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Agency

Office of Air Quality
Planning and Standards
Research Triangle Park, NC 27711

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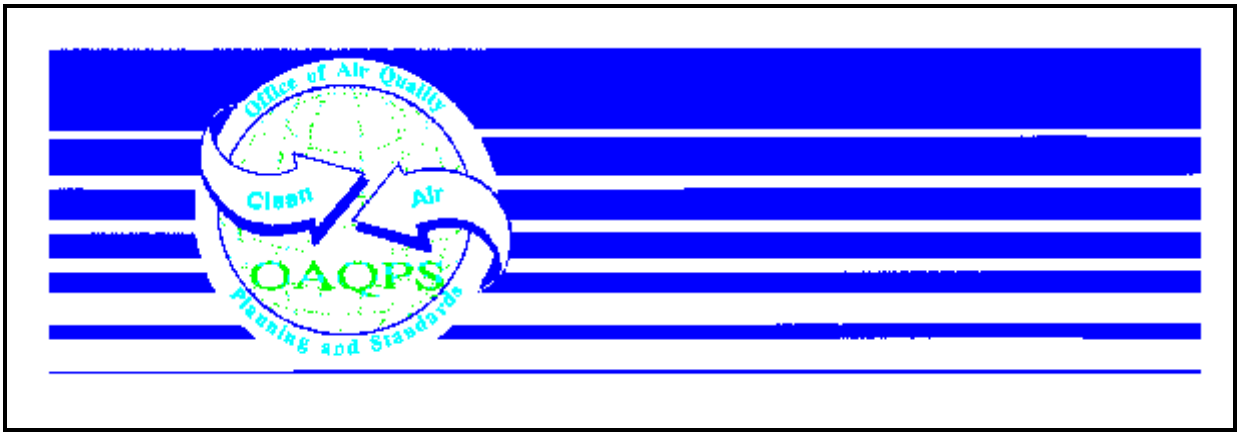
EPA

Implementation Document for the Polyether Polyols Production NESHAP (40 CFR 63, Subpart PPP)



Implementation Document for the Polyether Polyols Production NESHAP (40 CFR 63, Subpart PPP)

Prepared for:

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Office of Air Quality Planning and Standards
U. S. Environmental Protection Agency
Research Triangle Park, NC 27711

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September 2000

What is the legal status of this guide?

The Office of Air Quality Planning and Standards (OAQPS) and the Office of Enforcement and Compliance Assistance (OECA) of the U. S. Environmental Protection Agency (EPA) have reviewed this document and approved it for publication.

When using this document, remember that it isn't legally binding and doesn't replace the final rule - "National Emission Standard for Hazardous Air Pollutants for Polyether Polyols Production" (published in the *Federal Register*, **06/01/99, 64 FR 29420**) or any State, local or tribal rules that may apply to your facility.

This document isn't intended, nor can you rely on it, to create any rights enforceable by any party in litigation with the United States. The EPA may change this document at any time without public notice.

Thank You

This document was prepared by a joint partnership among the Environmental Protection Agency (EPA, or we), State and local agencies for air pollution control, trade associations, and organizations who produce polyether polyols. At the time of publication, the development team had the following members:

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We thank these people for their participation. Their technical insights, experiences, and suggestions were essential to this guide's development.

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Chapter 1 - Introduction

What does this chapter cover?

This chapter explains how and why to use this document.

Why should I use this document?

This document can help plant owners and operators (you) understand the **Polyether Polyols Production** NESHAP (also known as 40 CFR part 63, subpart PPP) by helping you determine **five** main things.

- if the rule applies to your plant and process
- what compliance options are available for the different emission points
- whether particular emission points are "Group 1" or "Group 2"
- what to monitor, record, and report
- dates by which you must meet requirements

Is there anything I should know before using this document?

When using this document, remember that it **doesn't** replace the final rule and that it covers only requirements published on or before **May 8, 2000**. You should keep up with new requirements printed after this date by periodically checking the Federal Register and the Code of Federal Regulations (CFR). You can download Federal Register notices by going to the Government Printing Office (GPO) website at www.access.gpo.gov/su_docs/aces/aces140.html.

We've included a copy of the final rule and amendments in **Appendix A** (as published in the *Federal Register*, 06/01/99, 64 FR 29420 and 05/8/2000, 65 FR 26491) , so that you can reference the rule while you're using this document.

How do I get copies of this document?

You can get copies of this document in **four** ways:

- EPA's Unified Air Toxics Website (www.epa.gov/ttn/uatw). Look under Rules and Implementation, polyether polyols, or www.epa.gov/ttn/uatw/polyols/polyols.html.
- Library Services Office, (MD-35), U.S. EPA, Research Triangle Park, NC 27711, or www.epa.gov/natlibra/ols.html (limited supply)
- National Technical Information Services (NTIS), 5285 Port Royal Road, Springfield, VA 22161, or 1-(800)- 553-6847, or www.ntis.gov/index.html (NTIS will charge you a fee for this document)

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Help us publish better documents by filling out our survey

Survey on the Plain Language Guide to the Polyether Polyols Production NESHAP

Please help us gauge this document's usefulness by completing this short form. We'll keep your responses confidential if you desire, but use them to help improve future documents. **Check this box if you would like us to keep your responses confidential 9**

1. What type of business do you work for? (check one of the following)
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We have incorporated parts of this document into our own policy documents						
The format of this document was well organized and easy to understand.						

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Provide additional comment on the back of this form or on a separate sheet of paper.

Return survey to: ATTN: Polyether Polyols Implementation Contact, U.S. Environmental Protection Agency (EPA), Information Transfer and Program Integration Division (MD-12), Research Triangle Park, NC 27711, **or** fax (919) 541-2664.

Chapter 2 - Regulatory Overview

What does this chapter cover?

This chapter gives you some general information about Subpart PPP and tells you how to use this document. It also describes compliance, testing, and reporting deadlines.

How do I use this document?

This document summarizes the major requirements of the NESHAP for polyether polyols production facilities. While we've attempted to be as complete as possible, you **shouldn't** use this summary as a substitute for the final rule and any subsequent amendments. This document includes only requirements from the final rule and rule amendments published 5/8/2000.

