

**ENVIRONMENTAL PROTECTION AGENCY****40 CFR Part 63**

[AD-FRL-5879-7]

RIN 2060-AE81

**National Emission Standards for Hazardous Air Pollutants for Polyether Polyols Production****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Proposed rules and notice of public hearing.

**SUMMARY:** The proposed rule will reduce emissions of hazardous air pollutants (HAP) from existing and new facilities that manufacture polyether polyols and are located at major source plant sites. Polyether polyols are used to make a variety of products. Urethane grade polyether polyols are used as raw material in the production of polyurethanes, including slabstock and molded flexible foams, rigid foams, and other polyurethanes including microcellular products, surface coatings, elastomers, fibers, adhesives, and sealants. Nonurethane polyether polyols are used as surfactants, lubricants, degreasing agents, hydraulic fluids, cosmetics, and pharmaceuticals.

In the production of these polyols, HAP are used primarily as reactants or extraction solvents. The HAP emitted by the facilities covered by this proposed 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 proposed rule is estimated to reduce emissions of these pollutants by 1,810 Mg/yr. Because all of the pollutants are also volatile organic compounds (VOC), which are precursors to ambient ozone, the proposed rule would aid in the reduction of tropospheric ozone.

The emission reductions achieved by these standards when combined with the emission reductions achieved by other similar standards, will achieve the primary goal of the Clean Air Act, which is to "enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population." The intent of this rule is to protect the public by requiring the maximum degree of reduction in emissions of HAP from new and existing major sources, taking into consideration the cost of achieving such emission reduction, and

any non-air quality, health and environmental impacts, and energy requirements.

**DATES:** *Comments.* Comments must be received on or before November 3, 1997.

*Public Hearing.* If anyone contacts EPA requesting to speak at a public hearing by September 25, 1997, a public hearing will be held in Research Triangle Park, North Carolina on October 6, 1997, beginning at 10 a.m. Persons interested in attending the hearing should call Ms. Maria Noell at (919) 541-5607 to verify that a hearing will be held.

*Request to Speak at Hearing.* Persons wishing to present oral testimony must contact EPA by September 25, 1997 by contacting Ms. Maria Noell, Organic Chemicals Group (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone number (919) 541-5607.

**ADDRESSES:** *Comments.* Comments should be submitted (in duplicate, if possible) to the Air and Radiation Docket and Information Center (6102), Attention: Docket No. A-96-38, U.S. Environmental Protection Agency, 401 M Street SW, Washington, DC 20460. The EPA requests that a separate copy also be sent to the contact person listed under the **FOR FURTHER INFORMATION CONTACT** section. Comments and data may also be submitted electronically by following the instructions provided in the **SUPPLEMENTARY INFORMATION** section. No Confidential Business Information (CBI) should be submitted through electronic mail.

*Public Hearing.* The public hearing, if requested, will be held at the EPA's Office of Administration Auditorium, Research Triangle Park, North Carolina.

*Docket.* The official record for this rulemaking, as well as the public version, has been established under Docket No. A-96-38 (including comments and data submitted electronically as described above). A public version of this record, including printed, paper versions of electronic comments and data, which does not include any information claimed as CBI, is available for inspection from 8 a.m. to 4 p.m., Monday through Friday, excluding legal holidays. The official rulemaking docket is located at the address in the **ADDRESSES** section above. Alternatively, a docket index, as well as individual items contained within the docket, may be obtained by calling (202) 260-7548. A reasonable fee may be charged for copying.

**FOR FURTHER INFORMATION CONTACT:** For information concerning the proposed rule, contact Mr. David Svendsgaard at

(919) 541-2380, Organic Chemicals Group, Emission Standards Division (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

**SUPPLEMENTARY INFORMATION:** *Electronic Filing.* Electronic comments can be sent directly to the EPA at: a-and-r-docket@epamail.epa.gov. Electronic comments and data must be submitted as an ASCII file avoiding the use of special characters and any form of encryption. Comments and data will also be accepted on disks in WordPerfect 5.1 or 6.1 file format or ASCII file format. All comments and data in electronic form must be identified by the docket number A-96-38. Electronic comments may be filed online at many Federal Depository Libraries.

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

Category	Examples of regulated entities
Industry .....	Producers of polyether polyols.

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 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 is regulated by this action, you should carefully examine the applicability criteria in § 63.1420 of the proposed rule. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

In addition to its inclusion in this notice, the regulatory text is available in Docket No. A-96-38, or from the EPA contact person designated in this notice. The proposed regulatory language is also available on the Technology Transfer Network (TTN) on the EPA's electronic bulletin boards. The TTN provides information and technology exchange in various areas of air pollution control. The service is free, except for the cost of a telephone call. Dial (919) 541-5742 for up to a 14,400 bps modem. For further information, call the TTN HELP line at (919) 541-5384, from 1 p.m. to 5 p.m., Monday through Friday, or access the TTN Web site at: <http://ttnwww.rtpnc.epa.gov>.

The Basis and Purpose Document, which contains the rationale for the various components of the standard, is available in the docket and on the TTN. This document is entitled Hazardous Air Pollutant Emissions from the Production of Polyether Polyols—Basis and Purpose Document for Proposed Standards, May 1997, and has been assigned document number EPA-453/R-97-003a.

Other materials related to this rulemaking are also available for review in the docket. Some of the technical memoranda have been compiled into a single document, the Supplementary Information Document (SID), to allow interested parties more convenient access to the information. The SID is entitled Hazardous Air Pollutant Emissions from the Production of Polyether Polyols—Supplementary Information Document for Proposed Standards, May 1997, and has been assigned document number EPA-453/R-97-003c.

The information presented in this preamble is organized as follows:

- I. List of Source Categories
- II. A Summary of Considerations Made in Developing This Standard
- III. Authority for National Emission Standards for Hazardous Air Pollutants Decision Process
  - A. Source of Authority for NESHAP Development
  - B. Criteria for Development of NESHAP
- IV. Summary of Proposed Standard
  - A. Source Category to be Regulated
  - B. Relationship to Other Rules
  - C. Pollutants to be Regulated
  - D. Affected Emission Points
  - E. Format of the Standards
  - F. Proposed Standards
  - G. Recordkeeping and Reporting Requirements
- V. Discussion of Major Issues
- VI. Summary of Environmental, Energy, Cost and Economic Impacts
  - A. Facilities Affected by These NESHAP
  - B. Primary Air Impacts
  - C. Other Environmental Impacts
  - D. Energy Impacts
  - E. Cost Impacts
  - F. Economic Impacts
- VII. Administrative Requirements
  - A. Public Hearing
  - B. Docket
  - C. Executive Order 12866
  - D. Enhancing the Intergovernmental Partnership Under Executive Order 12875
  - E. Paperwork Reduction Act
  - F. Regulatory Flexibility Act
  - G. Unfunded Mandates Reform Act
  - H. Miscellaneous

## I. List of Source Categories

The EPA identified a total of approximately 84 plant sites producing polyether polyols. Of the 84 facilities, 78 are considered in the analysis

supporting this proposed rule, and are believed to be major sources according to the 1990 Amendments criterion of having the potential to emit 10 tons per year of any one HAP or 25 tons per year of combined HAP. The proposed rule would apply to all major sources that produce polyether polyols. Area sources would not be subject to this proposed 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 are: 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 Clean Air Act.) Subcategorization was necessary due to the distinctively different nature of the epoxide and THF processes and its 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 does not use a HAP monomer. Additionally, the first group performs the reaction primarily on a batch basis, while the second group, polyols made with THF, performs the reaction on a continuous basis. Although the level of the proposed standard is identical for wastewater, storage vessels, and equipment leaks, the technical analyses were conducted separately for each subcategory to determine the appropriate level of the standard.

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 intends the term "polyether polyols" to represent both polyether polyols and polyether mono-ols.

## II. Summary of Considerations Made in Developing This Standard

The Clean Air Act was created in part "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population" (Clean Air Act, section 101(b)(1)). Available emission data, collected during the development of these proposed National Emission Standards for Hazardous Air Pollutants (NESHAP), show that the primary pollutants emitted by polyether polyols production that are listed in Section 112(b)(1) are ethylene oxide (EO), propylene oxide (PO), hexane and toluene and other incidental HAP. The proposed emission limits are projected to reduce HAP emissions by 47 percent from both subcategories. All reported HAP from polyether polyol producers are volatile organic compounds (VOC), therefore, this regulation is projected to reduce VOC emissions by 1,810 megagram per year (Mg/yr). The following is a summary of the potential health effects associated with exposure to these HAP that would be reduced by the standard.

Acute (short-term) exposure to high concentration of ethylene oxide in air can cause nausea, vomiting, neurological disorders, and even death. Lower concentrations may irritate the eyes, skin, and lungs. Chronic (long-term) exposure to EO irritates the eyes, skin, and mucous membranes and impairs central nervous system (CNS) function. Inhalation exposure may increase miscarriage rates in workers, and animal studies have shown adverse reproductive effects in males and females. Developmental effects, such as malformations and decreased fetal weight have been noted in animals. Long-term exposure to high levels of EO (c. 7000 ppm or more) may lead to cataracts in humans. Limited data exist suggesting elevated rates of leukemia, stomach and pancreatic cancer, and Hodgkin's disease in workers exposed to EO by inhalation; animal studies indicate that inhalation of EO causes lung and uterine tumors. EPA has classified EO as a Group B1 (probable) human carcinogen.

Acute exposure of workers to PO has been linked to CNS effects such as headache, weakness, loss or coordination, and coma. Propylene oxide also irritates the eyes and respiratory tract, causing coughing and difficulty in breathing, possibly leading

to pulmonary edema and pneumonia. No adverse health effects from chronic PO exposure in humans have been reported. Chronic animal studies have reported neurological disorders and inflammatory lesions of the nasal cavity, trachea, and lungs. EPA has classified PO as a Group B2 (probable) human carcinogen on the basis of nasal tumors observed in rodents exposed by inhalation.

Acute inhalation of toluene by humans may cause CNS effects such as fatigue, headache, and nausea, as well as irregular heartbeat. Repeated exposure to high concentrations may induce loss of coordination, tremors, decreased brain size, and involuntary eye movements, and may impair speech, hearing, and vision. Chronic exposure to toluene in humans has also been reported to irritate the skin, eyes, and respiratory tract, and to cause dizziness, headaches, and difficulty with sleep. Children exposed to toluene before birth may suffer nervous system dysfunction, attention deficits, and minor face and limb defects. Inhalation of toluene by pregnant women may increase the risk of spontaneous abortion. Because data are inadequate to assess potential cancer risk the EPA has classified toluene in Group D, not classifiable as to human carcinogenicity.

Acute exposure by humans to high levels of hexane causes mild CNS depression and irritation of the skin and mucous membranes. Nervous system effects include dizziness, nausea, and headaches. Chronic exposure to hexane is associated with numbness in the extremities, muscular weakness, blurred vision, headache, and fatigue. No information is available on reproductive or developmental effects of hexane exposure in humans, but inhalation studies have reported testicular damage. Because data are inadequate to assess potential cancer risk, the EPA has classified hexane in Group D, not classifiable as to human carcinogenicity.

The effects of these HAP vary in severity based on the level and length of exposure and are influenced by source-specific characteristics such as emission rates and local meteorological conditions. Health impacts are also dependent on multiple factors that affect human variability such as genetics, age, health status (e.g., presence of pre-existing disease) and lifestyle. The EPA does not have sufficient detailed data to conduct an intensive analysis to determine the actual population exposures to the HAP and resulting health effects around these facilities. This rule is technology-based; i.e., based on maximum achievable control technology. In addition, it is not

a "significant" rule as defined by Executive Order 12866, and a benefits analysis is not required. Considering these factors, the EPA chose not to expend the resources required to collect additional data and conduct an intensive health impacts analysis. Therefore, the EPA does not know the extent to which the adverse health effects described above occur in the populations surrounding these facilities. However, to the extent the adverse effects do occur, the proposed standard will substantially reduce emissions and exposures to the level achievable with MACT. The seriousness of risks remaining after impositions of the final MACT standards will be examined at a later date, as provided for under section 112(f) of the Clean Air Act.

The alternatives considered in the development of this regulation, including those alternatives selected as standards for new and existing polyether polyols production facilities, are based on process and emission data received from a questionnaire sent to urethane and nonurethane polyether polyols producing facilities, and on additional information submitted by the Society of the Plastics Industry (SPI). The EPA met with industry and State representatives several times to discuss these data. In addition, facilities and State regulatory authorities had the opportunity to comment on draft versions of the MACT regulatory provisions, and to provide additional information. Several facilities and States did provide comments, and these comments were considered in preparing the proposed standard.

The proposed standards give existing facilities three years from the date of promulgation to comply. This is the maximum amount of time allowed under the Clean Air Act. New sources are required to comply with the requirements of the standards upon startup. The number of existing plants considered to be major sources, and therefore affected by this rule, is estimated to be 78.

Included in the proposed rule are methods for determining initial compliance, as well as monitoring, recordkeeping, and reporting requirements. 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. The Agency has also attempted to maintain consistency with existing regulations by either incorporating applicable text from existing regulations or referencing existing regulations, depending on

which method would be less confusing for a given situation.

This rule introduces the concept of "extended cookout," which is a pollution prevention technique that has been employed by some industry members as an alternative to installing traditional add-on control devices. The EPA worked with the industry and State agency representatives to delineate requirements for demonstrating compliance from the use of extended cookout.

As described in the Basis and Purpose document, regulatory alternatives were considered that included a combination of requirements equal to, and above, the minimum level of control allowed by the Clean Air Act (i.e., the "floor"—see section III.B.). Cost-effectiveness was a factor considered in evaluating options above the floor; in cases where options more stringent than the floor were selected, they were judged to have a reasonable cost effectiveness. Non-air environmental and health factors, as well as energy impacts were also considered for the proposed standards.

Representatives from other interested EPA offices and programs, as well as representatives from State regulatory agencies, are included in the regulatory development process. Therefore, the EPA believes that the implications to other EPA offices and programs have been adequately considered during the development of these standards.

### **III. Authority for National Emission Standards for Hazardous Air Pollutants Decision Process**

#### *A. Source of Authority for NESHAP Development*

Section 112 of the 1990 Amendments gives the EPA the authority to establish national standards to reduce air emissions from sources that emit one or more HAP. Section 112(b) contains a list of HAP to be regulated by NESHAP. Section 112(c) directs the EPA to use this pollutant list to develop and publish a list of source categories for which NESHAP will be developed. The EPA must list all known source categories and subcategories of "major sources" (defined below) that emit one or more of the listed HAP. A major source is defined in section 112(a) as any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit in the aggregate, considering controls, 10 tons per year or more of any one HAP or 25 tons per year or more of any combination of HAP. This list of source categories was published in the **Federal**

**Register** on July 16, 1992 (57 FR 31576) and included polyether polyols.

#### *B. Criteria for Development of NESHAP*

The NESHAP are to be developed to control HAP emissions from both new and existing sources according to the statutory directives set out in section 112(d) of the 1990 Amendments. The statute requires the standards to reflect the maximum degree of reduction in emissions of HAP that is achievable for new or existing sources. This control level is referred to as the MACT.

The MACT "floor" is the least stringent level allowed for MACT standards. For new sources, the standards for a source category or subcategory "shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source, as determined by the Administrator" (section 112(d)(3)). 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 categories and subcategories with 30 or more sources or the average emission limitation achieved by the best performing five sources for categories 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 selection of MACT considers control levels more stringent than the MACT floor described above, its selection must reflect consideration of the cost of achieving the emission reduction, any non-air quality, health, and environmental impacts, and energy requirements.

#### **IV. Summary of Proposed Standards**

This section provides a summary of the proposed regulation. The full regulatory text is printed in today's notice 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. Source Category To Be Regulated*

These proposed standards would regulate HAP emissions from polyether polyols manufacturing process units (PMPU) provided that a PMPU is a major source or is located at a plant site that is a major source. Polyether polyols are defined as the products formed by the reaction of ethylene oxide (EO), propylene oxide (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.). This definition excludes materials regulated as glycols or glycol ethers under the Hazardous Organic NESHAP (HON). For the proposed rule, an affected source is defined as each group of one or more PMPU, that is manufacturing polyether polyols and that is located at a plant site that is a major source.

If a plant site with an existing affected source producing a polyether polyol as its primary product constructs a new PMPU also producing a polyether polyol as its primary product, the new PMPU is a new affected source if the new PMPU has the potential to emit more than 10 tons per year of a single HAP, or 25 tons per year of all HAP. In this situation, the plant site would have an existing affected source and a new source. Each subsequent new PMPU with potential HAP emissions above the levels cited above would be a separate new affected source.

New affected sources are also created when a PMPU is constructed at a major source plant site where the polyether polyol product was 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 a new PMPU is constructed at a new plant site (i.e., green field site) that will be a major source. The final manner in which a new affected source is created is when an existing affected source undergoes reconstruction, thus making the previous existing source subject to new source standards.

##### *B. Relationship to Other Rules*

Sources subject to the proposed rule are also subject to other existing rules. In some cases, the proposed rule supersedes existing rules and affected sources are no longer required to comply with the existing rule. In other cases, there is no conflict between the existing rule and the proposed rule, and in these cases, the affected source must comply with both rules.

Sources subject to the proposed rule may have storage vessels subject to the NSPS for Volatile Organic Liquid Storage Vessels (40 CFR part 60, subpart Kb). After the compliance date for this rule, such storage vessels are only subject to this rule and are no longer required to comply with subpart Kb.

Sources subject to the proposed rule may have cooling towers subject to the NESHAP for Industrial Cooling Towers (40 CFR part 63, subpart Q). There is no conflict between the requirements of subpart Q and the proposed rule.

Therefore, sources subject to both rules must comply with both rules.

##### *C. Pollutants To Be Regulated*

The source categories covered by the proposed rule emit a variety of HAP. The most significant emissions are of the following HAP: EO, PO, hexane, and toluene. These proposed standards would regulate emissions of these compounds, as well as all other organic HAP that are emitted during the production of polyether polyols.

##### *D. Affected Emission Points*

Emissions from the following types of emission points (i.e., emission source types) are being covered by the proposed rule: Storage vessels, process vents, equipment leaks, and wastewater operations.

##### *E. Format of the Standards*

As discussed in more detail in Section IV.F, the proposed standards, the HON (subparts F, G, and H of 40 CFR part 63) and the Group I Polymers and Resins NESHAP (subpart U of 40 CFR part 63) provided a basis for selection of the proposed formats. In most instances, the format of these proposed standards is the same as those found in the HON and/or the Group I Polymers and Resins NESHAP. The following paragraphs summarize the selected formats, including those that are different from the HON and/or the Group I Polymers and Resins NESHAP. The formats and their basis for selection are discussed in more detail in the Basis and Purpose Document for this proposed regulation.

For storage vessels for both subcategories, the format of these proposed standards is dependent on the method selected to comply with the standards. If tank improvements (e.g., internal or external floating roofs with proper seals and fittings) are selected, the format is a combination of design, equipment, work practice, and operational standards. If a closed vent system and combustion, recovery, or recapture device are selected, the format is a combination of design and equipment standards.

For process vents that make polyether polyols using epoxides or THF, the format of these proposed standards is a percent aggregate emission reduction.

For equipment leaks from both subcategories, these proposed standards incorporate several formats: Equipment, design, lowest allowable performance levels (e.g., maximum allowable percent leaking valves), work practices, and operational practices. Different formats are necessary for different types of equipment, available control techniques, and applicability of the

measurement method. In addition, a work practice standard is adopted for equipment leaks resulting in the emission of HAP from cooling towers at all facilities producing polyether polyols. This standard requires the leak detection and repair of leaks of HAP into cooling tower water.

For wastewater streams requiring control from both subcategories of the source category, these proposed standards incorporate several formats: Equipment, operational, work practice, and emission standards. The particular format selected depends on which portion of the wastewater stream is involved. For transport and handling equipment, the selected format is a combination of equipment standards and work practices. For the reduction of HAP from the wastewater stream itself, several alternative formats are incorporated, including five alternative numerical emission limit formats (overall percent reduction for total organic HAP, individual HAP percent reduction, effluent concentration limit for total organic HAP, individual organic HAP effluent concentration limits, and mass removal for HAP) and equipment design and operation standard for a steam stripper. For vapor

recovery and destruction devices other than flares, the format is a weight percent reduction. For flares, the format is a combination of equipment and operating specifications.

#### F. Proposed Standards

The standards being proposed for the following emission sources at new and existing facilities have the same applicability (i.e., group determination criteria) and control requirements as those promulgated for the corresponding emission source types at existing sources subject to the HON (Subpart F for general requirements, Subpart G for process vents, wastewater and storage vessels, and subpart H for equipment leaks): storage vessels; process vents from polyether polyol production with THF; process vents from continuous unit operations that emit nonepoxide HAP while making or modifying the polyol; equipment leaks, and wastewater. The requirements for process vents that emit nonepoxide HAP from making or modifying the product are based on the process vent sections of subpart G (for vents from continuous unit operations) and subpart U (for vents from batch unit operations), except that the Group 1/Group 2 criteria

are applied to the combination of process vents associated with the use of nonepoxide HAP to make or modify the product, rather than on individual vents. The process vent provisions for epoxide emission and nonepoxide HAP emissions from catalyst extraction require a specified emission reduction for the combination of all process vent streams at an affected source.

Tables 1 and 2 summarize the level of control being proposed for new and existing sources, respectively. Where the applicability criteria and required level of control is the same as the HON, this is indicated in the table as "HON." When the table lists "epoxides" it is referring to EO and PO, the HAP monomers used in the polyether polyols process. "Nonepoxide HAP" refers to organic HAP other than EO and PO that are used in this process. The following sections describe these proposed standards in more detail, by emission source type. The rationale for the selection of the proposed standards is contained in the Basis and Purpose Document. The Basis and Purpose Document is available as described in the **SUPPLEMENTARY INFORMATION** section of this Preamble.