In addition to the requirements summarized in this section, you're also subject to §§63.1 through 63.15 of the General Provisions. See **Table 1** in subpart PPP (**which can be found in Appendix A of this document**) for specific requirements, since we haven't included them here.

Where can I find the regulation?

You can find this regulation in the Code of Federal Regulations (CFR, revised as of July 1, 1999) at 40 CFR 63 Subpart PPP, §§63.1420 through 63.1439.

When was the regulation proposed and promulgated?

Subpart PPP was proposed on 9/4/97 [62 FR 46804]. It was promulgated on 6/1/99 [64 FR 29420]. A Correction Notice was published on 6/14/99 [64 FR 31895]. Amendments to the rule were promulgated on 5/8/2000 [65 FR 26491].

When do I need to comply with Subpart PPP?

When you will have to comply with the rule depends on whether you have an existing affected source or a new affected source. Table 1 summarizes your compliance dates for *new* and *existing* affected sources. In general, if your affected source is an ***existing*** source, you must comply by **June 1, 2002**, which is three years after the rule's effective date of **June 1, 1999**. (That is, the effective date is the date the final rule was published in the Federal Register.) However, the *new* and *existing* does allow you to request an extension of up to one additional year for the compliance date for existing sources. If you're a ***new source,*** you must comply upon startup. [§63.1422(b-c)] For more information on new and existing sources, see Chapter 3 on Applicability.

Table 1. Compliance Dates for Existing and New Sources

If . . .	**Then your[1]. . .**	**And you must comply by . . .**
construction or reconstruction of your affected source began on or **before** 09-04-97	affected source is an ***existing*** source	**06/01/02**[2] [§63.1422(c)]
construction or reconstruction of your affected source began **after** 09-04-97	affected source is a ***new*** source	**6/1/99 or** upon initial startup, whichever is later [§63.1422(b)]
your facility is a major source and you've added a **new** PMPU that **meets** the criteria in §63.1420(g)(1)(i)	new PMPU and associated equipment is a **new** source	**6/1/99 or** upon initial startup, whichever is later [§63.1420(g)(1)(i)]
your facility is a major source and you've added a **new** PMPU that **doesn't meet** the criteria in §63.1420(g)(1)(i)	new PMPU and associated equipment is an **existing** source	**06/01/02 or** upon initial startup , or by 6 months after notifying the Administrator that a process unit has been designated as a PMPU, whichever is later. [63.1420(g)(1)(ii)]
you've replaced a component at an existing affected source that the replacement meets the criteria for **reconstruction** in §63.1420(g)(2)(i)	affected source is a **new** source	**06/01/99 or** upon initial startup, whichever is later [§63.1420(g)(2)(i)]
you've **added** an emission point **or** made a process change to an existing affected source that **doesn't meet** the criteria in §63.1420(g)(2)(i) but adds a new Group 1 emission point (process vent, storage vessel, or wastewater stream)	emission point is an existing source	**06/01/02 or** upon initial startup, whichever is later [§63.1420(g)(2)(ii)]

[1]When determining if a source is new or existing, the General Provisions (40 CFR 63, Subpart A, §63.2) require us to use the proposal date of the rule as the cut-off date. In the case of subpart PPP, the rule was proposed on 09/04/97 [62 FR 46804].

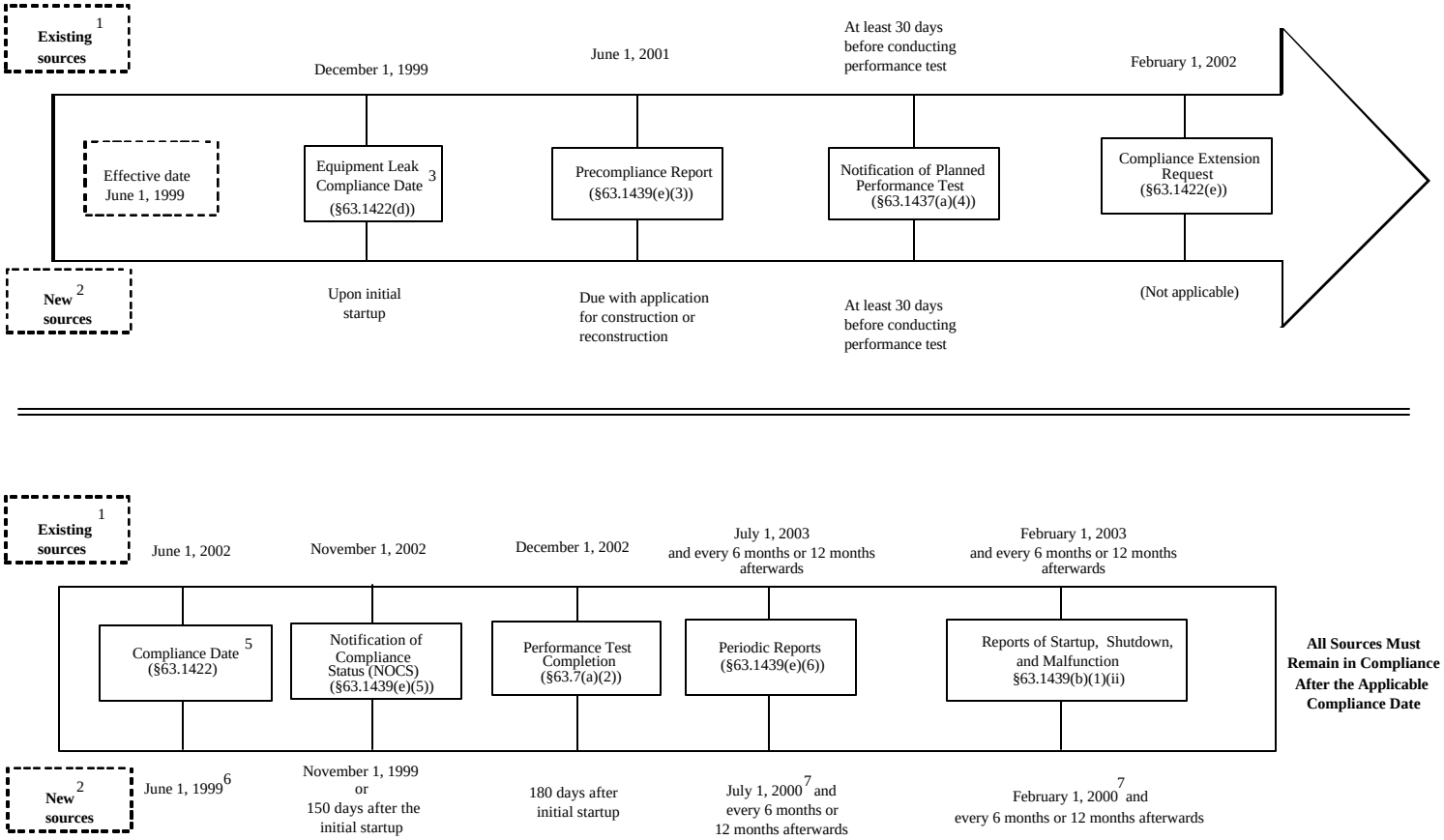
[2] §63.1422(d) outlines compliance dates for affected sources subject to the compressor provisions in §63.1464. Compliance dates for compressors are addressed in Chapter 14, Equipment Leaks.

Figure 1 provides a visual timeline of your compliance dates.

What are the testing and reporting dates?

See **Figure 1** for information on performance testing and reporting dates.

Figure 1. Compliance and Reporting Time Line



[1] An existing source is one at which construction was started prior to September 4, 1997.

[2] A new source is one at which construction or reconstruction began after September 4, 1997.

[3] Except as described in §63.1422(d)(1) through (5).

[4] Or 120 days after initial startup, whichever is later, except for new sources with initial startup after August 30, 1999, for which an application for construction or reconstruction is due instead (before initial startup).

[5] Unless a compliance extension is requested and granted, as allowed under §63.1422(e).

[6] Or upon initial startup, whichever is later.

[7] Or 240 days after notification of compliance status, whichever is later.

Chapter 3 - Applicability

What does this chapter cover?

This chapter contains information about when Subpart PPP applies. It has four sections.

Does this rule apply to me?	This section explains the basic criteria for whether your facility is subject. It also explains which parts of your facility the rule covers and which parts do and do not have regulatory requirements.
Primary Product Determination	The rule does not apply unless you manufacture polyether polyols as your primary product. This section explains how to determine whether polyether polyols are your primary product. Figure 2 presents the information visually.
Flexible Unit Operation	A flexible unit operation is one that produces polyether polyols some of the time and other products some of the time. This section describes your requirements for flexible unit operations, which are different from those for units that produce polyether polyols all the time. You must determine whether a unit is a flexible unit annually. Figure 3 and Figure 4 show this process.
Existing and New Sources	The requirements for new and existing facilities are different. This section explains when a facility is new or existing. It also explains what happens when a process change occurs.

Does this rule apply to me?

Is my facility subject to this rule?

Your facility is subject to this rule if it meets all of the following criteria. [§63.1420(a)(2-3)]

- contains a group of one or more polyether polyol manufacturing process units (PMPUs) and associated equipment
- is located at a major source of Hazardous Air Pollutants (HAP) (that is, potential to emit at least 10 tons/yr of any HAP **or** at least 25 tons/yr of any combination of HAP)

Definition. *Polyether Polyols* 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 (i.e., compounds with two or more ether bonds). Polyether polyols do not include cellulose ethers (such as methyl cellulose, carboxymethyl cellulose, hydroxy ethyl cellulose, and hydroxypropyl methyl cellulose), or materials regulated under 40 CFR part 63, subparts F, G, and H (the HON), such as glycols and glycol ethers.

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

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For a list of regulated HAPs, check our Unified Air Toxics Website (UATW) at http://ww.epa.gov/ttn/uatw/188polls.txt. To determine whether the primary product at a PMPU is a polyol, see the section on Primary Production Determination.

Does this rule apply to me?

What parts of my facility does the rule cover?

The "affected source" is all the parts of your facility that the rule covers. The affected source includes each PMPU and the following associated emission points and equipment. [§63.1420(a)(2), (a)(4)]

- each waste management unit
- maintenance wastewater
- each heat exchange system
- equipment required by or used for compliance purposes, including control techniques and recovery devices
- product finishing operations
- each feed and catalyst operation

What parts of my facility are exempt from the rule?

Some parts of your facility are **exempt** from subpart PPP. That is, they are not part of the affected source. They are not part of the PMPU and associated equipment. The rule does not apply to them. This includes **all** of the following. [§63.1420(d)]

- research and development facilities
- solvent reclamation, recovery, or recycling operations at hazardous waste treatment, storage, and disposal facilities (TSDF) that require a permit under 40 CFR part 270 and aren't part of a PMPU to which this subpart applies. That is, if the TSDF is at your plantsite, but is not part of the PMPU, it is not subject to this rule.
- reactions or processing that occur after epoxide polymerization is complete and all catalyst is removed.

Does this rule apply to me?

What parts of my facility do not have any requirements under Subpart PPP?

Some parts of your polyether polyol production facility are subject to Subpart PPP and part of the affected source, but don't have any requirements. They are **all** of the following. [§63.1420(c)]

- stormwater managed in segregated sewers
- water from fire-fighting and deluge systems in segregated sewers
- spills
- water from safety showers
- water from testing of deluge systems
- water from testing of firefighting systems
- vessels that store or handle material that contains no organic HAP, or organic HAP as impurities only
- equipment that operates in organic HAP service for less than 300 hours during the calendar year
- loading racks, loading arms, or loading hoses that only transfer liquids containing HAP as impurities
- loading racks, loading arms, or loading hoses that vapor balance during all loading operations
- utility fluids, such as heat transfer fluids

What parts of my facility have requirements under Subpart PPP?

The following parts of your facility are subject to subpart PPP, part of the affected source, and subject to emission standards. The emission standards and other requirements for each are addressed in a separate section within this document. [§63.1424(a)]

process vents (see Chapter 6)

storage vessels (see Chapter 12)

wastewater (see Chapter 13)

equipment leaks (see Chapter 14)

heat exchangers (see Chapter 15)

Does this rule apply to me?

What are the requirements if I don't use any organic HAP in my PMPU?