TABLE 1.—SUMMARY OF LEVEL OF PROPOSED STANDARDS FOR EXISTING SOURCES

	Emission sources					
Source, category, subcategory	Storage	Process vents <sup>a</sup>			Waste water	Equip; leaks
Polyether Polyols made with THF.	HON .....	The Group 1/Group 2 criteria are from § 63.115(d)(1) or (d)(2), and (d)(3) of subpart G. If the collection of vents is Group 1, the control requirement is 98% emission reduction			HON .....	HON
		Epoxides	Nonepoxide HAP in making or modifying the product	Nonepoxide HAP in catalyst extraction		
Polyether Polyols made with Epoxides.	HON .....	98 percent aggregate emission reduction.	For process vents from batch unit operations, the Group 1/Group 2 criteria are from 40 CFR 63 Subpart U. If the collection of vents is Group 1, the control requirement is a 90 percent aggregate emission reduction.  For process vents from continuous unit operations, the Group 1/Group 2 criteria are from § 63.115(d)(1) or (d)(2), and (d)(3) of subpart G. If the collection of vents is Group 1, the control requirement is a 98 percent aggregate emission reduction.	90 percent aggregate emission reduction.	HON .....	HON

<sup>a</sup> For Group 1/Group 2 determination, the appropriate criteria are applied to the combination of all applicable process vents and not to individual process vents.

TABLE 2.—SUMMARY OF LEVEL OF PROPOSED STANDARDS FOR NEW SOURCES

Source, category, subcategory	Emission sources			
	Storage	Process vents <sup>a</sup>	Waste water	Equip; leaks
Polyether Polyols made with THF.	HON .....	The Group 1/Group 2 criteria are from § 63.115(d)(1) or (d)(2), and (d)(3) of subpart G. If the collection of vents is Group 1, the control requirement is 98% emission reduction	HON .....	HON

TABLE 2.—SUMMARY OF LEVEL OF PROPOSED STANDARDS FOR NEW SOURCES—Continued

		Epoxides	Nonepoxide HAP in making or modifying the product	Nonepoxide HAP in catalyst extraction		
Polyether Polyols made with Epoxides.	HON .....	99.9 percent aggregate emission reduction.	For process vents from batch unit operations, the Group 1/Group 2 criteria are from 40 CFR 63 Subpart U. If the collection of vents is Group 1, the control requirement is a 90 percent aggregate emission reduction. For process vents from continuous unit operations, the Group 1/Group 2 criteria are from § 63.115(d)(1) or (d)(2), and (d)(3) of subpart G. If the collection of vents is Group 1, the control requirement is a 98 percent aggregate emission reduction.	98 percent aggregate emission reduction.	HON .....	HON

<sup>a</sup>For Group 1/Group 2 determination, the appropriate criteria are applied to the combination of all applicable process vents and not to individual process vents.

### 1. Storage Vessels

For polyether polyols made with either epoxides or THF, the storage vessel requirements at new and existing affected sources are identical to the HON storage vessel requirements in subpart G for existing sources. For this proposed rule "storage vessel" is a tank or other vessel that is associated with a PMPU and that stores a liquid containing one or more organic HAP. The proposed rule specifies assignment procedures for determining whether a storage vessel is associated with a polyether polyols process unit. The storage vessel provisions do not apply to the following (1) vessels permanently attached to motor vehicles, (2) pressure vessels designed to operate in excess of 204.9 kPa (29.7 psia), (3) vessels with capacities smaller than 38 m<sup>3</sup> (10,000 gal), (4) wastewater tanks, and (5) vessels storing liquids that contain HAP only as impurities. An impurity is produced coincidentally with another chemical substance and is processed, used, or distributed with it. The owner or operator must determine if the storage vessel is Group 1 or Group 2; Group 1 storage vessels require control while Group 2 do not. The criteria for determining whether a storage vessel is Group 1 or Group 2 are shown in Table 3, and are the same as the HON criteria for existing sources.

TABLE 3.—GROUP 1 STORAGE VESSEL CRITERIA

Vessel capacity (cubic meters)	Vapor pressure <sup>a</sup> (kPa)
Existing and new sources:	
75≤capacity<151 .....	≥13.1
151≥capacity .....	≥5.2

<sup>a</sup>Maximum true vapor pressure of total HAP at average storage temperature.

The storage 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 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 provisions.

### 2. Process Vents

There are separate process vent provisions in the proposed rule for the two polyether polyol subcategories. These requirements are discussed in the following sections.

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

### Requirements for Epoxide Emissions.

The process vent provisions for epoxide emissions require the owner or operator of existing sources using epoxides to reduce the aggregate total epoxide process vent emissions by 98 weight-percent, and by 99.9 weight-percent for new sources. In the determination of the control efficiency, uncontrolled emissions are measured at the outlet of the unit operation, and controlled emissions at the outlet of the combustion, recovery, or recapture device. Primary condensers operating as reflux condensers are considered part of the unit operation and not a recovery device.

In addition to achieving the 98 (or 99.9) percent reduction using a combustion, recovery, or recapture device, the proposed rule also allows the use of "extended cook-out" 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.

If a combustion, recovery, or recapture device is used to reduce epoxide emissions, an owner or operator can comply by demonstrating that each outlet stream after the control option has a concentration of 20 ppmv epoxide for existing sources. This is considered to be equivalent to demonstrating a 98 percent control efficiency from a combustion, recovery or recapture device.

As an alternative to the 98 percent emission reduction, owners or operators of existing sources can maintain a epoxide emission factor from the PMPU of no more than  $1.7 \times 10^{-2}$  kilograms of epoxide emissions per megagram of product made (kg/Mg). The corresponding emission factor for new sources is  $4.4 \times 10^{-3}$  kg/Mg. Compliance with this alternative

limitation will be 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.

**Requirements for nonepoxide HAP emissions from catalyst extraction.** The process vent provisions require the owner or operator of existing sources using epoxides to reduce the aggregate total nonepoxide organic HAP emissions by 90 weight-percent from process vents associated with catalyst extraction at existing sources. For new sources the requirement is a reduction in these emissions of 98 weight-percent. This provision only applies if a nonepoxide organic HAP is used in the catalyst extraction process. As with the epoxide provisions, uncontrolled emissions are measured at the outlet of the unit operation, and controlled emissions at the outlet of the combustion, recovery, or recapture device. Primary condensers operating as reflux condensers are considered part of the unit operation and not a recovery device.

**Requirements for nonepoxide HAP used to make or alter the product.** There are separate provisions for batch and continuous processes for process vents associated with the use of nonepoxide organic HAP to make or alter the product. The approach for vents from both batch and continuous unit operations is to determine if the collection of process vents in each PMPU that are associated with the use of nonepoxide organic HAP to make or alter the product is Group 1 or Group 2. If the combination of vents is determined to be Group 1, the aggregate nonepoxide organic HAP emissions are required to be reduced by 90 percent for batch processes and 98 percent for continuous processes. These requirements are the same for new and existing sources.

For vents from batch unit operations, the Group 1 criteria are the same as the criteria in the Group 1 Polymers and Resins rule, except that these criteria are applied to the combination of all vents for this proposed polyether polyol rule, and the criteria are applied to individual vents in the Polymers and Resins rule. The Group status is determined by calculating the annual emissions from all the applicable vents, and using these emissions 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 annual average flow rate is less than the cutoff

flow rate, the group of vents is Group 1, and must be controlled by 90 percent.

For continuous vents, the HON Group 1 criteria are used, except that they are again applied to the aggregated vent streams. The group of vents are Group 1 if they have a combined flow rate greater than or equal to 0.005 standard cubic meters per minute, a combined HAP concentration greater than or equal to 50 parts per million by volume (ppmv), and a total resource effectiveness index value (TRE) less than or equal to 1.0.

There is one notable difference in the provisions for nonepoxide HAP emissions from making or altering the product for continuous processes and the other continuous process vent provisions in the proposed rule for epoxide processes (i.e., Epoxide emission requirements and nonepoxide HAP emissions from catalyst extraction). For the nonepoxide HAP emissions from making or altering the product, the TRE of the combined vent streams is calculated after the final recovery device. Therefore, the recovery device may be used to reduce emissions so that the TRE is increased and the combined stream is Group 2, but the recovery device may not be used to achieve the required percentage reduction for the combination of vents that are Group 1.

Monitoring is required for those Group 2 continuous process vent streams whose combined stream characteristics result in a TRE index value between 1.0 and 4.0, to ensure that the combination of those streams do not become Group 1, which would then require control.

For either batch or continuous processes, the owner or operator can make the Group 1/Group 2 determination, or the owner or operator can elect to comply directly with the control requirements. As noted above, the TRE index value is determined after the final recovery device in the process or prior to venting to the atmosphere. The TRE calculation involves an emissions test or engineering assessment and use of the TRE equations in § 63.115 of subpart G.

ii. **Polyether polyols that use THF as a reactant.** The proposed 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 (on an individual vent basis), and the control of Group 1 process vent streams by 98 percent or the use of a flare.

b. **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 extended cook-out is used to control epoxide emissions. Daily monitoring parameters are recorded to determine compliance.

### 3. Wastewater Operations

For both polyether polyol subcategories the proposed wastewater provisions are identical to the wastewater provisions in subparts F and G. The proposed rule applies to any HAP-containing water, raw material, intermediate, product, co-product, or waste material that exists any polyether polyols production process unit equipment and has either (1) a total organic HAP concentration of 5 ppmw or greater and a flow rate of 0.02 liters per minute (lpm) or greater; or (2) a total organic HAP concentration of 10,000 parts per million by weight (ppmw) or greater at any flow rate. "Wastewater," as defined in § 63.101 of subpart F, encompasses both maintenance wastewater and process wastewater. The process wastewater provisions also apply to HAP-containing residuals that are generated from the management and treatment of Group 1 wastewater streams. Examples of process wastewater streams include, but are not limited to, wastewater streams exiting process unit equipment (e.g., condenser stream decanter water), feed tank drawdown, vessel washout/cleaning that is part of the routine batch cycle, and residuals recovered from waste management units. Examples of maintenance wastewater streams are those generated by descaling of heat exchanger tube bundles, cleaning of distillation column traps, and draining of pumps into an individual drain system.

a. **Maintenance wastewater.** For maintenance wastewater, the proposed rule incorporates the requirements of § 63.105 of subpart F for maintenance wastewater. This requires 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.

b. **Process wastewater.** The Group 1/Group 2 approach from the HON is also used for these proposed wastewater provisions, with Group 1 process wastewater streams requiring control and Group 2 process wastewater streams not requiring control. For existing and new sources, a Group 1 wastewater



stream is one with an average flow rate greater than or equal to 10 lpm and a total organic HAP average concentration greater than or equal to 1,000 ppmw.

An owner or operator may determine the organic HAP concentration and flow rate of wastewater stream either (1) at the point of determination; or (2) downstream of the point of determination. If wastewater stream characteristics are determined downstream of the point of determination, an owner or operator must make corrections for (1) losses by air emissions; (2) reduction of organic HAP concentration or changes in flow rate by mixing with other water or wastewater streams; and (3) reduction in flow rate or organic HAP concentration by treating or otherwise handling the wastewater stream to remove or destroy HAP. An owner or operator can determine the flow rate and organic HAP concentration for the point of determination by (1) sampling; (2) using engineering knowledge; or (3) using pilot-scale or bench-scale test data. 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 instances where an owner or operator can bypass the group determination. An owner or operator is allowed to designate a wastewater stream or mixture of wastewater streams to be a Group 1 wastewater stream without actually determining the flow rate and organic HAP concentration for the point of determination. Using this option, an owner or operator can simply declare that a wastewater stream or mixture of wastewater streams is a Group 1 wastewater stream and that the emissions from the stream(s) are controlled from the point of determination through treatment. An owner or operator is required to determine the wastewater stream characteristics (i.e., organic HAP concentration and flow rate) for the designated Group 1 wastewater stream in order to establish the treatment requirements in § 63.138. Also, an owner or operator who elects to use the process unit alternative in § 63.138(d) of subpart G or the 95-percent biological treatment option in section 63.138(e) of subpart G is not required to make a Group 1/Group 2 determination.

Controls must be applied to Group 1 wastewater streams, unless the source complies with the source-wide mass flow rate provisions of §§ 63.138(c)(5) or (c)(6) of subpart G; or implements

process changes that reduce emission as specified in § 63.138(c)(7) of subpart G. Control requirements include (1) suppressing emissions from the point of determination to the treatment device; (2) recycling the wastewater stream or treating the wastewater stream to the required Fr values for each organic HAP as listed in table 9 of subpart G (The required Fr values in table 9 of subpart G are "fraction removed" (or removal efficiency) based on a steam stripper, with specified operating parameters, as the control technology); (3) recycling any residuals or treating any residuals to destroy the total combined HAP mass flow rate by 99 percent or more; and (4) controlling the air emissions generated by treatment processes. While emission controls are not required for Group 2 wastewater streams, owners or operators may opt to include them in management and treatment options.

Suppression of emissions from the point of determination to the treatment device will be achieved by using covers and enclosures and closed-vent systems to collect organic HAP vapors from the wastewater and convey them to treatment devices. Air emissions routed through closed-vent systems from covers, enclosures, and treatment processes must be reduced by 95 percent for combustion or recovery devices; or to a level of 20 ppmv for combustion devices.

The treatment requirements are designed to reduce the organic HAP content in the wastewater prior to placement in units without air emissions controls, and thus to reduce the HAP emissions to the atmosphere. Section G of the preamble provides several compliance options, including percent reduction, effluent concentration limitations, and mass removal.

For demonstrating compliance with the various requirements, owners or operators have a choice of using a specified design, conducting performance tests, or documenting engineering calculations. Appropriate compliance, monitoring, reporting, and recordkeeping provisions are included in the regulation.

#### 4. Equipment Leaks

The equipment leak provisions in the proposed rule refer directly to the requirements contained in subpart H. The standards would apply to equipment in organic HAP service 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.

a. *Pumps and valves.* This proposed standard requires leak detection and repair (LDAR) for pumps in light liquid service and for valves in gas or light liquid service. Standards for both are implemented in three phases. The first and second phases for both types of equipment consist of an LDAR program, with lower leak definitions in the second phase. The LDAR program involves a periodic check for organic vapor leaks with a portable instrument; if leaks are found, they must be repaired within a certain period of time. In the third phase, the periodic monitoring (a work practice standard) is combined with a performance requirement for an allowable percent leaking components.

The standard requires monthly monitoring of pumps using an instrument and weekly visual inspections for indications of leaks. In the first two phases of the valve standard, quarterly monitoring is required. In phase three, semiannual or annual monitoring may be used by process units with less than 1 percent and less than 0.5 percent leaking valves, respectively.

In phase three, if the base performance levels for a type of equipment are not achieved, owners or operators must, in the case of pumps, enter into a quality improvement program (QIP), and in the case of valves may either enter into a QIP or implement monthly LDAR. The QIP is a concept that enables plants exceeding the base performance levels to eventually achieve the desired levels without incurring penalty or being in a noncompliance status. As long as the requirements of the QIP are met, the plant is in compliance. The basic QIP consists of information gathering, determining superior performing technologies, and replacing poorer performers with the superior technologies until the base performance levels are achieved.

b. *Connectors.* The 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. Process units that have 0.5 percent or greater leaking connectors are required to monitor all connectors annually. Units that have less than 0.5 percent may monitor biannually and units that show less than 0.5 percent for



two monitoring cycles may monitor once every four years.

c. *Other equipment.* Subpart H also contains standards for other types of equipment, 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 ppm HAP. Sampling connections must be 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 for storage vessels.

d. *Other provisions.* Under certain conditions, delay of repair beyond the required period may be acceptable. Examples of these situations include where: (1) A piece of equipment cannot be repaired without a process shutdown, (2) equipment is taken out of HAP service, (3) emissions from repair will exceed emissions from delay of repair until the next shutdown, and (4) equipment with better leak performance such as pump with single mechanical seals are replaced with dual mechanical seals.

In addition, specific alternative standards are included for batch processes and enclosed buildings. For batch processes, the owner or operator can choose either to meet similar standards to those for continuous processes with monitoring frequency pro-rated to time in use of HAP, or to periodically pressure test the entire system. For enclosed buildings, the

owner or operator may forego monitoring if the building is kept under a negative pressure and emissions are routed through a closed vent system to an approved combustion, recovery, or recapture device.

The equipment leak standards require the use of Method 21 of appendix A of part 60 to detect leaks. Method 21 requires a portable organic vapor analyzer to monitor for leaks from equipment in use. Test procedures using either a gas or a liquid for pressure testing the batch system are specified to detect for leaks.

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

#### *G. Recordkeeping and Reporting Requirements*

Specific recordkeeping and reporting requirements related to each emission source type are included in the applicable sections of the proposed rule. Section 63.1439 of the proposed rule provides general reporting, recordkeeping, and testing requirements.

The general reporting, recordkeeping, and testing requirements of this subpart are very similar to those found in subparts F, G, and U. The proposed rule also incorporates provisions of subpart A of part 63. A table included in the proposed rule designates which sections of subpart A apply to the proposed rule. This 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. If this subpart is promulgated subsequent to the promulgation of the amendments to the General Provisions, the amended General Provisions will be incorporated into this subpart.

The proposed rule requires sources to keep records and submit reports of information necessary to determine applicability and document compliance. The proposed rule requires retention of hourly average values of monitored parameters for continuous process vents. For batch process vents, the proposed rule requires daily average values of monitored parameters. If there

is a monitoring parameter excursion, the 15-minute values for the excursion period must be retained. The proposed rule also requires that records of all residual HAP content test results must be kept for five years.

Section 63.1439 of the proposed rule lists the following types of reports that must be submitted to the Administrator as appropriate: (1) Start-up, shutdown, and malfunction plan; (2) Application for Approval of Construction or Reconstruction; (3) Initial Notification; (4) Precompliance Report, (5) Notification of Compliance Status; (6) Periodic Reports; (7) Other reports, and; (8) Operating permit application. Operating permit may be substituted for a Precompliance Report. The requirements for each of the eight types of reports are summarized below. As can be noted, § 63.1435 incorporates the reporting requirements of subpart H, which require owners and operators to submit three types of reports: (1) An Initial Notification; (2) a Notification of Compliance Status; and (3) Periodic Reports.

#### *1. Start-up, Shutdown, and Malfunction Plan*

The plan would describe 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 equipment used to comply with this subpart.

#### *2. Application for Approval of Construction or Reconstruction*

The proposed rule requires that the owners or operator comply with § 63.5 of subpart A regarding the application for approval of construction or reconstruction, excluding the provisions specified in § 63.5(d)(1)(ii)(H), (d)(1)(iii), (d)(2), and (d)(3)(ii) of subpart A.

#### *3. Initial Notification*

The Initial Notification would be required within 120 calendar days after the effective date of the rule and shall provide 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) A brief description of the nature, size, design, and method of operation of the source, including its operating design capacity and an identification of each point of emission for each HAP, or if a definitive identification is not yet

possible, a preliminary identification of each point of emission for each HAP, and;

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

#### 4. Precompliance Report

Affected sources requesting an extension for compliance, or requesting approval to use alternative monitoring parameters, alternative continuous monitoring and recordkeeping, or alternative controls, shall submit a Precompliance Report.

#### 5. Notification of Compliance Status

The Notification of Compliance Status would be required to be submitted within 150 days after the source's compliance date. It contains the information for emission points that need to comply with the rule, that are

necessary to demonstrate that compliance has been achieved. Such information includes, but is not limited to, the results of any performance test for continuous and/or batch process vents, an ECO, and wastewater emission points; one complete test report for each test method used for a particular kind of emission point; design analyses for storage vessels and wastewater emission points; and monitored parameter levels for each emission point and supporting data for the designated level. The Notification of Compliance Status required by subpart H must be submitted within 90 days after the compliance date.

#### 6. Periodic Reports

Generally, Periodic Reports would be submitted semiannually. However, there is an exception. If monitoring results

show that the parameter values for an emission point are above the maximum or below the minimum established levels for more than one percent of the operating time in a reporting period, or the monitoring system is out of service for more than five percent of the time, the regulatory authority may request that the owner or operator submit quarterly reports for that emission point. After one year, semiannual reporting can be resumed, unless the regulatory authority requests continuation of quarterly reports.

All Periodic Reports would include information required to be reported under the recordkeeping and reporting provisions for each emission point.

For continuously monitored parameters, the Periodic Report must report when "excursions" occur. Table 5 shows what constitutes an excursion.

TABLE 5.—SUMMARY OF EXCURSIONS

Emission source type	Type of excursion	Description of excursion
Continuous Process Vents.	Daily average exceedance. Insufficient monitoring data.	When the daily average of a monitored parameter is above the maximum, or below the minimum, established level. 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 ...	Batch cycle daily average exceedance. Insufficient monitoring data.	When the batch cycle daily average of a monitored parameter is above the maximum, or below the minimum, established level. 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.

Periodic Reports would also include results of any performance tests conducted during the reporting period and instances when required inspections revealed problems. Additional information on the source is required to report under its operating permit would also be described in Periodic Reports.

Periodic Reports for subpart H must be submitted every six months and must contain summary information on the LDAR program changes to the process unit, changes in monitoring frequency or monitoring alternatives, and/or initiation of a QIP.

#### 7. Other Reports

Other reports required under the proposed rule include process changes that change the compliance status of process vents, and request for extensions of the allowable repair period and notifications of inspections for storage vessels and wastewater.

#### 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 the

Precompliance Report, as applicable, with the operating permit application.

#### V. Discussion of Major Issues

The Administrator welcomes comments from interested persons on any aspect of the proposed standards, and on any statement in the preamble or the referenced supporting documents. The proposed standards were developed on the basis of information available. The Administrator is specifically requesting factual information that may support either the approach taken in the proposed standards or an alternative approach. To receive proper consideration, documentation or data should be provided. Specifically, the EPA is requesting comment and data on the following issues: (1) The ECO definition and onset point, (2) the performance test protocol for determining compliance of combustion, recovery and recapture devices on short, batch process vent episodes, (3) the specifications of the performance test for the ECO, (4) the approach to determine an outlet concentration cutoff that is appropriate, if any, for the process vent epoxide limitation for new affected sources, (5) the

subcategorization of the industry based on the nature of the feed to the combustion, recovery, or recapture device, (6) the monitoring, recordkeeping and reporting requirements, (7) the epoxide emission factor as an alternative to the percent emission reduction requirement, (8) the nonepoxide organic HAP process vent emissions requirements, (9) whether the HAP list in table 4 is all inclusive, and (10) the definition of an applicable source and a PMPU.

The extended cook-out (ECO) is included as a control option for the first time in this standard, and the EPA requests comments on the definition of the ECO, and the calculation procedures that were used to determine the onset value (i.e., the point when uncontrolled emissions are calculated). The definition of the ECO is based on the input of a team of industry representatives who have used the ECO to control their process vent epoxide emissions. For the purposes of determining a default onset for an ECO, the EPA used information provided by SPI representatives. Some of the SPI facilities have used this control option for a number of years with permit

restrictions based on this control option. The SPI representatives provided the EPA with calculations that demonstrated the breakpoint for when a cookout is no longer economically feasible, which is defined as the onset for the ECO. This calculation contains confidential business information regarding the batch times, profit margins, and reaction rate equations for four different product types and, therefore, is not available for public review. However, the approach used to establish the onset of an ECO, as the point in time when continuing the reaction is no longer economically advantageous, and the approach used to determine the default onset of an ECO, are available for review (Docket No. A-96-38, Item No. II-B-7). The SPI determined, using conservative assumptions, that the ECO for four product types occurred when the amount of epoxide in the reactor is 25 percent of the amount in the reactor at the end of the epoxide feed step. These four product types were: EO-capped surfactants, PO-capped surfactants, EO-capped functional fluids, and PO-capped functional fluids. It was explained to the EPA that these are four typical product types in the polyether polyols industry. The onset value determined by SPI was established as the default ECO onset value for the purposes of this regulation. Facilities may accept this default value as the onset for an ECO at their facility, or they may calculate their own ECO onset point. To calculate a site-specific ECO onset, facility representatives are directed to the Definition of Extended Cookout Memorandum (Docket No. A-96-38, Item No. II-B-7).

Also, with respect to the ECO control option, a first order reaction rate equation, with respect to the epoxide, was used to determine the concentration of the unreacted epoxide in the reactor vessel. The EPA is requesting documentation to support or refute the first order reaction rate equation used in the ECO calculations.

The proposed rule requires an initial performance test to demonstrate that the ECO meets the performance represented by the engineering equations used to estimate the amount of unreacted epoxide in the reactor. This would be a one time test similar to the performance testing required for add-on combustion, recovery, or recapture devices. The proposed rule is requiring that samples of the liquid and vapor space be taken both before and after the ECO, and that these samples be analyzed for unreacted epoxide concentration. The proposed rule is requiring that the samples be analyzed using Method 18. The EPA is

requesting comments on the specifics of the test method and sample procedure required.

The EPA is proposing to require facilities to sample the inlet and outlet streams to the combustion, recovery or recapture device in order to determine compliance with the process vent provisions. Industry representatives have expressed several concerns with the requirement to sample emissions from process vents in batch unit operations. Industry representatives are concerned with the feasibility, accuracy, and safety of taking such samples. Typically, in batch unit operations, material exits the reactor in a short period of time following each batch, and the flow and concentration of the process vent emissions are not constant. As a result, industry asserts, that capturing representative and meaningful samples is not feasible using traditional stack sampling methods found in Appendix A of 40 CFR Part 60. Industry representatives also indicate that because there is a significant drop in pressure during the brief course of the venting, the results of any performance test are not likely to be very accurate. Industry also has expressed concerns that attempting to take samples during venting would raise significant safety issues for plant personnel given the potential flammability and toxicity of the stream. Industry maintains that pre-vent and post-vent samples with appropriate engineering calculations on flow rates would provide adequate results to demonstrate the performance of the combustion, recovery or recapture device. However, no specific procedures to use in this regulation were provided. The EPA, therefore, is asking for comment and information on alternatives to the proposed testing to determine compliance for process vents from batch unit operations.

The proposed standard for EO and PO process vent emissions at existing sources includes an alternative concentration limit of 20 ppmv. Thus, an existing source can comply with the control requirements of the NESHAP by either achieving an emission reduction of 98 percent (by weight), or maintaining an outlet concentration of 20 ppmv from the outlet of a combustion, recovery, or recapture device, whichever is less stringent. Including this option in the NESHAP recognizes that, as inlet concentrations to a control device drop, there is a corresponding decrease in percent reduction of the device and a leveling off of the outlet concentration from the device.

Industry representatives requested that an alternative concentration limit

also be developed for EO and PO process vent emissions at new sources. As with existing sources, the new sources would have the option to either achieve 99.9 percent control or a specified concentration limit, whichever is less stringent.

In responding to this request, EPA considered a concentration limit of 1 ppmv. This was based on concentration levels achieved, and verified by emission testing, by the facility identified as the best performer. These outlet concentrations were achieved even though high concentrations were being fed to the device. Industry representatives argued in a May 7, 1997 letter (Docket No. A-96-38, Item No. II-D-55) that 1 ppmv may not be achievable. They asserted that the EPA method used for the performance test does not speciate organic HAP and, therefore, should not be used to support a concentration limit unless the same test method is permitted within the NESHAP to demonstrate compliance. They also contended that EPA has historically used 20 ppmv as an alternative for standards that are combustion control-based. EPA has pointed out, however, that these other standards are based on incinerators required to meet only a 98 percent destruction efficiency.

Therefore, the EPA has decided to not include an alternative outlet concentration limit for new sources in the proposed rule, but is requesting information for determining an appropriate alternative limit for the standard based on an incinerator achieving 99.9 percent control. For example, test data from the 99.9 percent incinerator using the test methods and procedures prescribed in the proposed rule would establish a basis for such an alternative. If public comments provide sufficient information, the EPA will consider establishing an alternative concentration limit for the final rule.

The EPA is soliciting comment on the appropriateness of the new source MACT requirements for process vents that emit epoxides. As explained in the Basis and Purpose Document, the EPA set the control efficiency based on the data from the best performing facility. The SPI representatives, however, have contended that this facility is not a similar source because, its reactor vents during the epoxide feed step of the reaction. The SPI asserts that "the impacts of this method of operation would be to send a very high concentration of HAP 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 continuously)" (Docket No. A-96-38, Item No. II-D-46). They argue that this is not the typical mode of operation for this industry, and that this facility should be in a subcategory of its own. The EPA recognizes that different facilities may vent their reactors at different times in the reaction resulting in different concentrations and flows. The EPA also recognizes that the number of reactor trains feeding to the same recapture, recovery, or control device will affect the flow characteristics of the feed stream.

The EPA does not have data on the process vent epoxide concentration, description of when in the process the venting occurs, or venting episode duration from any of the facilities in the database. Therefore, at this time, the EPA has no basis for determining whether subcategorization of the industry is appropriate, or for determining where a subcategorization line should be drawn, if appropriate. Data to substantiate the SPI's argument that the facility setting the new source MACT floor is not a similar source will be necessary before the EPA can consider making revisions to the new source MACT floor level of control for process vent epoxide emissions.

The EPA is requesting the following information needed from industry in order to determine if a subcategory is appropriate, and what it should be.

- (1) Facility name and location
- (2) Product categories (i.e., surfactants, polyols, etc.) made at the facility in 1993
- (3) Process vent uncontrolled and controlled HAP emissions for 1993
- (4) Description of the combustion, recovery, or recapture device, including
  - (a) Type of device (e.g., scrubber, flare etc.)
  - (b) Control efficiency and basis
- (5) Information about the reactor feed characteristics to the control device, submitted in either of the following formats:
  - (a) Flow and concentration data (from monitoring instrumentation) for a single, typical day; or,
  - (b) A narrative description of a typical day's feed to a common combustion, recovery, or recapture device. In the narrative, an estimate of the total amount of time per day there is feed to the device is required along with an estimate of the range of HAP concentration during the typical day, on an episode or daily basis
- (6) A statement regarding whether the facility vents excess pressure from the reactor during oxide addition

The monitoring, recordkeeping and reporting provisions in this regulation differ slightly from those in the HON. This proposed regulation will require that monitors continue to operate during periods of start-up, shutdown, and malfunction. Monitoring records from periods of start-up, shutdown, and malfunction will provide evidence of whether start-up, shutdown, and malfunction plans are followed and will provide the Agency with valuable information for assessment of the adequacy of the source's start-up, shutdown, and malfunction plan. These records will also provide evidence of whether start-ups, shutdowns, and malfunctions occur during periods at issue and whether the source takes necessary steps to mitigate environmental impacts. Also, this proposed regulation enables a source that is subject to this regulation and to provisions in either 40 CFR part 264 or 40 CFR part 265 to continue to demonstrate compliance in accordance with 40 CFR part 264 or 265, except the source must report all excursions (as defined in this proposed regulation) in the semiannual report. The EPA is asking for comments on these provisions to determine whether the Agency should adopt these additional requirements in the final regulation.

For epoxide emissions, the proposed rule allows sources to comply with the process vent requirements by maintaining epoxide emissions at a level below the specified emission factors of  $1.7 \times 10^{-2}$  kilograms of epoxide emissions per megagram of product made (kg/Mg) for existing sources and  $4.4 \times 10^{-3}$  kg/Mg for new sources. The approach used for determining these emission factors is explained in the Supplementary Information Document. To verify compliance with this option, the owner or operator is required to calculate annual epoxide emissions and divide the emissions by the annual polyether polyol production. The annual production is annual mass of polyether polyol product produced from the applicable PMPU. The EPA is requesting comments on the method of calculation of the emission factors and whether the rule adequately describes the units of production for this determination.

In some instances, nonepoxide organic HAP are used in the reactor in making the polyether polyol product or modifying the product properties before final storage. Examples of such uses would include organic HAP used as an initiator, a catalyst, or as a reaction solvent. The proposed regulation requires that a group determination be

made on the combination of all process vents that emit these nonepoxide HAP, and that combinations of vents that are Group 1 be controlled. The EPA recognizes that a process vent from which these nonepoxide HAP are emitted would be subject to the epoxide emission reduction requirements as well as the requirements for nonepoxide organic HAP emissions. If a combustion, recovery, or recapture device is used to reduce epoxide emissions from the vent, then that same device would also reduce the emissions of the nonepoxide HAP. However, if extended cookout is the control technique utilized by the facility to reduce epoxide emissions, then the nonepoxide HAP emissions would not be affected, resulting in the need to address these emissions. The EPA is interested in methods to address the nonepoxide HAP emissions from making or modifying the product that alleviate the dual requirement problem mentioned above. Some of the approaches that the EPA has considered include: Requiring a group determination only for nonepoxide HAP emissions that are not controlled along with epoxide emissions; requiring all HAP emissions (epoxide and nonepoxide) from making or modifying the product to be reduced by the amount specified in the proposed rule for epoxide emissions; eliminating the group determination provisions and requiring a specified percent reduction for nonepoxide HAP emissions from all vents above a de minimis level, and; making all nonepoxide HAP emissions (from making or modifying the product and from catalyst extraction) subject to the same requirements. The EPA is requesting comments on input of these options, or the identification of other options. Comments should include a recommended approach, along with rationale for the recommendation.

The proposed rule lists specific HAP in table 4 used to determine compliance. The EPA requests comments on whether this list is all inclusive.

The EPA is requesting comments on the definition of the affected source, the PMPU and "make or modify the product." The EPA is asking for these comments in an attempt to ensure that all emission types related to the manufacture of polyether polyols are included in the affected source.

## VI. Summary of Environmental, Energy, Cost, and Economic Impacts

This section presents the air, non-air environmental (waste and solid waste), energy, cost and economic impacts resulting from the control of HAP emissions under this rule.

#### A. Facilities Affected by These NESHAP

The proposed rule will affect facilities that produce polyether polyols and are major sources in themselves, or that are located at a major source plant site. Based on available information, 92 percent of the facilities at which polyether polyols are produced were assumed to be major sources for the purpose of developing these standards. Final determination of major source status occurs as part of the compliance determination process undertaken by each individual source.

Impacts are presented relative to a baseline reflecting the level of control in the absence of the rule. Baseline impacts were extrapolated from the database to an estimated 78 polyether polyol facilities affected by the NESHAP nationwide. See the baseline emissions memorandum in the Basis and Purpose Document 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 proposed standards. According to the SPI representatives, no new sources are projected to be constructed in the next five years. Therefore, no new source impacts were estimated.

#### B. Primary Air Impacts

These proposed standards are estimated to reduce HAP emissions from all existing sources of polyether polyols by 1,810 Mg/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.

#### C. 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 of VOC is anticipated as a result of implementing these standards. However, emissions of criteria pollutants are estimated to increase by 80 Mg/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.

#### D. Energy Impacts

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

#### E. Costs 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 proposed standards.

The rule requirements are based on the 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). The HON level of control was considered as the level of control more stringent than the MACT floor level of control for each of the emission types listed above, except for process vents from batch unit operations where control levels established in the "Control of Volatile Organic Compound Emissions From Batch Processes—Alternative Control Techniques Information Document" (EPA-453/R-94-020) ("Batch ACT") were considered. The HON level of control was considered because polyether polyols manufacturing plants are fairly similar to sources that are subject to the HON. Additionally, the HON level of control had received extensive evaluation during the development of the HON, at which time the EPA concluded that the cost and other impacts of the HON levels were reasonable. Similarly, the estimated cost-effectiveness for the Batch ACT was determined to be comparable to the cost-effectiveness of the HON continuous vent provisions.

Under the proposed rule, it is estimated that total capital costs for existing sources would be \$10.2 million (August 1996 dollars) and that total annual costs would be \$7.7 million per year. It is expected that the actual compliance cost impacts of the proposed rule could be less than presented because of 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 cost would be reduced.

#### F. Economic Impacts

The goal of the economic impact analysis 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 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 one percent was determined to be an initial indicator of the potential for a significant facility impact.

For only one facility out of the 78 facilities affected by the regulation do costs exceed one percent of sales. This firm is estimated to 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 concludes it is unlikely that the company owning this facility will 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 the 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."

## VIII. Administrative Requirements

### A. Public Hearing

A public hearing will be held, if requested, to discuss the proposed standard in accordance with section 307(d)(5) of the Act. Persons wishing to make oral presentation on the proposed standards for polyether polyols production should contact EPA at the address given in the ADDRESSES section of this preamble. Oral presentations will be limited to 15 minutes each. Any member of the public may file a written statement before, during, or within 30 days after the hearing. Written statements should be addressed to the Air Docket Section address given in the ADDRESSES section of this preamble and should refer to Docket No. A-95-20.

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

### B. Docket

The docket is an organized and complete file of all the information submitted to or otherwise considered by EPA in the development of this proposed rulemaking. 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)).

### C. Executive Order 12866

Under Executive Order 12866, (58 FR 51735 (October 4, 1993)) the Agency must determine whether the regulatory action is "significant" and therefore subject to Office of Management and Budget (OMB) review and the requirements of this Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule 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 entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

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

It has been determined that this rule is not a "significant regulatory action" under the terms of Executive Order 12866 and is therefore not subject to OMB review.

### D. Enhancing the Intergovernmental Partnership Under Executive Order 12875

In compliance with Executive Order 12875, EPA has involved State, local, and tribal governments where the sources occur in the development of this rule. These governments are not directly impacted by the rule; i.e., they are not required to purchase control systems to meet the requirements of the rule. However, they will be required to implement this rule; e.g., incorporate the rule into permits and enforce the rule. They will collect permit fees that will be used to offset the resource burden of implementing the rule.

### E. Paperwork Reduction Act

The information collection requirements in this proposed rule have been submitted for approval to 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. 1811.01), and a copy may be obtained from Sandy Farmer, OPPE Regulatory Information Division (2137); U.S. Environmental Protection Agency; 401 M Street SW; Washington, DC 20460, or by calling (202) 260-2740. The public 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, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of 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 Ch. 15.

Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, 2136, U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20503, marked "Attention: Desk Officer for EPA." The final rule will respond to any OMB or public comments on the

information collection requirements contained in this proposal.

### F. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to conduct a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities.

The EPA analyzed the potential impact of the rule on small entities and determined that only 7 of the 36 polyether polyol producing firms are small entities—not a substantial number of entities. Of these 7, no small companies will experience an increase in costs as a result of the promulgation of today's rule that is greater than one percent of revenues. Pursuant to section 605(b) of the Regulatory Flexibility Act (5 U.S.C. 605(b)), I certify that this rule will not have a significant impact on a substantial number of small entities. Therefore, the Agency did not prepare an initial regulatory flexibility analysis.

Although the statute does not require the EPA to prepare an RFA because the Administrator has certified that the rule will not have a significant economic impact on a substantial number of small entities, the EPA did undertake a limited assessment, to the extent it could, of possible outcomes and the economic effect of these on small polyether polyol producing entities. The initial version of that evaluation is available in the administrative record for today's action.

### G. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of certain regulatory actions on State, local, and tribal governments and the private sector, and to seek input from State, local, and tribal governments on certain regulatory actions. EPA has determined that this action does not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. (The analysis of the costs associated with this action is referenced in paragraph VI.E of this preamble.) Therefore, this action is not subject to the requirements of sections 202 and 205 of the UMRA. The requirements of sections 203 and 204 of UMRA which relate to regulatory requirements that might significantly or uniquely affect small governments and to regulatory proposals that contain a significant Federal intergovernmental

mandate, respectively, also do not apply to today's rule because the rule affects only the private sector, i.e., facilities that manufacture chemical products for sale.

#### H. Miscellaneous

In accordance with section 117 of the Act, publication of this proposal was preceded by consultation with appropriate advisory committees, independent experts, and Federal departments and agencies. The Administrator will welcome comments on all aspects of the proposed regulation, including health, economic and technical issues, and on the proposed requirements for testing.

This regulation will be reviewed 8 years from the date of promulgation. This review will include an assessment of such factors as evaluation of the residual health and environmental risks, any overlap with other programs, the existence of alternative methods, enforceability, improvements in emission control technology and health data, and the recordkeeping and reporting requirements.

#### Lists of Subjects in 40 CFR Part 63

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

Dated: August 15, 1997.

**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 proposed to be 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. It is proposed that part 63 be amended by adding subpart PPP, consisting of §§ 63.1420 through 63.1439, to read as follows:

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

Sec.

- 63.1420 Applicability and designation of affected sources.
- 63.1421 Delegation of authority.
- 63.1422 Compliance schedule and relationship to existing applicable rules.
- 63.1423 Definitions.
- 63.1424 Emission standards.
- 63.1425 Process vent control requirements.

- 63.1426 Process vent requirements for determining organic HAP concentration, control efficiency, and overall organic HAP emission reduction for a PMPU.
- 63.1427 Process vent requirements for processes using extended cookout as an epoxide emission reduction device.
- 63.1428 Process vent requirements for group determination of PMPUs using a nonepoxide organic HAP to make or modify the product.
- 63.1429 Process vent monitoring requirements.
- 63.1430 Process vent reporting and recordkeeping requirements.
- 63.1431 Emission Factor Plan Requirements.
- 63.1432 Storage vessel provisions.
- 63.1433 Wastewater provisions.
- 63.1434 Equipment leak provisions.
- 63.1435 Heat exchanger provisions.
- 63.1436 [Reserved]
- 63.1437 Additional test methods and procedures.
- 63.1438 Parameter monitoring levels and excursions.
- 63.1439 General recordkeeping and reporting provisions.

##### 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 (a)(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)(3) of this section, and new affected source is defined in paragraph (a)(4) of this section.

(2) *Emission points and equipment.* The affected source also includes the emission points and equipment specified in paragraphs (a)(2)(i) through (a)(2)(vi) of this section that are associated with each group of polyether polyol manufacturing process units (PMPU) 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.
- (3) An existing affected source is defined as each group of one or more PMPU that is not part of a new affected source, as defined in paragraph (a)(4) of

this section, and that is located at a plant site that is a major source.

(4) A new affected source is defined as a source meeting the criteria of paragraph (a)(4)(i), (a)(4)(ii), or (a)(4)(iii) of this section.

(i) At a site previously without organic HAP emission points (i.e., a "greenfield" site), each group of one or more PMPUs that is part of a major source, and on which construction for the PMPU(s) commenced after September 4, 1997;

(ii) A PMPU 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.

(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, that does not use or manufacture any organic HAP shall comply with the requirements of paragraphs (b)(1) and (b)(2) of this section. Such a PMPU is not subject to any other provisions of this subpart and is not required to comply with the provisions of subpart A of this part.

(1) Retain information, data, and analyses used to document the basis for the determination that the PMPU does not use 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.

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

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

(1) Equipment that does not contain organic HAP and is located at a PMPU that is part of an affected source;

(2) Stormwater from 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 and equipment storing and/or handling 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; and

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

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

(1) Research and development facilities; and

(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 separate entities and not part of a PMPU to which this subpart applies.

(3) Reactions or processing that occur after the manufacture of polyether polyol products.

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

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

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

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

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

shall represent the primary product of the flexible operation unit.

(3) If the primary product of a process unit is a polyether polyol product, then that process unit is considered a PMPU. That PMPU is either an affected source or is part of an affected source comprised of other PMPU at the same plant site that also make polyether polyols, if the plant site is a major source. The status of a process unit as a PMPU, and as an affected source or part of an affected source shall not change regardless of which polyether polyol products are produced in the future by the PMPU, with the exception noted in paragraph (e)(3)(i) of this section.

(i) If a process unit terminates the production of all polyether polyol products and does not anticipate the production of any polyether polyol products in the future, the process unit is no longer a PMPU, is no longer an affected source or part of an affected source, and is not subject to the provisions of this subpart after notification is made as specified in paragraph (e)(3)(ii) of this section.