If you own or operate a PMPU that's part of an affected source **but** don't use or manufacture any *organic* HAP during production, your affected source is only subject to the requirements in Table 2.

Table 2. Requirements for Process Units without Organic HAP Emissions

If your PMPU **does not use or manufacture organic HAP to produce polyether polyols**, then you must comply with either Column 1 **OR** Column 2. [§63.1420(b)(1)]	If your PMPU **uses** or manufacturers organic HAP in the production of polyether polyols, **but** your facility **uses a HAP that is not an organic HAP in the production of a polyol that is not a polyether polyol non-organic HAP in the production of a non-polyether polyol**, then you must comply with either Column 1 OR Column 2 **during** the production of the non-polyether polyol product that doesn't use or manufacture organic HAP. [§63.1420(b)(2)]
Column 1	**Column 2**
Retain the information, data, and analyses you used to determine why the PMPU doesn't use or manufacture any organic HAP. This documentation could include records of chemicals purchased for the process, analyses of the process composition, engineering calculations, process knowledge, etc.	Demonstrate that the PMPU doesn't use or manufacture any organic HAP when requested to do so by the Administrator.

Products or raw materials containing organic HAP as impurities aren't considered organic HAP for the purposes of determining if your affected source uses organic HAP in the PMPU process. [§63.1420(b)]

Does this rule apply to me?

Definition "Organic HAP" includes **all** of the following chemicals, or any other chemical, if they're knowingly produced/ introduced into the polyether polyol manufacturing process (that is, not an impurity). It also includes chemicals listed in Table 2 of 40 CFR part 63, subpart F in the HON. [§63.1423 and Table 4 of subpart PPP]

- 1,3 Butadiene (CAS 106990)
- Epichlorohydrin (CAS 106898)
- Ethylene oxide (CAS 75218)
- n-Hexane (CAS 110543)
- Methanol (CAS 67561)
- Propylene oxide (CAS 75569)
- Toluene (CAS 108883)

An ***impurity*** is a substance that is produced coincidentally with the primary product, or is present in a raw material. An impurity does not serve a useful purpose in the production or use of the primary product and is not isolated. [§63.1423]

CAS = Chemical abstracts service registry number.

Primary Product Determination

This section describes how you'll determine if your PMPU produces polyether polyols as a primary product. Your facility is subject to Subpart PPP if it's a major source of HAPs and it contains a group of one or more process units that manufacture polyether polyols as their **primary product**.

What do we mean by "primary product"?

Many process units used to produce polyether polyols can also be used to produce other polymers or products. Only process units that predominantly manufacture polyether polyols are covered under subpart PPP.

Subpart PPP requires that you look at each of your process units to determine if polyether polyols are your "primary product" at these process units. If they are, your process unit is a PMPU and is subject to Subpart PPP.

However, if you change the primary product of a PMPU from a polyether polyol to a product that's subject to another NESHAP, the process unit may then be subject to the other NESHAP, and not to Subpart PPP. This process is described in §63.1420(e)(10).

How do I determine my primary product?

We've included several figures to help you determine if you produce polyether polyols as your primary product. The figures will help you do an initial determination of whether each process unit has polyether polyols as a primary product and is subject to Subpart PPP. They will also help you understand whether Subpart PPP applies if you later start to produce polyether polyols at a process unit that was not previously covered or if you stop producing polyether polyols in the future.

Figure 2 illustrates the procedures you'll follow to determine the primary product at *existing* and *new* sources. If you anticipate starting polyether polyol production at a process unit that isn't a PMPU, determine if it is a PMPU by using Figure 2.

Subpart PPP also addresses changes in production trends. Figure 3 shows the procedures for evaluating non-PMPUs that have recently produced polyether polyols. Figure 4 illustrates your procedures for determining if a PMPU is still subject to subpart PPP based on recent production and your future plans for production.

Primary Product Determination

What requirements must I meet if my process unit is a PMPU?

If your PMPU manufactures polyether polyols as its primary product, it's considered a PMPU and subject to Subpart PPP. Your requirements for PMPUs are discussed later in this document.

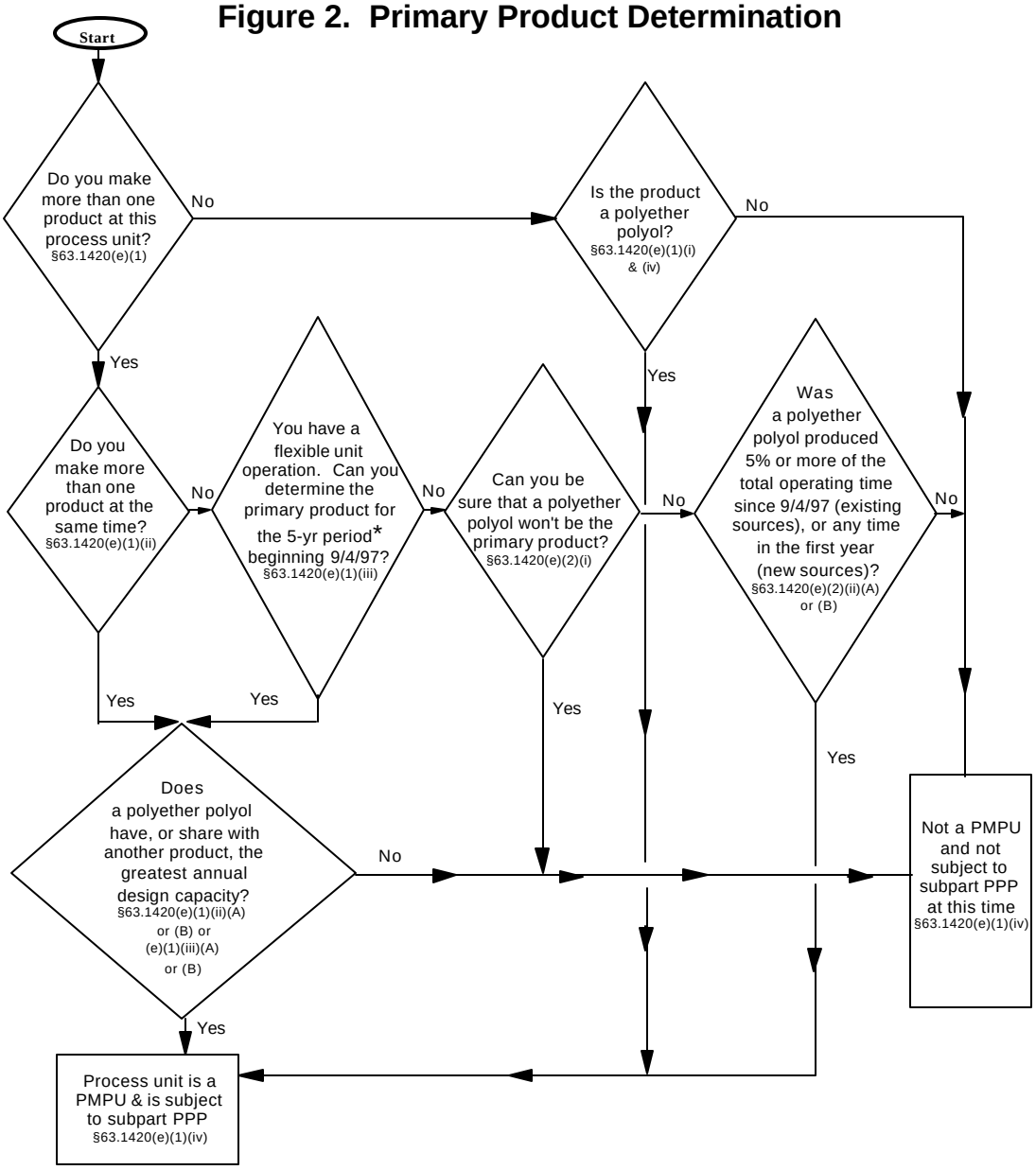
What if my process unit isn't a PMPU?