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

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

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

(i) If, at any time beginning [insert date 5 years from date of publication of final rule], the owner or operator determines that a polyether polyol product is the primary product for the process unit based on actual production

data for any preceding consecutive five-year period, then the process unit shall be classified as a PMPU. If that PMPU is not subject to another subpart of 40 CFR part 63, it is either an affected source or part of an affected source and shall be subject to this subpart. If the PMPU is subject to another subpart of 40 CFR part 63, it is not an affected source for the purposes of this subpart.

(ii) If a process unit meets the criteria of paragraph (e)(4)(i) of this section, the owner or operator shall notify the Administrator within 6 months of making this determination. The PMPU, as the entire affected source or part of an affected source, shall be in compliance with the provisions of this rule within 3 years from the date of such notification.

(5) Once the primary product of a process unit has been determined to be a polyether polyol product, the owner or operator of the affected source shall comply with the provisions of this subpart, as specified in either paragraph (e)(5)(i) or (e)(5)(ii) of this section, except as specified in paragraph (e)(5)(iii) of this section.

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

(ii) Alternatively, each owner or operator shall determine the applicability of the provisions of this subpart to each emission point that is part of the flexible operation unit based on the emission point characteristics when each product produced by the flexible operation unit is manufactured, regardless of whether the product is a polyether polyol product or not. Based on these findings, the owner or operator shall comply with the applicable requirements, as appropriate, regardless of what product is being produced.

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

(iii) Whenever a flexible operation unit manufactures a product that meets the criteria of paragraph (b) of this section (i.e., does not use or manufacture any organic HAP), the owner or operator shall comply only with either paragraph (b)(1) or (b)(2) of this section to demonstrate compliance

for activities associated with the manufacture of that product. This subpart does not require compliance with the provisions of subpart A of this part for activities associated with the manufacture of a product that meets the criteria of paragraph (b) of this section.

(6) The determination of the primary product for a process unit, to include the determination of applicability of this subpart to process units that are designed and operated as flexible operation units, shall be reported in the Notification of Compliance Status required by § 63.1439(e)(5) when the primary product is determined to be a polyether polyol product. The Notification of Compliance Status shall include the information specified in either paragraph (e)(6)(i) or (e)(6)(ii) of this section. If the primary product is determined to be something other than a polyether polyol product, the owner or operator shall retain information, data, and analysis used to document the basis for the determination that the primary product is not a polyether polyol product.

(i) If the PMPU manufactures only polyether polyol products, identification of that fact.

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

(A) Identification of polyether polyols as the primary product.

(B) Identification of the compliance option (either paragraph (e)(5)(i) or (e)(5)(ii) of this section), that has been selected by the owner or operator.

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

(i) Establish parameter monitoring levels as specified in § 63.1438, for those applicable emission points designated as Group 1 (or emission points subject to these provisions); and

(ii) Submit the parameter monitoring levels developed under paragraph (e)(7)(i) of this section and the basis for them in the Notification of Compliance Status report, as specified in § 63.1439(e)(6); or

(iii) Demonstrate that the parameter monitoring levels established are also appropriate for those periods when products other than polyether polyols are being produced. Material demonstrating this finding shall be submitted in the Notification of

Compliance Status report as specified in § 63.1439(e)(5).

(f) *Storage vessel ownership determination.* The owner or operator shall follow the procedures specified in paragraphs (f)(1) through (f)(7) of this section to determine to which process unit a storage vessel shall belong. Paragraph (f)(8) of this section specifies when an owner or operator is required to redetermine to which process unit a storage vessel belongs.

(1) If a storage vessel is already subject to another subpart of 40 CFR part 63 on [insert date of publication of final rule], that storage vessel shall belong 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 belong to that process unit.

(3) If a storage vessel is shared among process units, then the storage vessel shall belong to that process unit located on the same plant site as the storage vessel that has the greatest input into or output from the storage vessel (i.e., 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 belong 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 [insert date of publication of final rule] or based on the expected utilization for the 5 years following [insert date of publication of final rule] 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)(vi).

(7) Where a storage vessel is located at a major source that includes one or more process units which place material into, or receive materials from the storage vessel, but the storage vessel is

located in a tank farm (including a marine tank farm), the applicability of this subpart shall be determined according to the provisions in paragraphs (f)(7)(i) through (f)(7)(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 to the storage vessel in the tank farm so that product or raw material entering or leaving the process unit flows into (or from) the intervening storage vessel and does not flow directly into (or from) the storage vessel in the tank farm.

(ii) If there is no process unit at the major source that meets the criteria of paragraph (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. Applicability of this subpart to the storage vessel shall then be determined according to the provisions of paragraph (a) of this section.

(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 (f)(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 there is a change in the utilization of the storage vessel that could reasonably be expected to change the predominant use, the owner or operator shall redetermine to which process unit the storage vessel belongs by reperforming the procedures specified in paragraphs (f)(2) through (f)(7) of this section, as appropriate.

(g) *Changes or additions to plant sites.* The provisions of paragraphs (g)(1) through (g)(3) of this section apply to owners or operators that change or add to their plant site or affected source. Paragraph (g)(4) provides examples of what are and are not considered process changes for purposes of paragraph (g) of this section.

(1) *Adding a PMPU to a plant site.* The provisions of paragraphs (g)(1)(i)

and (g)(1)(ii) of this section apply to owners or operators that add PMPUs to a plant site.

(i) If one or more PMPU is added to a plant site, the addition shall be a new affected source and shall be subject to the requirements for a new affected source in this subpart upon initial start-up or by [insert date of publication of final rule], whichever is later, if the addition meets the criteria specified in paragraphs (g)(1)(i)(A) and (g)(1)(i)(B) and either (g)(1)(i)(C) or (g)(1)(i)(D) of this section:

(A) It is an addition that meets the definition of construction in § 63.2 of subpart A;

(B) Such construction commenced after September 4, 1997; and

(C) The addition has the potential to emit 10 tons per year or more of any organic HAP or 25 tons per year or more of any combination of organic HAP, and a polyether polyol is the primary product of the addition and polyether polyols are currently produced at the plant site as the primary product of an affected source; or

(D) 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 definition of a major source in § 63.2 of subpart A.

(ii) If a PMPU is added to a plant site, the addition shall be subject to the requirements for an existing affected source in this subpart upon initial start-up or by 3 years after [insert date of publication of final rule], whichever is later, if the addition does not meet the criteria specified in paragraph (g)(1)(i) of this section and the plant site meets, or after the addition is completed will meet, the definition of major source.

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

(i) If any process change is made or emission point is added to an existing affected source, the entire affected source shall be a new affected source and shall be subject to the requirements for a new affected source in this subpart upon initial start-up or by [insert date of publication of final rule], whichever is later, if the process change or addition meets the criteria specified in paragraphs (g)(2)(i)(A) through (g)(2)(i)(B) of this section:

(A) It is a process change or addition that meets the definition of reconstruction in § 63.2 of subpart A; 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 paragraphs (g)(2)(i)(A) and (g)(2)(i)(B) of this section, the resulting emission point(s) shall be subject to the requirements for an existing affected source in this subpart. The resulting emission point(s) shall be in compliance upon initial start-up or by 3 years after [insert date of publication of final rule], whichever is later.

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

(4) *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).

(h) *Applicability of this subpart except during periods of start-up, shutdown, malfunction, or non-operation.* Paragraphs (h)(1) through (h)(3) 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 provisions set forth in this subpart and the provisions 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, or periods of start-up or shutdown, malfunction. 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 specific provisions to which it is subject, then that emission point shall still be required to comply with the applicable provisions of this subpart during the start-up, shutdown, malfunction, or period of non-operation. For example, the degassing of a storage vessel would not affect the ability of a process vent to meet the requirements of §§ 63.1425 through 63.1430.

(2) The owner or operator shall not shut down items of equipment that are required or utilized for compliance with this subpart 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, or if the owner or operator must shut down the equipment to avoid damage due to a contemporaneous start-up, shutdown, or malfunction of the affected source or portion thereof.

(3) During start-ups, shutdowns, and malfunctions when the requirements of this subpart do not apply pursuant to paragraphs (h)(1) through (h)(3) of this section, the owner or operator shall implement, to the extent reasonably available, measures to prevent or minimize excess emissions. 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. Back-up control techniques are not required, but may be used 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) of subpart A, and the authority of § 63.177 of subpart H.

**§ 63.1422 Compliance schedule and relationship to existing applicable rules.**

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

(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 [insert date of publication of final rule], whichever is later, as provided in § 63.6(b) of subpart A.

(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 3 years after [insert date of publication of final rule], as provided in § 63.6(c) of subpart A, unless an extension has been granted as specified in paragraph (e) of this section.

(d) Except as provided for in paragraphs (d)(1) through (d)(5) of this section, existing affected sources shall be in compliance with § 63.1434 no later than [date 6 months from date of publication of final rule] unless an extension has been granted pursuant to section 112(i)(3)(B) of the Act, as discussed in § 63.182(a)(6) of subpart H.

(1) Compliance with the compressor provisions of § 63.164 of subpart H shall occur no later than [date 1 year from date of publication of final rule] for any compressor meeting one or more of the criteria in paragraphs (d)(1)(i) through (d)(1)(iv) of this section, if the work can be accomplished without a process unit shutdown, as defined in § 63.161 of subpart H.

(i) The seal system will be replaced;

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

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

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

(2) Compliance with the compressor provisions of § 63.164 of subpart H shall occur no later than [date 18 months

from date of publication of final rule], for any compressor meeting all the criteria in paragraphs (d)(2)(i) through (d)(2)(iv) of this section.

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

(ii) The work can be accomplished without a process unit shutdown as defined in § 63.161 of subpart H;

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

(iv) The owner or operator submits the request for a compliance extension to the appropriate U.S. Environmental Protection Agency (EPA) Regional Office at the addresses listed in § 63.13 of subpart A no later than 45 days before [date 6 months from date of publication of final rule]. The request for a compliance extension shall contain the information specified in § 63.6(i)(6)(i)(A), (B), and (D) of subpart A. 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 of subpart H cannot reasonably be achieved without a process unit shutdown, as defined in § 63.161 of subpart H, the owner or operator shall achieve compliance no later than [date 2 years after date of publication of final rule]. 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 of subpart H shall occur no later than [date 3 years from date of publication of final rule] for any compressor meeting one or more of the criteria in paragraphs (d)(4)(i) through (d)(4)(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; or

(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 of subpart H shall occur no later than [date 3 years from date of publication of final rule].

(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) of subpart A 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) of subpart A.

(2) The requirements in § 63.6(i)(8) through § 63.6(i)(14) of subpart A 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 provisions of subpart A of this part that apply and those that do not apply to owners and operators of affected sources subject to this subpart. For the purposes of this subpart, Table 3 of subpart F of this part is not applicable.

(g) Table 2 of this subpart summarizes the provisions of subparts F, G, and H of this part 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 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 of subpart H, 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 belongs to an affected source subject to this subpart that is also subject to the provisions of 40 CFR part 60, subpart Kb is required to comply only with the provisions of this subpart. After the compliance dates specified in this section, that storage vessel shall no longer be subject to 40 CFR part 60, subpart Kb.

(j) *Overlap with other regulations for monitoring, recordkeeping or reporting with respect to combustion devices, recovery devices, or recapture devices.* 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 in 40 CFR part 264 subpart AA or CC, the owner or operator may comply with either paragraph (j)(1) or (j)(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 in 40 CFR part 265 subpart AA or CC, the owner or operator may comply with either paragraph (j)(1) or (j)(3) of this section. If the owner or operator elects to comply with either paragraph (j)(2) or (j)(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) of this subpart, 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 CC and the periodic reporting requirements under 40 CFR part 264 subpart AA or 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) of this subpart, 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)(1) Notwithstanding time periods specified in this subpart for completion of required tasks, such time periods may be changed by mutual agreement between the owner or operator and the Administrator, as specified in subpart A of this part (e.g., a period could begin on the compliance date or another date, rather than on the first day of the standard calendar period). For each time period that is changed by agreement, the revised period shall remain in effect until it is changed. A new request is not necessary for each recurring period.

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

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

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

(3) In all instances where a provision of this subpart requires completion of a task during each 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)  
Compliance schedule (subpart A)  
Construction (subpart A)  
Continuous monitoring system (subpart A)

Emission standard (subpart A)  
EPA (subpart A)  
Equipment (subpart H)  
Equipment leak (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)  
In organic hazardous air pollutant (HAP) service (subpart H)  
Major source (subpart A)  
Malfunction (subpart A)  
New source (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)  
Process wastewater (subpart F)  
Process wastewater stream (subpart G)  
Reactor (subpart G)  
Recapture device (subpart G)  
Reconstruction (subpart A)  
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. If a term is defined in a subpart referenced above and in this section, it shall have the meaning given in this section for purposes of this subpart.

*Affected source* is defined in § 63.1420(a).

*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) of subpart G.

*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 operations.

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

*Combination of process vents that are Group 1* means a group of process vents that has a total resource effectiveness index value, calculated according to § 63.115 of subpart G, less than or equal to 1.0 for process vents from continuous unit operations. For process vents from batch unit operations, the combination of process vents that are Group 1 means a group of process vents that has a cutoff flow greater than the annual average flow, calculated according to § 63.488(b) of subpart U.

*Combination of process vents that are Group 2* means a group of process vents that has a total resource effectiveness index value, calculated according to § 63.115 of subpart G, greater than 1.0 for process vents from continuous unit operations. For process vents from batch unit operations, the combination of process vents that are Group 2 streams means a group of process vents that has a cutoff flow less than the annual average flow, calculated according to § 63.488(b) of subpart U.

*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.

*Day* means calendar day for the purposes of this subpart.

*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 (ethylene oxide and propylene oxide) are regulated by the provisions of this subpart.

*Existing affected source* is defined in § 63.1420(a)(3).

*Extended Cookout* means a control technique that reduces the amount of unreacted EO and/or 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 been emitted.

*Flexible operation unit* means a process unit that manufactures different chemical products in addition to polyether polyols periodically by alternating raw materials or operating conditions. These units are also referred to as campaign plants or blocked operations.

*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) of subpart G, with the exceptions listed in § 63.1433(a)(10) for the purposes of this subpart (i.e., for organic HAP listed on Table 5 of this subpart only).

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

*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. 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 of subpart F, 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 between batch cycles is not maintenance wastewater, for the purposes of this subpart.

*Make or modify the product* means to produce the polyether polyol with epoxides or other cyclic ethers with compounds having one or more reactive hydrogens, and to add any preservatives/antioxidants in order to maintain the quality of the finished product before shipping. Making and modifying the product for this regulation does not include grafting, polymerizing the polyol, or modifying it with compounds other than EO or PO.

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

*Month* means either a calendar month or a repeating 30-day period.

*New affected source* is defined in § 63.1420(a)(4).

*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 introduced into the manufacturing process other than as an impurity, or has been or will be reported under any Federal or State program, such as EPCRA section 311, 312, or 313 or Title V; and

(2) Is listed in Table 2 of subpart F of this part.

**Polyether polyol** means 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.

**Polyether polyol manufacturing process unit (PMPU)** means a collection of equipment assembled and connected by process pipes or ducts, used to process raw materials and to manufacture a polyether polyol product as its primary product. A polyether polyol process unit consists of more than one unit operation. This collection of equipment includes 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 polyether polyol product process unit) that are subject to the equipment leak provisions as specified in § 63.1434.

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

**Process** means a logical grouping of processing equipment which collectively function to produce a polyether polyols. A process may consist of one or more unit operations. For the purpose of this subpart, process includes all or a combination of reaction, recovery, separation, purification, or other activity, operation, manufacture, or treatment which are used to produce a polyether polyol.

**Process condenser** means a condenser whose primary purpose is to recover material as an integral part of a unit operation. The condenser must support a vapor-to-liquid phase change for periods of source equipment operation

that are above the boiling or bubble point of substance(s). Examples of process condensers include distillation condensers, reflux condensers, process condensers in line prior to the vacuum source, and process condensers used in stripping or flashing operations.

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

**Process vent** means a point of emission from a unit operation having a gaseous emission stream. Unit operations that may have process vents are condensers, distillation units, reactors, or other unit operations within the PMPU. Process vents are points 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 control, recovery, or recapture devices. Process vents exclude pressure relief valve discharges, gaseous streams routed to a fuel gas system(s), and leaks from equipment regulated under § 63.1434.

**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 curve representing the decline in pressure versus time. All products within a product class will have an essentially similar pressure decline 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).

**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, because they are part of the reactor unit operation), oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin film evaporation units. When this subpart requires compliance with monitoring, recordkeeping, or recording requirements of this subpart, recapture devices are considered recovery devices.

**Residual** is defined in § 63.111 of subpart G, 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 for purposes including, but not limited to, periodic maintenance, replacement of equipment, or repair, the cessation of operation of an affected source, a PMPU within an affected source, or a unit operation within an affected source, including equipment required or used to comply with this subpart, or the emptying or degassing of a storage vessel. Shutdown does not include the normal periods between batch cycles. 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, or a unit operation within an affected source, or 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 can occur.

**Storage vessel** means a tank or other vessel that is used to store liquids that contain one or more organic HAP and that has been assigned, according to the procedures in § 63.1420(f), to a PMPU that is subject to this subpart. Storage vessels do not include:

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

(2) Pressure vessels designed to operate in excess of 204.9 kilopascals and without 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; and



(6) Wastewater storage tanks.

*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 columns, 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 of subpart H 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

(a) an annual average concentration of organic HAP listed in Table 5 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

(b) an annual average concentration of organic HAP listed on Table 5 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.

*Wastewater stream* means a stream that contains wastewater as defined in this section.

*Year* means any consecutive 12-month period or 365 rolling days.

(c) Sections 63.1432, 63.1433, 63.1434, and 63.1435, of this subpart directly reference sections of subparts F, G, and H of this part. Terms used in the referenced sections of subparts F, G, and H of this part shall have the meanings given them in those subparts, as appropriate, unless a term is also defined in paragraph (b) of this section. If a term in a referenced section is defined in subpart F, G, or H of this part and in paragraph (b) of this section, the definition provided in paragraph (b) of this section shall override the definition of the term in subpart F, G, or H of this part, for the purposes of this subpart.

#### § 63.1424 Emission standards.

(a) Except as provided under paragraphs (b) through (d) 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, storage vessels subject to § 63.1432, process wastewater, and/or in-process equipment subject to § 63.149 of subpart G) 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 (b)(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 (a)(6) of this section; or

(2) Comply with the first set of requirements identified in paragraphs (b)(2)(i) through (b)(2)(iv) of this section which 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. Compliance with the first applicable set of requirements identified in paragraphs (b)(2)(i) through (b)(2)(iv) of this section constitutes compliance with all other requirements in paragraphs (b)(2)(i) through (b)(2)(iv) of this section applicable to other types of emissions in the combined stream.

(i) The requirements of this subpart for process vents subject to § 63.1425 through § 63.1430 and that require controls, including applicable monitoring, recordkeeping, and reporting;

(ii) The requirements of § 63.119(e) of subpart G, as specified in § 63.1432, for control of emissions from Group 1 storage vessels, including applicable monitoring, recordkeeping, and reporting;

(iii) The requirements of § 63.139 of subpart G, as specified in § 63.1433, for control techniques used to control

emissions from waste management units, including applicable monitoring, recordkeeping, and reporting; or

(iv) The requirements of § 63.139 of subpart G, as specified in § 63.1433, for closed vent systems for control of emissions from in-process equipment subject to § 63.149 of subpart G, as specified in § 63.1433, including applicable monitoring, recordkeeping, and reporting.

#### § 63.1425 Process Vent Control Requirements.

(a) For each process vent at an affected source, the owner or operator shall comply with the provisions of this section. Paragraphs (b), (c), and (d) of this section are applicable to affected sources that produce polyether polyol products using epoxides. There are three separate emission limitations for process vents at affected sources using epoxides. Paragraph (b) of this section contains emission limitations for epoxide emissions; paragraph (c) of this section contains limitations for organic HAP emissions resulting from the use of nonepoxide organic HAP (in addition to epoxides) to make or modify the polyether polyol product; and paragraph (d) of this section contains limitations for emissions of organic HAP resulting from the use of organic HAP in catalyst extraction. Owners and operators of all affected sources using epoxides in the production of polyether polyol products are subject to the requirements of paragraph (b) of this section. Owners or operators are subject to the requirements of paragraph (c) of this subpart only if nonepoxide organic HAP are used to make or modify the polyether polyol product. Similarly, owners or operators are subject to the requirements of paragraph (d) of this section only if organic HAP are used in catalyst extraction. Paragraph (e) of this section provides an overview of how other sections of this subpart relate to demonstrating compliance with the control requirements of paragraphs (b), (c), and (d) of this section. The owners 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 process unit operations and continuous process unit operations within each PMPU in accordance with either paragraph (b)(1) or (b)(2) of this section.

(1) For new affected sources, the owner or operator shall comply with

either paragraph (b)(1)(i), (b)(1)(ii) or (b)(1)(iii) of this section.

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

(ii) [Reserved]; or

(iii) Maintain a PMPU-wide emission factor of no greater than  $4.43 \times 10^{-3}$  kilogram epoxide emissions per megagram of product.

(2) For existing affected sources, the owner or operator shall comply with either paragraph (b)(2)(i), (b)(2)(ii), or (b)(2)(iii) of this section.

(i) Reduce the total epoxide emissions from the sum total of all process vents by an aggregated 98 percent;

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

(iii) Maintain a PMPU-wide emission factor of no greater than  $1.69 \times 10^{-2}$  kilogram epoxide emissions per megagram of product.

(c) *Requirements for nonepoxide HAP emissions making or modifying the product.* The owner or operator of a new or existing affected source where polyether polyol products are produced using epoxides shall determine the group status for the combination of process vents in each PMPU that are associated with the use of one or more nonepoxide organic HAP to make or modify the product. The group status shall be determined using the procedures in § 63.1428 (a) through (f) for process vents from batch unit operations and § 63.1428(h) for process vents from continuous unit operations. Depending on the results of the group status determination, the owner or operator shall comply with the provisions of paragraph (c)(1), (c)(2), (c)(3), or (c)(4) of this section, as applicable. A PMPU that does not use any nonepoxide organic HAP to make or modify the polyether polyol product is exempt from the requirements of this paragraph.

(1) *Process vents from batch unit operations—Group 1 requirements.* For PMPUs where nonepoxide organic HAP is used to make or modify the product in batch unit operations, the owner or operator shall reduce total nonepoxide organic HAP emissions from the combination of process vents from batch unit operations associated with making or modifying the product by an aggregated 90 percent if the combination of process vents meets the Group 1 criteria contained in § 63.1428 of this subpart.

(2) *Process vents from batch unit operations—Group 2 requirements.* For PMPUs where nonepoxide organic HAP is used to make or modify the product

in batch unit operations, and the combination of process vents from batch unit operations associated with making or modifying the product meets the Group 2 criteria, the owner or operator shall comply with the provisions of § 63.1428(g) of this subpart. No other control requirements apply to these process vents.

(3) *Process vents from continuous unit operations—Group 1 requirements.* For PMPUs where nonepoxide organic HAP is used to make or modify the product in continuous unit operations, the owner or operator shall reduce total nonepoxide organic HAP emissions from the combination of process vents from continuous unit operations that make or modify the product by an aggregated 98 percent, if the combination of process vents meets the Group 1 criteria contained in § 63.1428 of this subpart.

(4) *Process vents from continuous unit operations—Group 2 requirements.* For PMPUs where nonepoxide organic HAP is used to make or modify the product in continuous unit operations, and the combination of process vents from continuous unit operations that make or modify the product meets the Group 2 criteria, the owner or operator shall comply with paragraphs (c)(4)(i) or (c)(4)(ii) of this section, as applicable. No control requirements apply to these Group 2 process vents.

(i) If the TRE for the combination of process vents 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 the provisions in § 63.1428(h)(4).

(ii) If the TRE for the combination of process vents is greater than 4.0, the owner or operator shall comply 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 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. A PMPU that does not use any nonepoxide organic HAP in catalyst extraction is exempt from the requirements of this paragraph.

(e) This paragraph describes how §§ 63.1426 through 63.1431 of this subpart shall be used with the control requirements specified in (b), (c), and (d) of this section.

(1) *Compliance with requirements for epoxide emissions.* (i) If an owner or operator chooses to comply with the

control efficiency provisions in paragraph (b)(1)(i) or (b)(2)(i) of this section, the owner or operator shall comply with the provisions of paragraph (b)(1)(i) or (b)(2)(i) of this section by determining the epoxide emissions before and after control.

(A) If extended cookout is not being used as a control technique to reduce epoxide emissions, control efficiency shall be determined in accordance with § 63.1426 of this subpart. After the initial determination of compliance, monitoring of combustion, recovery, or recapture device performance shall be conducted in accordance with § 63.1429 of this subpart.

(B) If extended cookout is being used as a control technique to reduce epoxide emissions, uncontrolled and controlled emissions and control efficiency shall be determined in accordance with § 63.1427 of this subpart. After the initial determination of compliance, monitoring of the use of extended cookout shall be conducted in accordance with the requirements of § 63.1427(h) of this subpart.

(ii) If an owner or operator chooses to comply with the outlet concentration provision in paragraph (b)(2)(ii) of this section, the owner or operator shall determine the outlet concentration in accordance with § 63.1427 of this subpart. After the initial determination of compliance, monitoring of combustion, recovery, or recapture device performance or outlet concentration shall be conducted in accordance with § 63.1429 of this subpart.

(iii) If an owner or operator chooses to comply with the emission factor limitation provisions in paragraph (b)(1)(iii) or (b)(2)(iii) of this section, the owner or operator shall develop an epoxide annual emissions plan, as specified in § 63.1431 of this subpart. The owner or operator shall demonstrate compliance with this plan and monitor process and/or combustion, recovery, or recapture device parameters, in accordance with § 63.1431(c), (d), (e), and (f), as appropriate.

(2) *Compliance with requirements for nonepoxide organic HAP emissions from making or modifying the product.* The owner or operator shall comply with the provisions of paragraph (c) of this section in accordance with paragraph (e)(2)(i) of this section, and with either paragraph (e)(2)(ii) or (e)(2)(iii) of this section.

(i) For each PMPU, determine if the combination process vents from unit operations that are associated with the use of a nonepoxide organic HAP to make or modify the product meet the

Group 1 criteria provided in § 63.1428(a) for the combination of process vents from batch unit operations or § 63.1428(b) for the combination of process vents from continuous unit operations.

(ii) For combinations of process vents that are Group 1, demonstrate compliance with paragraph (c)(1) or (c)(2) of this section by complying with the performance test requirements contained in § 63.1426. After the initial determination of compliance, compliance shall be demonstrated by monitoring of combustion, recovery, or recapture device performance, in accordance with § 63.1429.

(iii) For combination of process vents that are Group 2, comply with the monitoring requirements in § 63.1429.

(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 requirements of §§ 63.113 through 63.118 of subpart G, except as provided for in paragraphs (f)(1) through (f)(10) of this section.

(1) When December 31, 1992 (i.e., the proposal date for subpart G) is referred to in § 63.113 of subpart G, 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, of subpart G are referred to in §§ 63.114(c) and 63.117(e) of subpart G, § 63.1439(f), alternative monitoring parameters, and § 63.1439(e)(8), submission of an operating permit, respectively, shall apply for the purposes of this subpart.

(3) When the Notification of Compliance Status requirements contained in § 63.152(b) of subpart G are referred to in §§ 63.114, 63.117, and 63.118 of subpart G, 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) of subpart G are referred to in §§ 63.117 and 63.118 of subpart G, 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) of subpart G is referred to in § 63.118(f)(2) of subpart G, the definition of excursion in § 63.1438(f) shall apply for the purposes of this subpart.

(6) When § 63.114(e) of subpart G specifies that an owner or operator shall

submit the information required in § 63.152(b) of subpart G 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) of subpart G, paragraphs (e)(7)(i) through (e)(7)(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) of subpart G, 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. The following information shall be submitted:

(A) A description of the process change; and

(B) A schedule for compliance with the provisions of this subpart, as required under § 63.1439(e)(6)(iii)(D)(1).

(ii) Whenever a process change, as defined in § 63.115(e) of subpart G, 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. This report may be included in the next Periodic Report. The following information shall be submitted:

(A) A description of the process change; and

(B) A schedule for compliance with the provisions of this subpart, as required under § 63.1439(e)(6)(iii)(D)(2).

(iii) Whenever a process change, as defined in § 63.115(e) of subpart G, 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. This report may be included in the next Periodic Report. The following information shall be submitted:

(A) A description of the process change; and

(B) A schedule for compliance with the provisions of this subpart, as required under § 63.1439(e)(6)(iii)(D)(2).

(iv) Whenever a process change, as defined in § 63.115(e) of subpart G, 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. This report may be included in the next Periodic Report. The following information shall be submitted:

(A) A description of the process change; and

(B) A schedule for compliance with the provisions of this subpart, as required under § 63.1439(e)(6)(iii)(D)(2).

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

(9) When §§ 63.115 and 63.116 of subpart G refer to Table 2 of 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 (c)(4) of subpart G 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 (f)(10)(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)(iii),

(b)(2)(i), (b)(2)(ii), (b)(2)(iii), (c)(1), (c)(3), or (d) of this subpart, the owner or operator shall comply with the flare provisions in § 63.11(b) of subpart A, and is not required to demonstrate the control efficiency. In order to use only a flare to comply with § 63.1425(b)(1)(i), an owner or operator shall submit a request in accordance with § 63.6(g) of subpart A.

**(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 (b)(5) of this section is used to comply with § 63.1425 (b), (c), or (d) of this subpart.

(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 for determining compliance with a regulation promulgated by the EPA and the test was conducted using the same Methods specified in this section and either no process changes have been made since the test, or the owner or operator can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes.

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

(i) Has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 266, subpart H; or

(ii) Has certified compliance with the interim status requirements of 40 CFR part 266, subpart H.

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

**(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 organic HAP percent reduction efficiency requirement in § 63.1425, (b)(2)(i), (c)(1), (c)(3), or (d) an organic HAP concentration limitation in § 63.1425 (b)(1)(ii) or (b)(2)(ii), or an annual epoxide emission limitation

§ 63.1425 (b)(1)(iii) or (b)(2)(iii), shall conduct a performance test using the procedures in paragraphs (c)(1) through (c)(4) of this section. The organic HAP concentration and percent reduction may be measured as either 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 § 63.1426(b), the owner or operator is only required to measure epoxide control efficiency or outlet concentration.

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

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

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

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

(2) To demonstrate compliance with the requirements for organic HAP emissions from the use of nonepoxide organic HAP in making or altering the product in § 63.1425(c), the inlet sampling site shall be located after the final recovery device.

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

(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) For determination of compliance with a parts per million by volume total organic HAP 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) The gas volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate.

(3) To determine compliance with a parts per million by volume total organic HAP limit in § 63.1425 (b)(1)(ii) or (b)(2)(ii), the owner or operator shall use Method 18 of 40 CFR part 60, appendix A to measure either TOC minus methane and ethane or total organic HAP (of the HAP of concern). Alternatively, any other method or data that has been validated according to the applicable procedures in Method 301 of appendix A of this part, may be used. For combustion devices, the following procedures shall be used to calculate parts per million by volume concentration, corrected to 3 percent oxygen:

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

(A) Testing of process vents from continuous unit operations will consist of three 1-hour runs. Gas stream volumetric flow rates shall be measured at approximately equal intervals of about 15 minutes during each 1-hour run. The HAP concentration shall be determined from samples collected in an integrated sample over the duration of each 1-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, at a minimum, include testing for the worst-case episode or aggregated episodes(s) in the batch cycle or cycles (in the event that equipment is manifolded and vented through a common stack). Gas stream volumetric flow rates shall be measured at 15-minute intervals, or at least once during the emission episode. The HAP or TOC concentration shall be

determined from samples collected in an integrated sample over the duration of the worst case episode(s), 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. The worst case episode shall be characterized by the criteria presented in paragraph (c)(3)(i)(B)(1), (c)(3)(i)(B)(2), or (c)(3)(i)(B)(3) of this section.

(1) The period of a batch cycle or combined cycles in which a process vent gas will contain at least 50 percent of the total HAP load (in lb) from the entire cycle or combined cycles (if more than one cycle is vented through the same process vent) over a time duration that is sufficient to include all batch cycles routed to the common process vent. An emission profile as described in paragraph (c)(3)(i)(C) of this section shall be used to identify the worst case episode.

(2) A 1-hour 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 contain the highest HAP mass loading rate, in lb/hr, experienced over a time duration that is sufficient to include all batch cycles routed to the common process vent. An emission profile as described in paragraph (c)(3)(i)(C) of this section shall be used to identify the worst case episode.

(3) If a condenser is used to control the process vent stream(s), the worst case emission episode(s) shall represent a 1-hour 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)(C) of this section and a concentration profile that will allow calculation of sensible and latent heat loads.

(4) For the purposes of testing the combustion, recovery, or recapture device, the worst case episode may be simulated based on the emissions profile described in paragraph (c)(3)(i)(C) of this section. A simulated worst case episode must have a representative composition, HAP load,

and duration that would be predicted from the emission profile.

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

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

(E) For testing of batch emission episodes of greater than 1 hour, the emission rate from a single test run may be used to determine compliance. For testing of episodes less than or equal to 1 hour, testing shall include three runs, each of a duration not less than the duration of the worst case episode.

(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 (c)(3)(ii)(B) of this section.

(A) The TOC concentration ( $C_{\text{TOC}}$ ) is the sum of the concentrations of the individual components and shall be computed for each run using the following equation:

$$C_{\text{TOC}} = \sum_{i=1}^x \frac{\left( \sum_{j=1}^n C_{ji} \right)}{x} \quad [\text{Equation 1}]$$

Where:

$C_{\text{TOC}}$  = 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 ( $C_{\text{HAP}}$ ) shall be computed according to equation 1, 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 (% $O_{2d}$ ). 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 ( $C_c$ ) shall be computed using equation 2, as follows:

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

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.

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

(4) To determine compliance with a percent reduction requirement of § 63.1425(b)(1)(i), (b)(2)(i), (c)(1), (c)(3), or (d), the owner or operator shall use Method 18 of 40 CFR part 60, appendix A; alternatively, any other method or data that has been validated according to the applicable procedures in Method 301 of appendix A of this part may be used. The following procedures shall be used to calculate percent reduction efficiency:

(i) Test duration shall be as specified in paragraphs (c)(3)(i)(A) through (c)(3)(i)(E) 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:

$$E_i = K_2 \left( \sum_{j=1}^n C_{ij} M_{ij} \right) Q_i \quad [\text{Equation 3}]$$

$$E_o = K_2 \left( \sum_{j=1}^n C_{oj} M_{oj} \right) Q_o \quad [\text{Equation 4}]$$

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,  $2.494 \times 10^{-6}$  (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 3 and 4 in paragraph (c)(4)(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 3 and 4 in paragraph (c)(4)(ii)(A) of this section.

(iii) The percent reduction in TOC (minus methane and ethane) or total organic HAP shall be calculated using equation 5 as follows:

$$R = \frac{E_i - E_o}{E_i} (100) \quad [\text{Equation 5}]$$

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)(4)(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)(4)(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 exiting the combustion device, respectively.

(d) *Determination of uncontrolled organic HAP emissions.* For each process vent at a PMPU that is complying with § 63.1425 (b)(1)(i), (b)(1)(iii), (b)(2)(i), (b)(2)(iii), (c)(1), (c)(3), or (d) 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 this paragraph shall also be used to calculate uncontrolled epoxide emissions prior to the onset of an extended cook out and uncontrolled epoxide emissions prior to the end of the extended cook out.

(1) 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 associated with the use of nonepoxide organic HAP to make or modify a polyether polyol product is subject to the Group 1 requirements of either § 63.1425 (c)(1) or (c)(3), the owner or operator is not required to determine uncontrolled nonepoxide organic HAP emissions for those process vents if every process vent associated with the use of nonepoxide

organic HAP to make or modify the polyether polyol 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) 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 § 63.488 (b)(1) through (b)(7) of subpart U. Uncontrolled emissions from process vents from batch unit operations shall be determined at the exit from the batch unit operation 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)(A) 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 at the exit from the continuous unit operation before any recovery devices, or

(B) For process vents subject to the Group 1 requirements for process vents associated with the use of nonepoxide organic HAP to make or modify the polyether polyol product in § 63.1425(c)(3) of this subpart, uncontrolled nonepoxide organic HAP emissions shall be determined after the final 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 using Equation 6. The organic HAP emission reduction must be determined for each group of

process vents subject to the same paragraph of § 63.1425 of this subpart. For instance, process vents that emit

epoxides are subject to paragraph (b) of § 63.1425. Therefore, the organic HAP (i.e., epoxide) emission reduction must

be determination for the group of vents in a PMPU that are subject to this paragraph.

$$RED_{PMPU} = \left( \frac{\sum_{i=1}^n (E_{unc,i})(R_i)}{\sum_{i=1}^n (E_{unc,i}) + \sum_{j=1}^m (E_{unc,j})} \right) * 100 \quad \text{[Equation 6]}$$

Where:

$RED_{PMPU}$  = Organic HAP emission reduction for the group of process vents exclusively subject to § 63.1425 (b), (c), or (d) of this subpart, percent

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

$n$  = Number of process vents in the PMPU that are exclusively subject to § 63.1425 (b), (c), or (d) of this subpart and that are controlled using a combustion, recovery, or recapture device

$R_i$  = Control efficiency of the combustion, recovery, or recapture device 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 exclusively subject to § 63.1425 (b), (c), or (d) of this subpart 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) or (ii) of this section.

(i) If the process vent is controlled using a flare, or a combustion device specified in paragraph (b)(1), (b)(2), (b)(4), or (b)(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.

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

(a) Owners or operators of affected sources that produce polyether polyol products using epoxides, and that are using extended cookout (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)(i) shall determine the batch cycle percent epoxide emission reduction for each product class in accordance with the provisions of paragraphs (b) through (g) of this section. Owners or operators shall also comply with the testing, monitoring, and recordkeeping and reporting requirements associated with extended cookout listed in paragraphs (h), (i), (j), and (k) of this section.

(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 product 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. If the owner or operator elects to use any method other than direct measurement, the percent reduction must be determined by direct measurement for one product for each PMPU to verify the accuracy of the estimation method selected.

(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 (b)(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 paragraph (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, and

(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 prior to the onset of the ECO, if any, plus the epoxide emissions at the onset of the ECO. The default 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 7.

$$E_{\text{epox,uncontrolled}} = (C_{\text{liq},i})(V_{\text{liq},i})(D_{\text{liq},i}) + (C_{\text{vap},i})(V_{\text{vap},i})(D_{\text{vap},i}) + (E_{\text{epox,before}})$$

[Equation 7]

Where:

$E_{\text{epox,uncontrolled}}$  = Uncontrolled epoxide emissions at the onset of the ECO, kilograms per (kg)/batch

$C_{\text{liq},i}$  = 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

$E_{epox,before}$  = 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.

(3) The owner or operator may request to define the onset of the ECO differently than described in paragraph (c)(1) or (c)(2) of this section by submitting a request, along with a justification for the alternative definition of the onset of the ECO to the Administrator in the Precompliance report.

(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 8.

$$E_{epox,ECO} = (C_{liq,f})(V_{liq,f})(D_{liq,f}) + (C_{vap,f})(V_{vap,f})(D_{vap,f})$$

[Equation 8]

Where:

$E_{epox, ECO}$  = 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 paragraph (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) (1) The owner or operator shall determine the percent epoxide emission reduction for the batch cycle using Equation 9.

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

[Equation 9]

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 10, instead of using the procedures in paragraph (e)(1) of this section.

$$R_{batchcycle} = \left[ 1 - \frac{P_{epox,f}}{P_{epox,i}} \right] * 100$$

[Equation 10]

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) *Determination of epoxide concentration in reactor liquid.* 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 11.

$$C_{liq,f} = C_{liq,i}e^{-kt}$$

[Equation 11]

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

Where:

$C_{liq,f}$  = 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

(iii) If the owner/operator deems that the methods listed in paragraph (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) *Determination of concentration of epoxide in the reactor vapor space.* 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 69, 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 paragraph (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 in accordance with manufacturer's recommendations.

(h) *ECO Monitoring Requirements.* The owner or operator using ECO shall comply with the monitoring requirements of this paragraph to demonstrate continuous compliance with the emission limitation. Paragraphs (h)(1) through (h)(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 (h)(1) (i) through (iii) of this section, or may utilize the provision in paragraph (h)(1)(iv) of this section.

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

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

(iii) Direct measurement of epoxide concentration in the reactor liquid at the end of the ECO; or

(iv) An owner or operator may submit a request to the Administrator to monitor a parameter other than the parameters listed in paragraphs (h)(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 must be maintained during periods of operation, one of the parameters in paragraphs (h)(2)(i) through (h)(2)(iii) of this section, or may utilize the procedure in paragraph (h)(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; and

(iii) The epoxide concentration in the reactor liquid at the end of the ECO; or

(iv) An owner or operator may submit a request to the Administrator to monitor a parameter other than the parameters listed in paragraphs (h)(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 (h)(2) of this section to determine if an excursion has occurred. An ECO excursion is defined

as one of the situations described in paragraphs (h)(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 level established in paragraph (h)(2)(i) of this section;

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

(iii) When the epoxide concentration in the reactor liquid at the end of the ECO is greater than the level established in paragraph (h)(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.

(i) *Recordkeeping requirements.* The owner or operator shall maintain the records specified in this paragraph.

(1) *Records for each product class.* The owner or operator shall maintain the records specified in paragraph (i)(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 paragraph (i)(1) (iii) through (x) of this section, as applicable, for each product class.

(i) Operating conditions of the product class, including

(A) Pressure decline curve

(B) Minimum reaction temperature

(C) Number of -OH groups in the catalyst feed

(D) Minimum catalyst concentration

(E) The EO/PO ratio

(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 paragraph (i)(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 end of 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 (h)(3) of this section.

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

(x) 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.

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

(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) *Continuous records.* The owner or operator shall maintain the records specified in paragraphs (i)(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 (h)(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 of this subpart.

(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) of this subpart.

(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.

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

(1) *Precompliance report.* The information specified in paragraphs (j)(1) (i) through (iii) of this section shall be provided in the Precompliance Report, as specified in § 63.1439(e)(4) of this subpart.

(i) A request to define the onset of the ECO in a manner different than provided in paragraphs (c)(1) and (c)(2) of this section, as provided for in paragraph (c)(3) of this section.

(ii) 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.

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

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

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

(A) The operating conditions of this product class, as specified in paragraph (i)(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 (h)(2) of this section,

(iii) If a combustion, recovery, or recapture device is used to reduce emissions, the information specified in § 63.1430(g) of this subpart

(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) *Periodic reports.* The information specified in paragraphs (j)(3) (i) through (iii) of this section shall be provided in the periodic report, as specified in § 63.1439(e)(6) of this subpart.

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

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

(1) If the operating conditions of the new polyether polyol product are consistent with the operating conditions for an existing product class, the owner or operator shall comply with the requirements in paragraphs (k)(1)(i) and (2) of this section.

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

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

(2) If the operating conditions of the new polyether 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 (k)(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 (i)(1) of this section for the product class.

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

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

(1) A change in operation for a polyether polyol product is defined as a change in any one of the parameters listed in paragraph (l)(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 only update the records specified in paragraphs (i)(1)(i) (A) through (G) 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 (g)(3) (i) or (ii) of this section, as appropriate.

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

(A) The owner or operator shall update the list of products for the product class required by paragraph (i)(1)(ii) of this section, and shall record

the new information in paragraphs (i)(1)(i) (A) through (G) of this section for the product.

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

(ii) If the new operating conditions of the polyether 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 (l)(3)(i) (A) through (C) of this section.