If your PMPU doesn't manufacture polyether polyols as its primary product, it isn't considered a PMPU and isn't subject to Subpart PPP. If you determine that a process unit isn't subject to this subpart, maintain all the information, data, and analyses that you used to determine that the process unit isn't a PMPU. As an alternative to keeping records, you may demonstrate that the process unit isn't a PMPU when requested to do so by the Administrator. [§63.1420(e)(8)]

What are my requirements if my PMPU stops producing polyether polyols?

If your PMPU stops the production of polyether polyol and you don't anticipate the production of a polyether polyol in the future, your process unit is no longer a PMPU and isn't subject to Subpart PPP after notification is made to the Administrator. In your notification, include a rationale for why you anticipated that no polyether polyol will be produced in the process unit in the future. [§63.1420(e)(9)]

Figure 2. Primary Product Determination



* A 1-yr projection is required for new process units

Flexible Operation Unit

This section describes the requirements for flexible operation units.

What is a flexible operation unit?

A flexible operation unit is a process unit that manufactures different chemical products by periodically alternating the raw materials fed into the process unit or alternating the operating conditions at the process unit. These units are also sometimes called campaign plants or blocked operations. Under Subpart PPP, a flexible operation unit is a process unit that sometimes produces polyether polyols and sometimes produces other products. [§63.1420(e)(5)]

Are my flexible operating units subject to Subpart PPP?

If you are producing polyether polyols as your primary product (see Figure 2), your flexible operating unit is subject to Subpart PPP. Your flexible operation unit isn't required to comply with Subpart PPP when it is producing **any** of the following products. [§63.1420(e)(5)(iv)]

- products in which no organic HAP is used or manufactured, if you are complying with §63.1420(b)(2) [that is, requirements for PMPUs without organic HAP]
- products that make the process unit subject to 40 CFR part 63, Subpart GGG (that is, Pharmaceuticals Production NESHAP)

You must designate which process units are flexible operation units and whether they are subject to Subpart PPP in your Notification of Compliance Status. [§63.1420(e)(1)(iii); §63.1439(d)(5)(iii)]. If you designate a flexible operation unit as not subject to subpart PPP, you must re-evaluate whether it is subject to subpart PPP annually, beginning June 1, 2004. Figure 3 describes this annual redetermination process.

Some flexible unit operations that are initially subject to subpart PPP may stop being subject to subpart PPP. To determine whether your flexible operation unit is still subject to subpart PPP, see Figure 4. **If you terminate production of all polyether polyols, and you have notified the Administrator, the process unit is no longer subject to Subpart PPP.**[§63.1420(e)(3) and (9)]

Flexible Operation Unit

What are the requirements for flexible operation units?

If the flexible operation unit is not using organic HAP, you must meet the requirements in Table 2. If the flexible operation unit is subject to the pharmaceutical MACT [40 CFR part 63, Subpart GGG], you do not have any requirements under Subpart PPP. Otherwise, you must comply with the control device and monitoring requirements in §63.1420(e)(i) - (e)(iii) of Subpart PPP, which are described in Table 3. These requirements vary according to whether you are producing polyether polyols or not.

Table 3. Requirements for Flexible Operating Units*

	Producing polyether polyol	**Not producing polyether polyol**
Control Requirements	comply with all applicable provisions in Subpart PPP [§63.1420(e)(5)(i)(A)]	continue to operate any existing combustion, recovery, or recapture devices required for compliance during the production of polyether polyols if you use extended cookout (ECO) as your control technique for epoxide emission reduction **and** the non-polyether polyol being produced uses epoxide monomers, continue to use the ECO or an equivalent control technique [§63.1420(e)(5)(i)(B)]
Monitoring Requirements	establish a single parameter monitoring level for each parameter at each device that requires monitoring under Subpart PPP. Do this by following §63.1438(a). Your parameter monitoring is based on the emission point and control techniques used while polyether polyols are produced [§63.1420(e)(5)(ii)(A)]	
	monitor each parameter at each device that requires monitoring under Subpart PPP [§63.1420(e)(5)(ii)(B)]	monitor each parameter at each device that requires monitoring under Subpart PPP [§63.1420(e)(5)(ii)(B)]

*These requirements do not apply if the flexible operation unit is not using organic HAP or if the flexible operation unit is subject to Subpart GGG. As for other process units, the requirements do not apply unless the flexible operation unit is making a polyol as a primary product.