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

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

(C) Within 180 days of the change in operating conditions for the polyether polyol product, the owner or operator shall submit a report containing the information specified in paragraphs (j)(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, the group status of the combination of all process vents from batch unit operations that are associated with the use of nonepoxide organic HAP to make or modify a polyether polyol product. This group status shall be determined in accordance with paragraph (f) of this section using the annual uncontrolled nonepoxide organic HAP emissions determined in accordance with paragraph (b) of this section, the annual average flow rate determined in accordance with paragraph (d) of this section, and the cutoff flow rate determined in accordance with paragraph (e) of this section.

(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 a polyether polyol product in accordance

with paragraphs (b)(1) and (b)(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 a polyether polyol product shall be determined using the procedures in § 63.488(b) of subpart U.

(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 a polyether polyol 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 combination is considered to be Group 2, and the owner or operator of that PMPU shall comply with the requirements in § 63.1425(c)(4). The owner or operator of that PMPU is not required to comply with the provisions in paragraphs (d) through (f) 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 polyether polyol product in accordance with paragraphs (d)(1) and (d)(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 a polyether polyol product shall be determined using the procedures in § 63.488(e) of subpart U.

(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)(2) 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 a polyether polyol 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 a polyether polyol product, the owner or operator shall calculate the cutoff flow rate using Equation 12.

$$CFR = (0.00437)(AE) - 51.6$$

[Equation.12]

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 a polyether polyol product, as determined in paragraph (b)(2) of this section, kg/yr.

(f) *Group 1/Group 2 status determination.* To determine the group status of the combination of process vents in a PMPU from batch unit operations that are associated with the use of nonepoxide organic HAP to make or modify a polyether polyol product, the owner or operator shall compare the cutoff flow rate, calculated in accordance with paragraph (e) of this section, with the annual average flow rate, determined in accordance with paragraph (d)(2) of this section. The group determination status shall be made using the criteria specified in paragraphs (f)(1) and (f)(2) of this section.

(1) If the cutoff flow rate is greater than or equal to the annual average flow rate of the streams, 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 a polyether polyol is classified as Group 1.

(2) If the cutoff flow rate is less than the annual average flow rate of the streams, 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 a polyether polyol is classified as Group 2.

(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 process vents from batch unit operations in a PMPU that are associated with the use of nonepoxide organic HAP to make or modify a polyether polyol 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 (g)(3) of this section.

(1) Examples of process changes include, but are not limited to, changes in production capacity, production rate, feedstock type, or catalyst type; or whenever there is replacement, removal, or modification of recovery equipment considered part of the batch unit operation. 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. For purposes of this paragraph, 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 (f) of this section, as applicable. Alternatively, engineering assessment, as described in § 63.488(b)(6)(i) of subpart U, may be used to determine the effects of the process change.

(3) Based on the results of paragraph (g)(2) of this section, owners or operators 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 a polyether polyol 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 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 the combination of all process vents from continuous unit operations in a PMPU that are associated with the use of nonepoxide organic HAP to make or modify a polyether polyol 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 procedures in § 63.115 (d)(1) or (d)(2) of subpart G

and the TRE equation in § 63.115(d)(3) of subpart G, with the following exception. The procedures in § 63.115(d) of subpart G are to determine the TRE index value for an individual process vent. For the purposes of this subpart, the TRE index value shall be determined for the combination of all process vents from continuous unit operations in a PMPU that are associated with the use of nonepoxide organic HAP to make or modify a polyether polyol product by summing the values in the individual process vent streams.

(2) The owner or operator of a group of process vents from continuous unit operations that is Group 2 shall recalculate the TRE index value as necessary to determine whether the group of process vents is Group 1 or Group 2, whenever process changes are made that could reasonably be expected to change the group of process vents to Group 1. Examples of process changes include, but are not limited to, changes in production capacity, production rate, feedstock type, or catalyst type, or whenever there is replacement, removal, or 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 § 63.115 (a), (b), (c), and (d) of subpart G, as applicable, or on best engineering assessment of the effects of the change. Engineering assessments shall meet the specifications in § 63.115(d)(1) of subpart G.

(ii) Where the recalculated TRE index value is less than or equal to 1.0, or less than or equal to 4.0 but greater than 1.0, the owner or operator shall submit a report as specified in § 63.1430(j) or (k) and shall comply with the appropriate provisions in § 63.1425 of this subpart by the dates specified in § 63.1422 of this subpart.

#### § 63.1429 Process vent monitoring requirements.

(a) Each owner or operator of a process vent that uses a combustion, recovery, or recapture device to comply with the requirements in § 63.1425(b)(1), (b)(2), (c)(1), (c)(3), or (d) of this subpart shall install monitoring equipment specified in paragraph (a)(1), (a)(2), (a)(3), (a)(4), (a)(5), (a)(6), or (a)(7), of this section, depending on the type of device used.

Also, each owner or operator that uses a recovery or recapture device to comply with § 63.1425(c)(4) shall install monitoring equipment specified in paragraph (a)(4), (a)(5), (a)(6), or (a)(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 temperature monitoring device and a specific gravity monitoring device are required, each equipped with a continuous recorder.

(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  $\pm 10$  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 alternate to paragraphs (b)(4) through (b)(6) of this section, the owner or operator may install an organic monitoring device equipped with a continuous recorder.

(b) 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 § 63.1430(j) and § 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 the combination of all process vents from continuous unit operations that are associated with the use of organic HAP to make or modify a polyether polyol product, 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 § 63.1425 (b), (c), or (d) shall comply with paragraph (c)(1), (c)(2), or (c)(3) of this section. Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to this paragraph.

(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 § 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;

(2) Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the non-diverting position and emissions are not diverted through the bypass line. Records shall be generated as specified in § 63.1430(d)(4)(i); or

(3) Continuously monitor the bypass line damper or valve position using computer monitoring and record any periods when the position of the bypass line damper or valve has changed as specified in § 63.1430(d)(4)(ii).

(d) *Establishment of parameter monitoring levels.* Parameter monitoring levels for process vents from continuous or batch unit operations using combustion, recovery, or recapture devices to comply with § 63.1425 (b), (c), or (d) shall be established as specified in paragraphs (d)(1) through (d)(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, 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 § 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 § 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 § 63.1439(e)(5) or § 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 times at which an operating day begins and ends.

#### **§ 63.1430 Process vent reporting and recordkeeping requirements.**

(a) This section contains process vent reporting and recordkeeping requirements. Paragraph (b) of this section specifies records that shall be kept to demonstrate compliance with the process vent provisions of this subpart, and paragraph (c) of this section specifies records that shall be kept regarding the establishment of parameter monitoring levels. Paragraph (d) specifies records that shall be kept to demonstrate continuous compliance with the process vent provisions of this subpart. Paragraph (e) of this section specifies records that shall be kept

related to the group determination for process vents that are associated with the use of organic HAP to make or modify a polyether polyol product. Paragraph (f) of this section specifies records that shall be kept for combinations of process vents from unit operations that are associated with the use of organic HAP to make or modify a polyether polyol product. Paragraph (g) of this section specifies reporting requirements.

(b) *Records to demonstrate compliance.* Each owner or operator complying with § 63.1425 (b), (c), or (d) shall keep the following records, as applicable, up-to-date and readily accessible:

(1) When using a flare to comply with § 63.1425 (b), (c), or (d):

(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 compliance determination required by § 63.11(b) of subpart A; and

(iii) All periods during the compliance determination required by § 63.11(b) of subpart A when the pilot flame is absent.

(2) The following information when using a combustion, recovery, or recapture device (other than a flare) to achieve compliance with § 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)(i), (c)(1), (c)(2), or (d), or the annual epoxide emission limitation in § 63.1425 (b)(1)(iii) or (b)(2)(iii), the percent reduction of organic HAP or TOC achieved, as determined using the procedures specified in § 63.1426 of this subpart;

(ii) For a combustion device being used to comply with an outlet concentration limitation of § 63.1425 (b)(1)(ii) or (b)(2)(ii), the concentration of organic HAP or TOC outlet of the combustion device, as determined using the procedures specified in § 63.1426 of this subpart;

(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 § 63.1429(a) and Table 5 of this subpart, or for alternate parameters and/or parameters for alternate control techniques monitored according to § 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 § 63.1429(d) for parameters specified in § 63.1429(a) and as required by § 63.1439(f) for alternate parameters. This documentation shall include the parameter monitoring data used to establish the level.

(d) *Records to demonstrate continuous compliance.* Each owner or operator that uses a combustion, recovery, or recapture device to comply with § 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 § 63.1429(a) as applicable, and listed in Table 5 of this subpart, or specified by the Administrator in accordance with § 63.1439(f) as allowed under § 63.1429(b). These records shall be kept as specified under § 63.1438(b)(2), except as specified in paragraphs (d)(1)(i) and (d)(1)(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 batch cycle daily averages.

(2) Records of the daily average value for process vents from continuous unit operations or batch cycle daily average value for process vents from batch unit operations of each continuously monitored parameter, except as provided in paragraph (d)(2)(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 resulting in cessation of organic HAP emissions shall not be included in computing the batch cycle daily averages.

(ii) If all recorded values for a monitored parameter during an

operating day are above the minimum or below the maximum level established in accordance with § 63.1429(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 or batch cycle 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 times of all periods when the process vent is diverted from the combustion, recovery, or recapture device, or the flow indicator specified in § 63.1429(c)(1) is not operating.

(4) Where a seal or closure mechanism is used to comply with § 63.1429(c)(2) or where computer monitoring of the position of the bypass damper or valve is used to comply with § 63.1429(c)(3), hourly records of flow are not required.

(i) 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.

(ii) For compliance with § 63.1429(c)(3), the owner or operator shall record the times of all periods when the bypass line valve position has changed.

(5) Records specifying the times and duration of periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high level adjustments. In addition, records specifying any other periods of process or 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 organic HAP to make or modify a polyether polyol product—*(1) *Process vents from batch unit operations.* Except as provided in paragraphs (e)(1)(vi) and (e)(1)(vii) of this section, each owner or operator of an affected source shall maintain the records specified in paragraphs (e)(1)(i) through (e)(1)(v) of this section for each PMPU that uses organic HAP to make or modify a polyether polyol 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 § 63.1428 (a) through (f), 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, this paragraph does not require that additional information be developed.

(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 a polyether polyol product, as determined in accordance with § 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 a polyether polyol product, as determined in accordance with § 63.1428(d).

(iv) The cutoff flow rate, determined in accordance with § 63.1428(e).

(v) The results of the PMPU group determination, conducted in accordance with § 63.1428(f).

(vi) If the combination of all process vents from batch unit operations associated with the use of an organic HAP to make or modify a polyether polyol product process vent is in compliance with § 63.1425(c)(1), and the combustion, recovery, or recapture device is operating at all times, none of the records in paragraphs (b)(1)(i) through (b)(1)(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 a polyether polyol product are less than the level specified in § 63.1428(c), only the records in paragraphs (b)(1)(i) and (b)(1)(ii) of this section are required.

(2) *Process vents from continuous unit operations.* Each owner or operator of an affected source that uses organic HAP to make or modify a polyether polyol product in continuous unit operations shall keep records regarding the measurements and calculations performed to determine the TRE index value of the combined process vent stream. Owners or operators of combined streams that are in compliance with the Group 1 requirements of § 63.1425(c)(3) are not required to keep these records.

(f) *Records for Group 2 process vents that are associated with the use of*

*organic HAP to make or modify a polyether polyol product.* The following records shall be maintained for PMPUs where the combination of all process vents that are associated with the use of organic HAP to make or modify a polyether polyol product are classified as Group 2. Paragraph (f)(1) of this section contains requirements for process vents from batch unit operations, and paragraph (f)(2) of this section contains requirements for process vents from continuous unit operations.

(1) *Process vents from batch unit operations.* Owners or operators shall maintain records of the combined total annual organic HAP emissions from process vents associated with the use of organic HAP to make or modify a polyether polyol product for each PMPU where the combination of these process vents is classified as Group 2.

(2) *Process vents from continuous unit operations.* Each 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 § 63.113(a)(3) or § 63.113(d) of subpart G shall keep the following records readily accessible:

(i) Continuous records of the equipment operating parameters specified to be monitored under § 63.114(b) of subpart G and listed in table 5 of this subpart or specified by the Administrator in accordance with § 63.114(c) and § 63.117(e) of subpart G; 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) of subpart G. 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) Each owner or operator subject to the provisions of this subpart and who elects 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) of subpart G shall keep readily accessible records of:

(i) Any process changes as defined in § 63.115(e) of subpart G; and

(ii) Any recalculation of the TRE index value pursuant to § 63.115(e) of subpart G.

(4) Each 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) of subpart G, shall keep readily accessible records of:

(i) Any process changes as defined in § 63.115(e) of subpart G that increase the process vent stream flow rate,

(ii) Any recalculation or measurement of the flow rate pursuant to § 63.115(e) of subpart G, 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) of subpart G.

(5) Each 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) of subpart G shall keep up-to-date, readily accessible records of:

(i) Any process changes as defined in § 63.115(e) of subpart G that increase the organic HAP concentration of the process vent stream,

(ii) Any recalculation or measurement of the concentration pursuant to § 63.115(e) of subpart G, 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) of subpart G.

(g) *Reporting requirements.* The owner or operator of an affected source shall submit the information specified in paragraphs (g)(1) through (g)(3) of this section, as appropriate, as part of the Notification of Compliance Status specified in § 63.1439(e)(5).

(1) For each owner or operator complying with § 63.1425(b), (c)(1), or (c)(3), 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 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 PMPU where the combination of process vents from continuous unit operations that are associated with the use of organic HAP to make or modify a polyether polyol product is Group 2, the information related to the group determination specified in paragraph (e)(2) of this section.

(h) The owner or operator of an affected source shall submit Periodic Reports of the recorded information specified in paragraphs (h)(1) through (h)(6) of this section, as appropriate,

according to the schedule in § 63.1439(e)(6).

(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 is not collected for each excursion caused by insufficient monitoring data as defined in § 63.1438(f)(4).

(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) Whenever a process change, as defined in § 63.1420(g)(4), is made that causes a Group 2 combination of process vents from batch unit operations at a PMPU that are associated with the use of organic HAP to make or modify a polyether polyol 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). The following information shall be submitted:

(1) A description of the process change; and

(2) A schedule for compliance with the provisions of § 63.1425(c)(1), as appropriate, as required under § 63.1439(e)(6)(iii)(D)(1)(i).

(j) Whenever a process change, as defined in § 63.1420(g)(4), is made that causes a Group 2 combination of process vents from batch unit operations at a PMPU that are associated with the use of nonepoxide organic HAP to make or modify a polyether polyol product

with a TRE greater than 4.0 to become Group 2 with a TRE less than 4.0, the owner or operator shall submit a report within 180 calendar days after the process change. The report may be submitted as part of the next periodic report. The report shall include:

(1) A description of the process change;

(2) The results of the recalculation of the TRE index value required under § 63.1428(h)(2) of this subpart, and recorded under paragraph (f)(3) of this section; and

(3) A statement that the owner or operator will comply with the requirements specified in § 63.1429 of this subpart.

(k) If an owner or operator uses a combustion, recovery, or recapture device other than those specified in § 63.1429(a) and listed in Table 5 of this subpart or 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, 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)(6), 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 Emission factor plan requirements.**

(a) An owner or operator electing to comply with an annual epoxide emission factor limitation in § 63.1425 (b)(1)(iii) or (b)(2)(iii) shall develop and implement an epoxides emission factor plan in accordance with the provisions of this section. Paragraph (b) of this section describes the requirements for the plan. Paragraphs (c) and (d) of this section describe the procedures to verify and monitor that the plan is being followed, respectively, and paragraph (e) of this section provides recordkeeping and reporting requirements associated with the plan. Paragraph (f) of this section describes the requirements for facilities complying with an emission factor limitation without ECO or add-on control.

(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, 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, 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)(iii). 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 the permit application.

(i) Annual uncontrolled epoxide emissions. These emission estimates shall be determined in accordance with the procedures in § 63.488(b) of subpart U 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 13.

$$AE_{\text{control}} = (AE_{\text{uncontrolled}} \times (100\% - R))$$

[Equation 13]

Where:

$AE_{\text{control}}$  = Annual epoxide emissions after control, KG/yr

$AE_{\text{uncontrolled}}$  = 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

(iv) Actual annual production rate. 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 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 13, 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 report, as provided in § 63.1439(e)(5) of this subpart.

(3) The owner or operator shall comply with the monitoring provisions in § 63.1429 of this subpart.

(4) The owner or operator shall comply with the recordkeeping requirements in paragraphs § 63.1430 (b) through (d), and the 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)(iii). 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 the permit application.

(2) The owner or operator shall determine the annual epoxide emissions in accordance with § 63.1427(d) of this subpart, based on anticipated production. This information shall be submitted as part of the Notification of Compliance status report, as provided in § 63.1439(e)(5) of this subpart.

(3) The owner or operator shall comply with the monitoring provisions in § 63.1427(h) of this subpart.

(4) The owner or operator shall comply with the recordkeeping and reporting requirements in § 63.1430 of this subpart.

(e) *Compliance with epoxide emission factor limitation through the use of extended cookout in conjunction with a combustion, recovery, or recapture device.* (1) The owner or operator shall notify the Agency of the intent to use extended cookout in conjunction with a combustion, recovery, or recapture device to comply with the annual epoxide emission limitation in § 63.1425 (b)(1)(iii) or (b)(2)(iii). 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 § 63.1425(f)(4), or the permit application.

(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 report, as provided in § 63.1425(e)(5) of this subpart.

(3) The owner or operator shall comply with the monitoring provisions in § 63.1427(h).

(4) The owner or operator shall comply with the recordkeeping and reporting requirements in § 63.1427 (i) and (j) of this subpart.

(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)(iii) without the use of extended cookout or a combustion, recovery, or recapture device. The owner or operator shall prepare an estimate of the annual epoxide emissions control. This notification and emission estimate shall be submitted in the precompliance report as specified in § 63.1439(e)(4), or the permit application.

(g) 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 requirements of §§ 63.119 through 63.123 and § 63.148 of subpart G, 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 §§ 63.119 through 63.123 of subpart G, 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 §§ 63.119 through 63.123 of subpart G, 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 §§ 63.119 through 63.123 of subpart G, the definition of this term in § 63.1423 shall apply for the purposes of this subpart.

(e) When December 31, 1992 (i.e., the proposal date for subpart G of this part) is referred to in § 63.119 of subpart G,

it shall be replaced with September 4, 1997 (i.e., the proposal date for this subpart) for the purposes of this subpart.

(f) When April 22, 1994 (i.e., the publication date for subpart G of this part) is referred to in § 63.119 of subpart G, it shall be replaced with [date of publication of final rule] (i.e., the promulgation date for this subpart) for the purposes of this subpart.

(g) Each owner or operator shall comply with this paragraph instead of § 63.120(d)(1)(ii) of subpart G 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 §§ 63.1425 through § 63.1433, the performance test required for §§ 63.1425 through § 63.1433 is acceptable for demonstrating compliance with § 63.119(e) of subpart G, 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) of subpart G, if the performance test meets the criteria specified in paragraphs (g)(1) and (g)(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 § 63.119(e)(1) or § 63.119(e)(2) of subpart G, 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 term "operating range" is used in § 63.120(d)(3)(i) of subpart G, it shall be replaced with the term "level," for the purposes of this subpart.

(i) For purposes of this subpart, the monitoring plan required by § 63.120(d)(2) shall specify for which combustion, recovery, or recapture devices the owner or operator has selected to follow the procedures for continuous monitoring specified in § 63.1438. For those combustion, recovery, or recapture devices 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 or parameters 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 (or parameters), 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 Notification of Compliance Status requirements contained in § 63.152(b) of subpart G are referred to in §§ 63.120, 63.122, and 63.123 of subpart G, the Notification of Compliance Status requirements contained in § 63.1439(e)(5) shall apply for the purposes of this subpart.

(l) When the Periodic Report requirements contained in § 63.152(c) of subpart G are referred to in §§ 63.120, 63.122, and 63.123 of subpart G, 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) of subpart G are referred to in § 63.122 of subpart G, the reporting requirements contained in § 63.1439(e)(7) shall apply for the purposes of this subpart.

(n) When the Initial Notification requirements contained in § 63.151(b) of subpart G are referred to in § 63.119 through § 63.123 of subpart G, 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) of subpart F are referred to in § 63.121(a) of subpart G, the provisions in § 63.6(g) of subpart A 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.

#### **§ 63.1433 Wastewater provisions.**

(a) For each process wastewater stream originating at an affected source, the owner or operator shall comply with the requirements of §§ 63.132 through 63.149 of subpart G, with the differences noted in paragraphs (a)(1) through (a)(19) and (b) and (c) of this section, for the purposes of this subpart.

(1) Owners and operators of affected sources are not required to comply with the requirements in § 63.132(b)(1) and § 63.132(d) of subpart G, for the purposes of this subpart. All new affected sources, as defined in this subpart, shall comply with the requirements for existing sources in §§ 63.132 through 63.149 of subpart G.

(2) When §§ 63.132 through 63.149 of subpart G refer to table 9 or table 36 of subpart G, the owner or operator shall only consider organic HAP listed in table 9 or table 36 of subpart G that are also listed on table 5 of this subpart, for

the purposes of this subpart. Owners and operators are exempt from all requirements in §§ 63.132 through 63.149 of subpart G that pertain solely and exclusively to organic HAP listed on table 8 of subpart G. In addition, when §§ 63.132 through 63.149 of subpart G refer to List 1, List 2, and/or List 3, as listed in table 36 of subpart G, the owner or operator shall only consider organic HAP contained in those lists that are also listed on table 5 of this subpart, for the purposes of this subpart.

(3) When the determination of equivalence criteria in § 63.102(b) of subpart F is referred to in §§ 63.132, 63.133, and 63.137 of subpart G, the provisions in § 63.6(g) of subpart A shall apply for the purposes of this subpart.

(4) When the storage tank requirements contained in §§ 63.119 through 63.123 of subpart G are referred to in §§ 63.132 through 63.148 of subpart G, §§ 63.119 through 63.123 of subpart G are applicable, with the exception of the differences referred to in § 63.1432, for the purposes of this subpart.

(5) When § 63.146(a) of subpart G requires the submission of a request for approval to monitor alternative parameters according to the procedures specified in § 63.151(g) or § 63.152(e), owners or operators requesting to monitor alternative parameters shall follow the procedures specified in § 63.1439(f), for the purposes of this subpart.

(6) When § 63.147(d) of subpart G requires owners or operators to keep records of the daily average value of each continuously monitored parameter for each operating day as specified in § 63.152(f) of subpart G, owners and operators 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 §§ 63.132 through 63.149 of subpart G 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 §§ 63.132 through 63.149 of subpart G 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 § 63.132 (a) and (b) of subpart G refer to the "applicable dates specified in § 63.100 of subpart F of this part," the compliance dates specified in § 63.1422 shall apply, for the purposes of this subpart.

(10) Whenever §§ 63.132 through 63.149 of subpart G 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 § 63.149(d) of subpart G refers to "§ 63.100(f) of subpart F", the owner or operator shall substitute the phrase "§ 63.1420(c)", 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 owner or operator of the affected source shall substitute "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," for the purposes of this subpart.

(12) When § 63.149 (e)(1) and (e)(2) refer to "a chemical manufacturing process unit subject to the new source requirements of 40 CFR 63.100(l)(1) or 40 CFR § 63.100 (l)(2)," the owner or operator of an affected source shall substitute "a new affected source as described in § 63.1420(a)(4)," for the purposes of this subpart.

(13) When the Notification of Compliance Status requirements contained in § 63.152(b) of subpart G are referred to in §§ 63.138 and 63.146 of subpart G, the Notification of Compliance Status requirements contained in § 63.1439(e)(5) shall apply for the purposes of this subpart. In addition, when §§ 63.138 and 63.146 of subpart G require that information be reported according to § 63.152(b) of subpart G in the 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 Periodic Report requirements contained in § 63.152(c) of subpart G are referred to in § 63.146 of subpart G, the Periodic Report requirements contained in § 63.1439(e)(6) shall apply for the purposes of this subpart. In addition, when § 63.146 of subpart G requires that information be reported in the Periodic Reports required in § 63.152(c) of subpart G, 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 §§ 63.132 through 63.149 of subpart G, the term "level" shall be used instead, for the purposes of this subpart. This level shall be determined using the procedures specified in § 63.1438.

(16) When § 63.143(f) of subpart G specifies that owners or operators 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 of § 63.1438 (b)(1), (c), or (d) for establishing parameter level maximums/minimums, for the purposes of this subpart.

(17) When § 63.146(b)(7) and § 63.146(b)(8) require that "the information on parameter ranges specified in § 63.152(b)(2)" be reported in the 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, owners or operators are not required to comply with the provisions of § 63.138(g) of subpart G.

(19) When the provisions of § 63.139(c)(1)(ii), § 63.145(d)(4), or § 63.145(i)(2) of subpart G 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 (a)(19)(ii) of this section.

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

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

(b) The owner or operator of each affected source shall comply with the requirements for maintenance wastewater in § 63.105 of subpart F, except that when § 63.105(a) refers to "organic HAPs," the definition of organic HAP in § 63.1423 shall apply for the purposes of this subpart.

(c) 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 requirements of subpart H of this part 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 subpart I of this part shall continue to comply with subpart I until the compliance date specified in § 63.1422. After the compliance date for this section, the source shall be subject to this subpart and shall no longer be subject to subpart I.

(d) When the Initial Notification requirements contained in § 63.182(a)(1) and § 63.182(b) of subpart H are referred to in 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.

(e) The Notification of Compliance Status required by § 63.182(a)(2) and § 63.182(c) of subpart H 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 can 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) of subpart H shall 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.

#### **§ 63.1435 Heat exchanger provisions.**

(a) The owner or operator of each affected source shall comply with the requirements of § 63.104 of subpart F for heat exchange systems, with the exceptions noted in paragraphs (b) through (d) of this section.

(b) When the term "chemical manufacturing process unit" is used in § 63.104 of subpart F, 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 (b)(3) of this subpart, except for chemical manufacturing units meeting the condition specified in § 63.100(c) of this subpart" is used in § 63.104(a) of subpart F, the term "polyether polyols manufacturing process unit" shall apply for the purposes of this subpart.

(c) When § 63.104(c)(3) and § 63.104(f)(1) specify that the monitoring plan and records required by

§ 63.104 (f)(1)(i) through (f)(1)(iv) shall be kept as specified in § 63.103(c), the provisions of § 63.1439(a) and the applicable provisions of subpart A of this part, as specified in Table 1 of this subpart, shall apply for the purposes of this subpart.

(d) When § 63.104(f)(2) of subpart F requires information to be reported in the Periodic Reports required by § 63.152(c) of subpart G, the owner or operator should instead report the information specified in § 63.104(f)(2) of subpart F in the Periodic Reports required by § 63.1439(e)(6), for the purposes of this subpart.

#### **§ 63.1436 Reserved**

#### **§ 63.1437 Additional test methods and procedures.**

(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) of subpart A, with the exceptions specified in paragraphs (a)(1) through (a)(4) of this section and the additions specified in paragraph (b) of this section. Sections 63.1432 through 63.1433 also contain specific testing requirements.

(1) Performance tests shall be conducted according to the provisions of § 63.7(e) of subpart A, except that performance tests shall be conducted during worst case operating conditions for the process.

(2) References in § 63.7(g) of subpart A to the Notification of Compliance Status requirements in § 63.9(h) shall refer to the requirements in § 63.1439(e)(5), for the purposes of this subpart.

(3) Because the site-specific test plans in § 63.7(c)(3) of subpart A are not required, § 63.7(h)(4)(ii) is not applicable.

(4) The owner or operator shall notify the Administrator of the intent to conduct a performance test at least 30 days before the performance test is scheduled, to allow the Administrator the opportunity to have an observer present during the test.

(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.

#### **§ 63.1438 Parameter monitoring levels and excursions.**

(a) *Establishment of parameter monitoring levels.* The owner or operator of a control or recovery device that has one or more parameter monitoring level requirements specified under this subpart shall establish a

maximum or minimum level for each measured parameter. If a performance test is required by this subpart for a control, 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 control, 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 § 63.506(e)(3)(vii) for review and approval, as part of the Precompliance Report.

(1) The owner or operator shall operate control and recovery devices such that the daily average value of monitored parameters remain above the minimum established level or below the maximum established level.

(2) As specified in § 63.1439(e)(6), 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. Once approved, this information shall be incorporated into the affected source's Notification of Compliance Status or operating permit.

(3) Nothing in this section shall be construed to allow a monitoring parameter excursion caused by an activity that violates other applicable provisions of subparts A, F, G, or H of this part.

(b) *Establishment of parameter monitoring levels based on performance tests.* The procedures specified in paragraphs (b)(1) through (b)(3) of this section shall be used, as applicable, in establishing parameter monitoring levels. Level(s) established under this paragraph shall be based on the parameter values measured during the performance test.

(1) *Storage tanks and wastewater.* The maximum and/or minimum monitoring levels shall be based on the parameter values measured during the performance test, supplemented, if desired, by engineering assessments and/or manufacturer's recommendations.

(2) *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 one-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.

(3) *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) are those established during the compliance test.

(c) *Establishment of parameter monitoring levels based on performance tests, 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 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 (c)(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 control or recovery device.

(d) *Establishment of parameter monitoring based on engineering assessments and/or manufacturer's recommendations.* If a performance test is not required by this subpart for a control or recovery device, the maximum or minimum level may be based solely on engineering assessments and/or manufacturer's recommendations. As required in paragraph (a)(2) of this section, the determined level and all supporting documentation shall be provided in the Notification of Compliance Status.

(e) *Compliance determinations.* The provisions of this paragraph apply only to emission points and control or recovery devices for which continuous monitoring is required under this subpart.

(1) The parameter monitoring data for storage vessels, process vents, process wastewater streams, and emission points included in emissions averages that are required to perform continuous monitoring shall be used to determine compliance for the monitored control or recovery devices.

(2) Except as provided in paragraph (e)(3) and (g) of this section, for each excursion, as defined in paragraphs (f) of this section, the owner or operator shall be deemed out of compliance with the provisions of this subpart.

(3) If the daily average value of a monitored parameter is above the maximum level or below the minimum level established, or if monitoring data cannot be collected during monitoring device calibration check or monitoring device malfunction, or if monitoring data are not collected during periods of non-operation of the affected source or portion thereof (resulting in cessation of the emissions to which the monitoring applies), but the affected source is operated during the periods of start-up, shutdown, or malfunction in accordance with the affected source's Start-up, Shutdown, and Malfunction Plan, then the event shall not be considered a monitoring parameter excursion.

(f) *Parameter monitoring excursion definitions.* For storage vessels and process vents using control or recovery devices for purposes of compliance, and for wastewater streams, an excursion means any of the three cases listed in paragraphs (f)(1) through (f)(3) of this section. For a control or recovery device where multiple parameters are monitored, if one or more of the parameters meets the excursion criteria in paragraphs (f)(1) through (f)(3) of this section, this is considered a single excursion for the control or recovery device.

(1) 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.

(2) The period of control or recovery device operation is 4 hours or greater in an operating day and monitoring data are insufficient, as defined in paragraph (f)(4) of this section, to constitute a valid hour of data for at least 75 percent of the operating hours.

(3) The period of control or recovery device operation is less than 4 hours in an operating day and more than two of the hours during the period of operation do not constitute a valid hour of data due to insufficient monitoring data, as defined in paragraph (f)(4) of this section.

(4) Monitoring data are insufficient to constitute a valid hour of data, as used in paragraphs (f)(2) and (f)(3) of this section, if measured values are unavailable for any of the 15-minute periods within the hour. For data compression systems approved under § 63.1439(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.

(g) *Excused excursions.* A number of excused excursions shall be allowed for each control or recovery device for each semiannual period. The number of excused excursions for each semiannual period is specified in paragraphs (g)(1) through (g)(6) of this section. This paragraph 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, each owner or operator of an affected source shall keep copies of all applicable records and reports required by this subpart for at least 5 years. 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 as specified in Table 1 of this subpart. These requirements include, but are not limited to, the requirements specified in paragraphs (b)(1) and (b)(2) of this section.

(1) *Start-up, shutdown, and malfunction plan.* The owner or operator of an affected source shall develop and implement a written start-up, shutdown, and malfunction plan as specified in § 63.6(e)(3) of subpart A. This plan shall describe, in detail, procedures for operating and maintaining the affected source during periods of start-up, shutdown, and malfunction and a program for corrective action for malfunctioning process and air pollution control equipment used to comply with this subpart. The affected source shall keep this plan onsite. The owner or operator shall keep the written start-up, shutdown, and malfunction plan on record after it is developed, to be made available for inspection, upon request, by the Administrator for the life of the affected source or until five years from the date the affected units were last subject to the provisions of this subpart for those affected sources that are no longer subject. Records associated with the plan shall be kept as specified in paragraphs (b)(1)(i)(A) through (b)(1)(i)(D) of this section. Reports related to the plan shall be submitted as specified in paragraph (b)(1)(ii) of this section.

(i) *Records of start-up, shutdown, and malfunction.* The owner or operator shall keep the records specified in paragraphs (b)(1)(i)(A) through (b)(1)(i)(D) of this section.

(A) Records of the occurrence and duration of each 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)(3)) occur.

(B) For each start-up, shutdown, or malfunction during which excess emissions (as defined in § 63.1420(h)(3)) occur, records that 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 must be kept of whether the plan was followed. These records may take the form of a "checklist," or other form of recordkeeping that confirms conformance with the start-up, shutdown, and malfunction plan for the event.

(C) For continuous monitoring systems used to comply with this

subpart, records documenting the completion of calibration checks and maintenance of continuous monitoring systems that are specified in the manufacturer's instructions or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(ii) *Reports of start-up, shutdown, and malfunction.* For the purposes of this subpart, the semiannual start-up, shutdown, and malfunction reports shall be submitted on the same schedule as the Periodic Reports required under paragraph (e)(6) of this section instead of the schedule specified in § 63.10(d)(5)(i) of subpart A. The reports shall include the information specified in paragraphs (b)(1)(i)(A) through (b)(1)(i)(C) of this section and shall contain the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy.

(2) *Application for approval of construction or reconstruction.* For new affected sources, each owner or operator shall comply with the provisions in § 63.5 of subpart A regarding construction and reconstruction, excluding the provisions specified in § 63.5 (d)(1)(ii)(H), (d)(1)(iii), (d)(2), and (d)(3)(ii) of subpart A.

(c) *Subpart H requirements.* Owners or operators of affected sources shall comply with the reporting and recordkeeping requirements in subpart H, except as specified in § 63.1434(b) through § 63.1434(g).

(d) *Recordkeeping and documentation.* Owners or operators required to comply with § 63.1438 and, therefore, required to keep continuous records shall keep records as specified in paragraphs (d)(1) through (d)(9) of this section, unless an alternative recordkeeping system has been requested and approved as specified in paragraph (g) or (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 (d)(9) of this section apply. As described in § 63.1432(i), certain storage vessels are not required to comply with § 63.1438 and, therefore, are not required to keep continuous records as specified in this paragraph. Owners and operators 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 measured data value, or block average values for 1 hour or shorter periods calculated from all measured data values during each period. If values are measured more frequently than once per minute, a single value for each minute may be used to calculate the hourly (or shorter period) block average instead of all measured values. Owners or operators of process vents from batch unit operations must be 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 (d)(3)(ii) of this section, except as specified in paragraphs (d)(6) and (d)(7) of this section.

(i) The daily average value shall be calculated as the average of all parameter values recorded during the operating day. The calculated average shall cover a 24-hour period if operation is continuous, or the number of hours of operation per operating day if operation is not continuous.

(ii) The operating day shall be the 24-hour period that the owner or operator specifies in the operating permit or the Notification of Compliance Status. It may be from midnight to midnight or another 24-hour period.

(4) *Records required for excursions.* If the daily average value of a monitored parameter for a given operating day is below the minimum level or above the maximum level established in the Notification of Compliance Status or operating permit, the owner or operator shall retain the data recorded that operating day under paragraph (d)(2) of this section.

(5) *Records required when the daily average value is within the established limit.* If the daily average value of a monitored parameter for a given operating day is above the minimum level or below the maximum level established in the Notification of Compliance Status or operating permit, the owner or operator shall retain the data recorded that operating day under paragraph (d)(2) of this section.

(6) *Records required when all recorded values are within the established limits.* 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. For these operating days, the records required in

paragraph (d)(5) of this section are required.

(7) Monitoring data recorded during periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments shall not be included in any average computed under this subpart. Records shall be kept of the times and durations of all such periods and any other periods during process or combustion, recovery, or recapture device operation when monitors are not operating.

(8) For each flexible operation unit in which the primary product is determined to be something other than a polyether polyol product, the owner or operator shall maintain the documentation specified in § 63.1420(e)(7).

(9) The owner or operator of an affected source granted a waiver under § 63.10(f) shall maintain the information demonstrating whether an affected source is meeting the requirements for a waiver of recordkeeping or reporting requirements.

(e) *Reporting and notification.* (1) In addition to the reports and notifications required by subparts A and H of this part, as specified in this subpart, the owner or operator of an affected source shall prepare and submit the reports listed in paragraphs (e)(3) through (e)(9) of this section, as applicable.

(2) All reports required under this subpart shall be sent to the Administrator at the applicable address listed in § 63.13 of subpart A of this part. If acceptable to both the Administrator and the owner or operator of a source, reports may be submitted on electronic media.

(3) *Initial Notification.* Each 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 Initial Notification provisions in § 63.9(b)(2), (b)(3), and (b)(6) of subpart A 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 affected source; and

(E) A statement of whether the source can achieve compliance by the relevant compliance date specified in § 63.1422.

(ii) The Initial Notification shall be submitted according to the schedule in paragraph (e)(3)(ii)(A), (e)(3)(ii)(B), or (e)(3)(ii)(C) of this section, as applicable.

(A) For an existing source, the Initial Notification shall be submitted within 120 calendar days after the date of promulgation.

(B) For a new source that has an initial start-up 90 calendar days after the date of promulgation of this subpart or later, the application for approval of construction or reconstruction required by § 63.5(d) of subpart A 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 90 calendar days after the date of publication of this subpart).

(C) For a new source that has an initial start-up prior to 90 calendar days after the date of promulgation, the Initial Notification shall be submitted within 90 calendar days after the date of promulgation of this subpart. The application for approval of construction or reconstruction described in § 63.5(d) of subpart A is not required for these sources.

(4) *Precompliance Report.* Affected sources requesting an extension for compliance, or requesting approval to use alternative monitoring parameters, alternative continuous monitoring and recordkeeping, or alternative controls, shall submit a Precompliance Report according to the schedule described in paragraph (e)(4)(i) of this section. The Precompliance Report shall contain the information specified in paragraphs (e)(4)(ii) through (e)(4)(vi) of this section, as appropriate.

(i) *Submittal dates.* The Precompliance Report shall be submitted to the Administrator no later than 12 months prior to the compliance date. For new sources, the Precompliance Report shall be submitted to the Administrator with the application for approval of construction or reconstruction required in paragraph (b)(2) of this section.

(ii) A request for an extension for compliance may be submitted in the Precompliance Report, in a separate submittal to the Administrator, or in the Operating Permit application, as specified in § 63.1422(e).

(iii) The alternative monitoring parameter information required in paragraph (f) of this section shall be submitted if, for any emission point, the owner or operator of an affected source seeks to comply through the use of a control technique other than those for which monitoring parameters are specified in this subpart or in subpart G

of this part, or seeks to comply by monitoring a different parameter than those specified in this subpart or in subpart G of this part.

(iv) If the affected source seeks to comply using alternative continuous monitoring and recordkeeping as specified in paragraph (g) of this section, the information requested in paragraph (e)(4)(iv)(A) or (e)(4)(iv)(B) of this section must be submitted in the Precompliance Report.

(A) The owner or operator must submit notification of the intent to use the provisions specified in paragraph (h) of this section; or

(B) The owner or operator must submit a request for approval to use alternative continuous monitoring and recordkeeping provisions as specified in paragraph (g) of this section.

(v) The owner or operator shall report the intent to use alternative controls to comply with the provisions of this subpart. Alternative controls must be deemed by the Administrator to be equivalent to the controls required by the standard, under the procedures outlined in § 63.6(g) of subpart A.

(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 must submit the information required in § 63.182(c) of subpart H in the Notification of Compliance Status. 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 (e)(5)(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 used to demonstrate compliance, values of monitored parameters established during performance tests, and any other information required to be included in the Notification of Compliance Status under § 63.1422(j), § 63.122 of subpart G, and § 63.1432 for storage vessels, and § 63.146 of subpart G for process wastewater. In addition, each owner or operator shall comply with paragraphs (e)(5)(i)(A) and (e)(5)(i)(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 required information shall be submitted, but a complete test report is not required.

(B) A complete test report shall include a brief process description, sampling site description, description of sampling and analysis procedures and any modifications to standard procedures, quality assurance procedures, record of operating conditions during the test, record of preparation of standards, record of calibrations, raw data sheets for field sampling, raw data sheets for field and laboratory analyses, documentation of calculations, and any other information required by the test method.

(ii) For each monitored parameter for which a maximum or minimum level is required to be established under § 63.114(e) of subpart G and § 63.1429(d) for process vents, § 63.143(f) of subpart G for process wastewater, paragraph (e)(8) of this section, or paragraph (f) of this section, the information specified in paragraphs (e)(5)(ii)(A) through (e)(5)(ii)(C) of this section shall be submitted. Further, as described in § 63.1432(k), for those storage vessels for which the monitoring plan required by § 63.120(d)(3) specifies compliance with the provisions of § 63.1438, the owner or operator shall provide the information specified in paragraphs (e)(5)(ii)(A) through (e)(5)(ii)(C) of this section for each monitoring parameter. For those storage vessels for which the monitoring plan required by § 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.

(D) The required information shall include a definition of the affected source's operating month for the purposes of determining monthly average values of residual organic HAP.

(iii) The determination of applicability for flexible operation units as specified in § 63.1420(e)(6).

(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 for storage vessels belonging to an affected source subject to this subpart that is made under § 63.1420(f)(6).

(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, each owner or operator shall submit Periodic Reports as specified in paragraphs (e)(6)(i) through (e)(6)(x) of this section. In addition, for equipment leaks subject to § 63.1434, the owner or operator must submit the information specified in § 63.182(d) of subpart H, and for heat exchange systems subject to § 63.1434, the owner or operator must submit the information specified in § 63.104(f)(2) of subpart F.

(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 (e)(6)(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 (e)(6)(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 the affected source was in compliance for the preceding 6-month period and that none of the activities specified in paragraphs (e)(6)(iii) through (e)(6)(vii) of this section occurred.

(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 § 63.122(a)(4) of subpart G for storage vessels, § 63.1430 (h) or (i) for process vents, § 63.104(b)(4) of subpart F for heat exchange systems, and § 63.146(c) through § 63.146(f) of subpart G 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 (e)(6)(iii)(D)(4) of this section, as applicable:

(i) Notification if a process change is made such that the group status of any emission point changes. The information submitted shall include a compliance schedule, as specified in paragraphs (e)(6)(iii)(D)(2)(i) and (e)(6)(iii)(D)(2)(ii) of this section, for emission points that change from Group 2 to Group 1 as specified in § 63.1420(g)(3); or for process vents under the conditions listed in § 63.1429(g)(3)(i). This information may be submitted in a separate report, as specified in § 63.1430(i).

(j) The owner or operator shall submit to the Administrator for approval a compliance schedule and a justification for the schedule.

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

(2) Notification if one or more emission points 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)(3)(i) through (e)(6)(iii)(D)(3)(iii) of this section.