Figure 3. Annual Redetermination for Non-PMPU Flexible Operation Units (Beginning June 1, 2004)

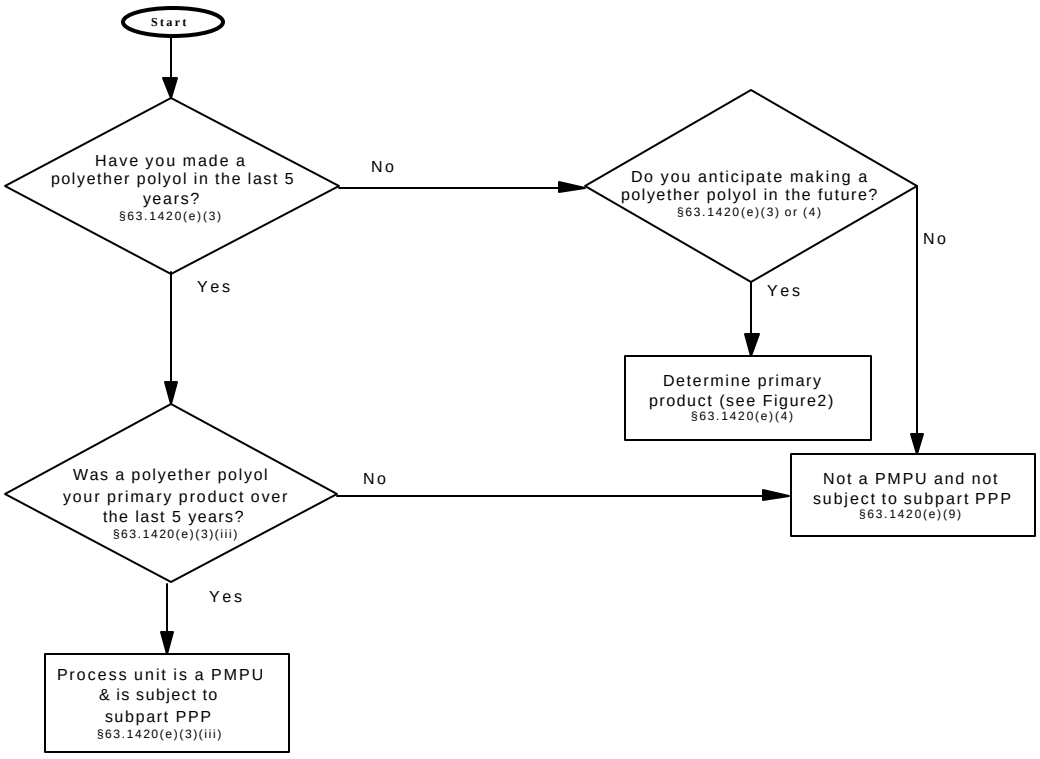
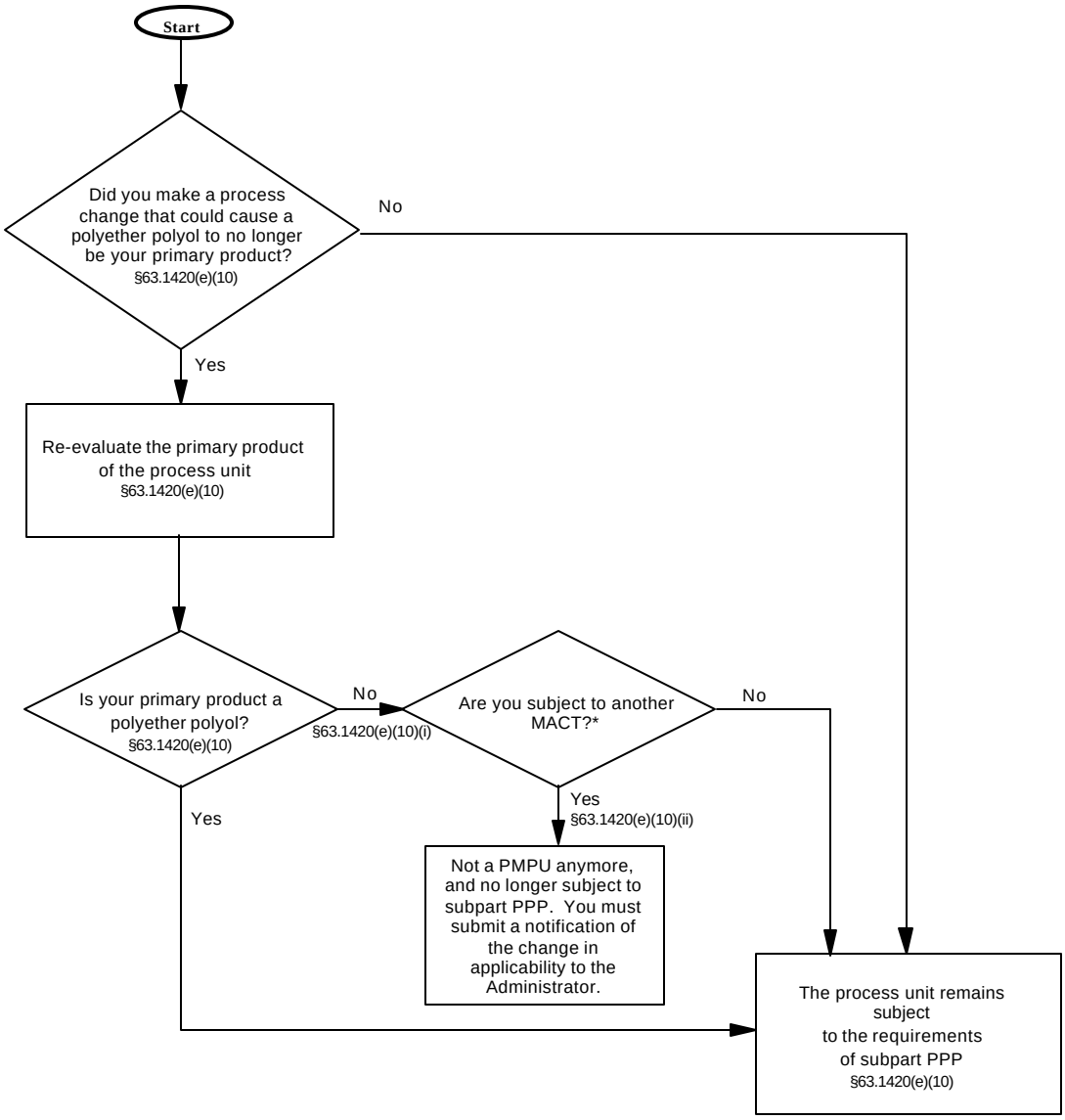


Figure 4. Redetermination for PMPUs Acting as Flexible Operation Units §63.1420(e)(10)



* With the exception of 40 CFR 63, subpart GGG (Pharmaceutical MACT)

Existing and New Affected Sources

What is an existing affected source?