(i) A description of the addition to the affected source;

(ii) Notification of the group status or control requirement for the additional

emission point or all emission points in the PMPU;

(iii) A compliance schedule, as required under paragraph (e)(6)(iii)(D)(2) of this section.

(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 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 polyether polyol product made under § 63.1420(e)(6).

(vi) The results for each change made to a predominant use determination for a storage vessel belonging to an affected source subject to this subpart that is made under § 63.1420(f)(6).

(vii) The Periodic Report required by § 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 a period of 1 year for an emission point or process section if the 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 and the Administrator requests the owner or operator to submit quarterly reports for that emission point or process section.

(7) *Other reports.* The notifications of inspections required by § 63.1432 shall be submitted, as specified in § 63.122 (h)(1) and (h)(2) of subpart G.

(8) *Operating permit application.* An owner or operator who submits an operating permit application instead Precompliance Report shall submit the information specified in paragraph (e)(4) of this section, Precompliance Report, 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 to set unique monitoring parameters, or who requests approval to monitor a different parameter than those listed in § 63.1432 for storage vessels, § 63.1426 for ECO, § 63.1429 for process vents, or § 63.143 of subpart G for process wastewater shall submit the information specified in paragraphs (f)(1) through (f)(3) of this section in the Precompliance Report, as required by paragraph (e)(4) of this section. The owner or operator shall retain for a period of 5 years each record required by paragraphs (f)(1) through (f)(3) of this section.

(1) The required information shall include a description of the parameter(s) to be monitored to ensure the combustion, recovery or 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 recording system, to include the frequency and content of monitoring, recordkeeping, and reporting. Further, the rationale for the proposed monitoring, recordkeeping, and reporting system shall be included if either condition in paragraph (f)(3)(i) or (f)(3)(ii) of this section is met:

(i) If monitoring and recordkeeping is not continuous, or

(ii) If reports of daily average values will not be included in Periodic Reports when the monitored parameter value is above the maximum level or below the minimum level as established in the operating permit or the Notification of Compliance Status.

(g) *Alternative continuous monitoring and recordkeeping.* An owner or operator choosing not to implement the 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 (g)(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 § 63.8(f)(5)(i) of subpart A 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 (g)(2)(ii) of this section.

(i) The requested system shall include manual reading and recording of the value of the relevant operating parameter no less frequently than once per hour. Daily 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 (g)(3)(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 § 63.8(f)(4) of subpart A.

(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 (h)(2) of this section as alternatives to the continuous operating parameter monitoring and recordkeeping provisions listed in § 63.1432 for storage vessels, § 63.1429 for process vents, and § 63.1433 for wastewater. The owner or operator shall retain for a period of 5 years each record required by paragraph (h)(1) or (h)(2) of this section.

(1) The owner or operator may retain only the daily average value, and is not required to retain more frequent monitored operating parameter values, for a monitored parameter with respect to an item of equipment, if the requirements of paragraphs (h)(1)(i) through (h)(1)(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  $-200^{\circ}\text{C}$  on a boiler), and

will alert the operator by alarm or other means. The owner or operator shall record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

(ii) The monitoring system generates, updated at least hourly throughout each operating day, a running average of the monitoring values that have been obtained during that operating day, and the capability to observe this running average is readily available to the Administrator on-site during the operating day. The owner or operator shall record the occurrence of any period meeting the criteria in paragraphs (h)(1)(ii)(A) through (h)(1)(ii)(C) of this section. All instances in an operating day constitute a single occurrence.

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

(B) The running average is based on at least six one-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 is the expected operating condition based on past experience (e.g., pH in some scrubbers), and will alert the operator by alarm or other means. The owner or operator shall record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

(iv) The monitoring system will alert the owner or operator by an alarm, if the running average parameter value calculated under paragraph (h)(1)(ii) of this section reaches a set point that is appropriately related to the established limit for the parameter that is being monitored.

(v) The owner or operator shall verify the proper functioning of the monitoring system, including its ability to comply with the requirements of paragraph (h)(1) of this section, at the times specified in paragraphs (h)(1)(v)(A) through (h)(1)(v)(C) 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 (h)(1)(vi)(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 (h)(1)(v) of this section. The description shall identify the location and format (e.g., on-line storage, log entries) for each required record. If the description changes, the owner or operator shall retain both the current and the most recent superseded description, 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) Owners and operators 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, but not less than 5 years from the date it was last employed. 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 the most recent superseded description at

least until 5 years from the date it was last employed.

(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 (h)(1)(iv) of this section does not result in retention of a record of at least one occurrence or measured parameter value, the owner or operator shall record and retain at least one parameter value during a period of operation other than a start-up, shutdown, or malfunction.

(iv) For 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 (h)(2)(iv)(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 § 63.6(e)(3) of subpart A.

(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.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART PPP AFFECTED SOURCES

Reference	Applies to sub-part PPP	Comment
63.1(a)(1) .....	Yes .....	§ 63.1423 of subpart PPP specifies definitions in addition to or that supersede definitions in § 63.2.
63.1(a)(2) .....	Yes.	
63.1(a)(3) .....	Yes .....	§ 63.1422(f) through (j) of this subpart and § 63.160(b) of subpart H identify those standards which overlap with the requirements of subparts U 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)–63.1(a)(8) .....	Yes.	
63.1(a)(9) .....	No .....	Reserved.
63.1(a)(10) .....	Yes.	
63.1(a)(11) .....	Yes.	
63.1(a)(12)–63.1(a)(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.

TABLE 1.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART PPP AFFECTED SOURCES—Continued

Reference	Applies to subpart PPP	Comment
63.1(e) .....	Yes.	
63.2 .....	Yes .....	§ 63.1423 of subpart PPP specifies those subpart A definitions that apply to subpart PPP.
63.3 .....	Yes.	
63.4(a)(1)–63.4(a)(3) .....	Yes.	
63.4(a)(4) .....	No .....	Reserved.
63.4(a)(5) .....	Yes.	
63.4(b) .....	Yes.	
63.4(c) .....	Yes.	
63.5(a)(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(h) defines when construction or reconstruction is subject to new source standards.
63.5(b)(2) .....	No .....	Reserved.
63.5(b)(3) .....	Yes.	
63.5(b)(4) .....	Yes .....	Except that the Initial Notification and § 63.9(b) requirements do not apply.
63.5(b)(5) .....	Yes.	
63.5(b)(6) .....	Yes .....	Except that § 63.1420(h) 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)(6) and § 63.1434(f) of subpart PPP 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 of subpart PPP 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.
63.6(e)(1)(i) .....	No .....	This is addressed by § 63.1420(i)(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(i)(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.	
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 must provide for operation in compliance with § 63.1420(i)(4).
63.6(e)(3)(vii)(C) .....	Yes.	
63.6(e)(3)(viii) .....	Yes.	

TABLE 1.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART PPP AFFECTED SOURCES—Continued

Reference	Applies to subpart PPP	Comment
63.6(f)(1) .....	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)(2) .....	Yes .....	
63.6(f)(3) .....	Yes.	Subpart PPP does not require opacity and visible emission standards.
63.6(g) .....	Yes.	
63.6(h) .....	No .....	
63.6(i)(1) .....	Yes.	
63.6(i)(2) .....	Yes.	
63.6(i)(3) .....	Yes.	Dates are specified in § 63.1422(e) and § 63.1439(e)(5)(i) for all emission points except equipment leaks, which are covered under § 63.182(a)(6)(i) of subpart H.
63.6(i)(4)(i)(A) .....	Yes.	
63.6(i)(4)(i)(B) .....	No .....	Reserved.
63.6(i)(4)(ii) .....	No.	
63.6(i) (5)–(14) .....	Yes.	
63.6(i)(15) .....	No .....	
63.6(i)(16) .....	Yes.	
63.6(j) .....	Yes.	§ 63.1439(e)(6) of subpart PPP specifies the submittal dates of performance test results for all emission points except equipment leaks; for equipment leaks, compliance demonstration test results are reported in the Periodic Reports.
63.7(a)(1) .....	Yes.	
63.7(a)(2) .....	No .....	§ 63.1437(a)(4) of subpart PPP specifies notification requirements.
63.7(a)(3) .....	Yes.	
63.7(b) .....	No .....	Except if the owner or operator chooses to submit an alternative nonopacity emission standard for approval under § 63.6(g).
63.7(c) .....	No .....	
63.7(d) .....	Yes.	Except that all performance tests must be conducted at maximum representative operating conditions.
63.7(e)(1) .....	Yes .....	
63.7(e)(2) .....	Yes.	Subpart PPP specifies requirements
63.7(e)(3) .....	No .....	
63.7(e)(4) .....	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 tied to the site specific test plan.
63.7(f) .....	Yes .....	
63.7(g) .....	Yes .....	Except that references to the Notification of Compliance Status report in 63.9(h) of subpart A are replaced with the requirements in § 63.1439(e)(6) of subpart PPP. In addition, emission points 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)(3) are not required.
63.8(a)(1) .....	Yes.	Reserved.
63.8(a)(2) .....	No.	
63.8(a)(3) .....	No .....	Subpart PPP specifies locations to conduct monitoring.
63.8(a)(4) .....	Yes.	
63.8(b)(1) .....	Yes.	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) of subpart H.
63.8(b)(2) .....	No .....	
63.8(b)(3) .....	Yes.	§ 63.1438 of subpart PPP specifies monitoring frequency; not applicable to equipment leaks, because § 63.1434 does not require continuous monitoring systems.
63.8(c)(1) .....	Yes.	
63.8(c)(1)(i) .....	Yes.	Timeframe for submitting request is specified in § 63.1439 (f) or (g) of subpart PPP; not applicable to equipment leaks, because § 63.1434 (through subpart H) specifies acceptable alternative methods.
63.8(c)(1)(ii) .....	No .....	
63.8(c)(1)(iii) .....	Yes.	Contents of request are specified in § 63.1439 (f) or (g).
63.8(c)(2) .....	Yes.	
63.8(c)(3) .....	Yes.	Subpart PPP does not require CEM's.
63.8(c)(4) .....	No .....	
63.8(c)(5)–63.8(c)(8) .....	No.	
63.8(d) .....	No.	
63.8(e) .....	No.	
63.8(f)(1)–63.8(f)(3) .....	Yes.	
63.8(f)(4)(i) .....	No .....	
63.8(f)(4)(ii) .....	No .....	
63.8(f)(4)(iii) .....	No.	
63.8(f)(5)(i) .....	Yes.	
63.8(f)(5)(ii) .....	No.	
63.8(f)(5)(iii) .....	Yes.	
63.8(f)(6) .....	No .....	



TABLE 1.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART PPP AFFECTED SOURCES—Continued

Reference	Applies to sub-part PPP	Comment
63.8(g) .....	No .....	Data reduction procedures specified in § 63.1439 (d) and (h) of subpart PPP; not applicable to equipment leaks.
63.9(a) .....	Yes.	
63.9(b) .....	No .....	Subpart PPP does not require an initial notification.
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)(6) of subpart PPP specifies Notification of Compliance Status requirements.
63.9(i) .....	Yes.	
63.9(j) .....	No.	
63.10(a) .....	Yes.	
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 of subpart PPP specifies recordkeeping requirements.
63.10(d)(1) .....	Yes.	
63.10(d)(2) .....	No .....	§ 63.1439(e)(6) specifies performance test reporting; 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)(7) of subpart PPP. The start-up, shutdown, and malfunction plan, and any records or reports of startup, 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 of subpart H (for equipment leaks) will not be delegated to States.
63.13–63.15 .....	Yes.	

<sup>a</sup>The plan, and any records or reports of start-up, shutdown, and malfunction do not apply to Group 2 emission points.

TABLE 2. APPLICABILITY OF SUBPARTS F, G, AND H TO SUBPART PPP AFFECTED SOURCES

Reference	Applies to sub-part PPP	Comment	Applicable section of subpart PPP
<b>Subpart F</b>			
63.100 .....	No.		
63.101 .....	Yes .....	Several definitions from 63.101 are incorporated by reference into 63.1424.	63.1423.
63.102–63.109 .....	No.		
<b>Subpart G</b>			
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 .....	With the differences noted in 63.1425(f)(1) through (f)(10), for THF facilities. For epoxide facilities, 63.115(d) is used for TRE determinations.	
63.119–63.123 .....	Yes .....	With the differences noted in 63.1432(c) through 63.1432(q) .....	63.1432.
63.124–63.125 .....	No .....	Reserved	
63.126–63.130 .....	No		
63.131–63.147 .....	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(c) through 63.1432(q) and 63.1433(a)(1) through 63.1433(a)(19).	63.1432 and 63.1433.
63.150(a) through 63.150(f) .....	No.		
63.150(g)(1) and 63.150(g)(2) .....	No.		
63.150(g)(3) .....	No.		
63.150(g)(4) .....	No.		
63.150(g)(5) .....	No.		
63.150(h)(1) and 63.150(h)(2) .....	No.		
63.150(h)(3) .....	No.		
63.150(h)(4) .....	No.		
63.150(h)(5) .....	No.		

TABLE 2. APPLICABILITY OF SUBPARTS F, G, AND H TO SUBPART PPP AFFECTED SOURCES—Continued

Reference	Applies to subpart PPP	Comment	Applicable section of subpart PPP
63.150(i) through 63.150(o) ..... 63.151–63.152 .....	No. No.		
<b>Subpart H</b>			
63.160–63.193 .....	Yes .....	Subpart PPP affected sources must comply with all requirements of subpart H.	63.1434.

TABLE 3.—GROUP 1 STORAGE VESSELS AT EXISTING AND NEW AFFECTED SOURCES

Vessel capacity (cubic meters)	Vapor pressure <sup>a</sup> (kilopascals)
75 ≤ capacity < 151 .....	≥13.1
151 ≤ capacity .....	≥5.2

<sup>a</sup>Maximum true vapor pressure of total organic HAP at storage temperature.

TABLE 4.—KNOWN ORGANIC HAP FROM POLYETHER POLYOL PRODUCTS

Organic HAP/chemical name (CAS No.)
1,3 Butadiene (106990). Ethylene Oxide (75218). Hexane (100543). Methanol (67561). Propylene Oxide (75569). Toluene (108883).

CAS No. = Chemical Abstract Service Number.

TABLE 5.—GROUP 1 PROCESS VENTS STREAMS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

Control/recovery device	Parameter to be monitored	Recordkeeping and reporting requirements for monitored parameters
Thermal Incinerator .....	Firebox temperature <sup>a</sup> .....	1. Continuous records as specified in § 63.1429b. 2. Record and report the average firebox temperature measured during the performance test—NCS. <sup>c</sup> 3. Record the batch cycle daily average firebox temperature as specified in § 63.1429. 4. Report all batch cycle daily average temperatures that are below the minimum operating temperature established in the NCS or operating permit and all instances when monitoring data are not collected—PR. <sup>d, e</sup> .
Catalytic Incinerator .....	Temperature upstream and downstream of the catalyst bed.	1. Continuous records as specified in § 63.1429. <sup>b</sup> 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. <sup>c</sup> 3. Record the batch cycle daily average upstream temperature and temperature difference across catalyst bed as specified in § 63.1429. 4. Report all batch cycle daily average upstream temperatures that are below the minimum upstream temperature established in the NCS or operating permit—PR. <sup>d, e</sup> 5. Report all batch cycle daily average temperature differences across the catalyst bed that are below the minimum difference established in the NCS or operating permit—PR. <sup>d, e</sup> 6. Report all instances when monitoring data are not collected. <sup>e</sup>
Boiler or Process Heater with a design heat input capacity less than 44 megawatts and where the process vents are <i>not</i> introduced with or used as the primary fuel.	Firebox temperature <sup>a</sup> .....	1. Continuous records as specified in § 63.1429. <sup>b</sup>  2. Record and report the average firebox temperature measured during the performance test—NCS. <sup>c</sup> 3. Record the batch cycle daily average firebox temperature as specified in § 63.1429. <sup>d</sup>

TABLE 5.—GROUP 1 PROCESS VENTS STREAMS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS—Continued

Control/recovery device	Parameter to be monitored	Recordkeeping and reporting requirements for monitored parameters
Flare .....	Presence of a flame at the pilot light.	<ol style="list-style-type: none"> <li>4. Report all batch cycle daily average temperatures that are below the minimum operating temperature established in the NCS or operating permit and all instances when monitoring data are not collected—PR.<sup>d, e</sup></li> <li>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.</li> <li>2. Record and report the presence of a flame at the pilot light over the full period of the compliance determination—NCS.<sup>c</sup></li> <li>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.</li> <li>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.<sup>d</sup></li> </ol>
Absorber <sup>f</sup> .....	Exit temperature of the absorbing liquid, and	<ol style="list-style-type: none"> <li>1. Continuous records as specified in § 63.1429.<sup>b</sup></li> <li>2. Record and report the average exit temperature of the absorbing liquid measured during the performance test—NCS.<sup>c</sup></li> <li>3. Record the batch cycle daily average exit temperature of the absorbing liquid as specified in § 63.1429 for each batch cycle.</li> <li>4. Report all the batch cycle daily average exit temperatures of the absorbing liquid that are below the minimum operating value established in the NCS or operating permit and all instances when monitoring data are not collected—PR.<sup>d, e</sup></li> </ol>
	Exit specific gravity for the absorbing liquid.	<ol style="list-style-type: none"> <li>1. Continuous records as specified in § 63.1429.<sup>b</sup></li> <li>2. Record and report the average exit specific gravity measured during the performance test—NCS.</li> <li>3. Record the batch cycle daily average exit specific gravity as specified in § 63.1429.</li> <li>4. Report all batch cycle daily average exit specific gravity 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.<sup>d, e</sup></li> </ol>
Condenser <sup>f</sup> .....	Exit (product side) temperature .....	<ol style="list-style-type: none"> <li>1. Continuous records as specified in § 63.1429.<sup>b</sup></li> <li>2. Record and report the average exit temperature measured during the performance test—NCS.</li> <li>3. Record the batch cycle daily average exit temperature as specified in § 63.1429.</li> <li>4. Report all batch cycle daily average exit temperatures that are above the maximum operating temperature established in the NCS or operating permit and all instances when monitoring data are not collected—PR.<sup>d, e</sup></li> </ol>
Carbon Adsorber <sup>f</sup> .....	Total regeneration stream mass or volumetric flow during carbon bed regeneration cycle(s), and	<ol style="list-style-type: none"> <li>1. Record of total regeneration stream mass or volumetric flow for each carbon bed regeneration cycle.</li> <li>2. Record and report the total regeneration stream mass or volumetric flow during each carbon bed regeneration cycle during the performance test—NCS.<sup>c</sup></li> <li>3. Report all carbon bed regeneration cycles when the total regeneration stream or volumetric mass flow is above the maximum flow rate established in the NCS or operating permit—PR.<sup>d, e</sup></li> </ol>
	Temperature of the carbon bed after regeneration and within 15 minutes of completing any cooling cycle(s).	<ol style="list-style-type: none"> <li>1. Record the temperature of the carbon bed after each regeneration and within 15 minutes of completing any cooling cycle(s).</li> <li>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.<sup>c</sup></li> <li>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.<sup>d, e</sup></li> </ol>
All Combustion, recovery, or recapture devices.	Diversion to the atmosphere from the combustion, recovery, or recapture device or	<ol style="list-style-type: none"> <li>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.</li> <li>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.<sup>d</sup></li> </ol>
	Monthly inspections of sealed valves.	<ol style="list-style-type: none"> <li>1. Records that monthly inspections were performed as specified in § 63.1429.</li> </ol>

TABLE 5.—GROUP 1 PROCESS VENTS STREAMS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS—Continued

Control/recovery device	Parameter to be monitored	Recordkeeping and reporting requirements for monitored parameters
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.	<p>2. Record and report all monthly inspections that show that valves are in the diverting position or that a seal has been broken—PR.<sup>d</sup></p> <p>1. Continuous records as specified in § 63.1429.<sup>b</sup></p> <p>2. Record and report the average concentration level or reading measured during the performance test—NCS.</p> <p>3. Record the batch cycle daily average concentration level or reading as specified in § 63.1429.</p> <p>4. Report all batch cycle daily average concentration levels or readings that are above the maximum concentration or reading established in the NCS or operating permit and all instances when monitoring data are not collected—PR.<sup>d, e</sup></p>

<sup>a</sup> Monitor may be installed in the firebox or in the ductwork immediately downstream of the firebox before any substantial heat exchange is encountered.

<sup>b</sup> "Continuous records" is defined in § 63.111 of subpart G.

<sup>c</sup> NCS = Notification of Compliance Status described in § 63.1429.

<sup>d</sup> PR = Periodic Reports described in § 63.1429 of this subpart.

<sup>e</sup> The periodic reports shall include the duration of periods when monitoring data are not collected as specified in § 63.1439 of this subpart.

<sup>f</sup> Alternatively, these devices may comply with the organic monitoring device provisions listed at the end of this table.

TABLE 6.—OPERATING PARAMETERS FOR WHICH MONITORING LEVELS ARE REQUIRED TO BE ESTABLISHED FOR PROCESS VENTS STREAMS

Control/recovery option	Parameters to be monitored	Established operating parameter(s)
Thermal incinerator .....	Firebox temperature .....	Minimum temperature.
Catalytic incinerator .....	Temperature upstream and downstream of the catalyst bed .....	Minimum upstream temperature; and minimum temperature difference across the catalyst bed.
Boiler or process heater .....	Firebox temperature .....	Minimum temperature.
Scrubber for halogenated process vents.	pH of scrubber effluent; and scrubber liquid and gas flow rates .....	Minimum pH; and minimum liquid/gas ratio.
Absorber .....	Exit temperature of the absorbing liquid; and exit specific gravity of the absorbing liquid.	Minimum temperature; and minimum specific gravity.
Condenser .....	Exit temperature .....	Maximum temperature.
Carbon 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.
Other devices (or as an alternate to the above) <sup>a</sup> .	HAP concentration level or reading at outlet of device .....	Maximum HAP concentration or reading.

<sup>a</sup> Concentration is measured instead of an operating parameter.