If a source is not a new affected source, it is an existing affected source.

What is a new affected source?

A ***new*** affected source is an affected source that meets **any** of the following criteria.

- **Greenfield site**. A facility without organic HAP emissions before 9/4/97 that commenced construction on a group of one or more PMPUs and associated equipment after 9/4/97 and is located at a facility that's a major source as defined in §63.2 of the General Provisions. [§63.1420(a)(3)(i)]
- **Addition of a new PMPU**. A PMPU may be added by constructing or reconstructing a process unit to produce polyether polyols, or a PMPU may be added due to changes in production such that the polyether polyol becomes the primary product of a non-PMPU process unit.

  You've added a new PMPU if you commenced construction on a group of one or more PMPUs (and associated equipment) after 9/4/97 **and** your PMPU meets at least **one** of the following criteria: [§63.1420(a)(3)(ii), §63.140(g)(1)(i) (A)]

  < the new process unit has potential to emit 10 tons per year (tpy) or more of any *organic* HAP or 25 tpy of any combination of *organic* HAP, **and** polyether polyols are currently produced as a primary product at an affected source on the facility (that is, new unit emits *organic* HAP at major source levels) [§63.1420(g)(1)(i)(B)]

  < the new process unit will be installed at a facility that doesn't currently produce polyether polyols as its primary product, **and** the facility emits (or has the potential to emit after construction) HAPs greater than the major source threshold as defined in §63.2 of the General Provisions (that is, facility emits *any* HAP at major source levels) [§63.1420(g)(1)(i)(C)]

- **Replacing components**. If you've **replaced any components** of an existing source **and** the replacement meets the definition of reconstruction **and** reconstruction commenced after 9/4/97 [§63.140(g)(2)(i)(A-B)].

Addition of a new PMPU may occur if a process unit is constructed or reconstructed after 9/4/97.

Existing and New Affected Sources

Definition. *Reconstruction* means the replacement of components of an affected source or of a previously unaffected stationary source that becomes an affected source as a result of the replacement, to such an extent that: (1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source; and (2) It is technologically and economically feasible for the reconstructed source to meet the provisions of this subpart.

Note: To determine whether the fixed capital cost of the new components exceeds 50 percent, the equivalent capital cost shall be the

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However, if you have an addition or a process change **that does not replace components** but that creates one or more Group 1 emission points (new Group 1 emission points or Group 2 emission points become Group 1), they are part of the existing affected source. [§63.1420(g)(2)(ii)].

What types of changes are "process changes"?

Under §63.1420(g), a process change **includes**, but isn't limited to, **any** of the following. [§63.1420(g)(3)]

- additions to process equipment that result in a change in capacity to produce
- production of a product outside the scope of the initial compliance demonstration
- replacement, removal, or addition of recovery equipment

A process change **doesn't** include **any** of the following. [§63.1420(g)(3)]

- process upsets and unintentional temporary process changes
- changes that do not alter equipment configuration and operating conditions

Chapter 4- Determining Group Status

What does this chapter cover?

This chapter describes how group status is defined for specific emission points. Under Subpart PPP, you'll be required to determine the group status of some emission points. Different requirements apply to Group 1 and Group 2 emission points. Often, the only requirements for Group 2 emission points involve monitoring, setting parameter monitoring levels, and recordkeeping and reporting. Specific requirements for each type of emission point will be discussed in individual chapters later in this document.

When must I determine Group 1 or Group 2 status?

Under Subpart PPP, you must determine the group status for **all** of the following types of emission points.

- continuous process vents associated with the use of a nonepoxide organic HAP to make or modify a polyether polyol product
- combinations of batch process vents associated with the use of a nonepoxide organic HAP to make or modify a polyether polyol product
- storage vessels
- wastewater streams

What is a Group 1 continuous process vent?

A Group 1 continuous process vent is a process vent from a continuous unit operation that's associated with the use of a nonepoxide organic HAP to make or modify the product, and meets **all** of the following criteria.

- has a flow rate greater than or equal to 0.005 standard cubic meters per minute (scmm)
- has a total organic HAP concentration greater than or equal to 50 parts per million by volume (ppmv)
- has a total resource effectiveness (TRE) index value less than or equal to 1.0

Definition. *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.

What is a Group 2 continuous process vent?

A Group 2 continuous process vent is a process vent from a continuous unit operation that's associated with the use of a nonepoxide organic HAP to make or modify the product, and isn't a Group 1 continuous process vent.

What is a Group 1 storage vessel?

A Group 1 storage vessel is a storage vessel from an existing or new affected source that meets **any** of the following criteria.

- has a capacity greater than or equal to 75 cubic meters and less than 151 cubic meters, and its vapor pressure is greater than or equal to 13.1 kilopascals
- has a capacity greater than or equal to 151 cubic meters, and its vapor pressure is greater than or equal to 5.2 kilopascals

What is a Group 2 storage vessel?

A Group 2 storage vessel is a storage vessel from an existing or new affected source that doesn't meet the definition of a Group 1 storage vessel.

What is a Group 1 wastewater stream?

A Group 1 wastewater stream is a process wastewater stream at an existing or new affected source that meets **any** of the following criteria.

- has a total annual average concentration of organic HAP that is greater than or equal to 10,000 parts per million by weight (ppmw)
- has a total annual average concentration of organic HAP that is greater than or equal to 1,000 ppmw and an annual average flow rate greater than or equal to 10 liters per minute

What is a Group 2 wastewater stream?

A Group 2 wastewater stream is a process wastewater stream at an existing or new affected source that doesn't meet the definition of a Group 1 wastewater stream.

What is a Group 1 combination of batch process vents?

A Group 1 combination of batch process vents is a collection of process vents in a PMPU from batch unit operations that's associated with the use of a nonepoxide organic HAP to make or modify the product, and meets **all** of the following criteria.

Definition. *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

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- has annual nonepoxide organic HAP emissions of 11,800 kg/yr or more
- has a cutoff flow rate that is greater than or equal to the annual average flow rate

What is a Group 2 combination of batch process vents?

A Group 2 combination of batch process vents is a collection of process vents in a PMPU from batch unit operations that is associated with the use of a nonepoxide organic HAP to make or modify the product, and that isn't a Group 1 combination of batch process vents.

Chapter 5 - Startup, Shutdown, Malfunctions and Non-Operation

What does this chapter cover?

This chapter contains information about requirements for startup, shutdown, malfunction, and non-operation. It has two sections.

Startup, Shutdown, Malfunction, and Non-operation	Subpart PPP has special provisions when you operate your emission point during startup, shutdowns and malfunctions (SSM) or when your emission point isn't operating. This section describes the procedures you'll follow while operating under these conditions.
Startup, Shutdown, and Malfunction Plans	This section describes the requirements for SSM plans (SSMP).

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

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

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Startup, Shutdown, Malfunction, and Non-operation

What if my PMPU isn't operating?

Non-operation means an action that results in the cessation of the emissions to which this subpart applies. [§63.1420(h)(1)] Except as provided below, emission limits under Subpart PPP do not apply when you are not operating your affected source (or specific portion thereof).

If you're subject to the emission limit for equipment leaks under 40 CFR part 63, Subpart H (that is, the HON Equipment Leak provisions), as referenced under §63.1434, you must comply with §63.1434 at all times **except** during periods of non-operation where lines are drained and depressurized and that action results in the cessation of the emissions subject to §63.1434. [§63.1420(h)(2)]

In some cases, you're subject to Subpart PPP even during non-operation. See "Are there times when I must follow Subpart PPP even if I have a SSM or period of non-operation?" for further details.

Am I subject during Startup, Shutdown, and Malfunction?

Except as identified below, emission limits under Subpart PPP do not apply during periods of SSM as long as the affected source follows the provisions in its startup, shutdown and malfunction plan (SSMP), as required under §63.6(e)(3) of the General Provisions. [§63.1420(h)(1)]

If you're subject to the emission limit for equipment leaks under 40 CFR part 63, Subpart H (that is, the HON Equipment Leak provisions), as referenced in §63.1434, you must comply with §63.1434 at all times **except** during periods of SSM or process unit shutdown where lines are drained and depressurized and that action results in the cessation of the emissions subject to §63.1434. [§63.1420(h)(2)]

In some cases, you're subject to Subpart PPP even during SSM. See "Are there times when I must follow Subpart PPP even if I have a SSM or period of non-operation?" for further details.

What requirements must I follow during SSMs?

If you're operating during periods of SSM and emission limits under Subpart PPP don't apply, you must take steps to prevent or minimize excess emissions to the extent practical. The measures you'll take to reduce emissions during SSM must be identified in your SSMP. Measures include, but aren't limited to: air pollution control technologies, recovery technologies, work practices, pollution prevention, monitoring, and changes in the manner you operate the affected sources. Use of back-up control techniques isn't required, but is allowed, if applicable. [§63.1420(h)(4)]

Startup, Shutdown, Malfunction, and Non-operation

Would I ever follow Subpart PPP during SSM or non-operation?

If one part of your affected source has a SSM or period of non-operation that doesn't affect the ability of an emission point to comply with the emission limit to which it's subject, then you must comply with the emission limit for that emission point even during the SSM or period of non-operation.

Example. The degassing of a storage vessel would not affect the ability of a process vent to meet the emission limitations for process vents in §63.1425 - 63.1430l.

Also, you can't shutdown items of equipment during SSM if emissions are routed to that equipment **and** the equipment is required or used for compliance with Subpart PPP **and** the shutdown would prevent the equipment from meeting applicable requirements. However, you can shutdown equipment (other than monitoring systems) if it's malfunctioning **or** it will be damaged due to a concurrent SSM of the affected source or portions thereof. [§63.1420(h)(3)]

If you believe that monitoring equipment would be damaged if you don't shut it down during a SSM of the affected source, you must document why in the Precompliance Report or in a supplement to the Precompliance Report, as required under §63.1439(e)(4). You must get the Administrator's approval before you have permission to stop collecting monitoring data during a SSM. Once approved by the Administrator, you must incorporate these provisions into your SSMP for that affected source. [§63.1420(h)(3)] Then you can stop collecting monitoring data if you have a SSM.

Startup, Shutdown, and Malfunction Plans

Emission limits under Subpart PPP apply at all times **except** during periods of SSM as long as the affected source follows the provisions in its SSMP. This section provides an overview of what a SSMP is and what it should contain.

What is a Startup, Shutdown and Malfunction Plan?

The purpose of the plan is to demonstrate how you'll do your best to maintain compliance with Subpart PPP, even during SSM. The plan will help you operate your affected source during these periods by identifying how you'll do **all** of the following.

- Operate and maintain your affected source in a manner that's consistent with good air pollution control practices, and, which minimize excess emissions during startup, shutdown and malfunction. [§63.1420(h)(4)]
- correct malfunctions as soon as practicable after their occurrence to minimize emissions. [§63.6(e)(3)(i)(B)]

Definition. *Excess emissions* means emissions greater than those allowed by the emissions limitation which would apply during operational periods other than start-up, shutdown, and malfunction.

When must I develop my SSMP?

You must develop your SSMP, which is due by the source's compliance date [§63.6(e)(3)(i)]. See Table 1 for compliance dates for new and existing sources.

What information should my SSMP contain?

For the purposes of Subpart PPP, you should have a plan that covers the affected source (that is, each PMPU and associated equipment). If you're subject to the equipment leak provisions under §63.1434, your SSMP is limited to combustion, recovery, or recapture devices and is optional for other equipment. In addition, SSMPs aren't required for Group 2 emission points. [Subpart PPP, Table 1, §63.6(e), §63.6(e)(3)(i)]

Startup, Shutdown, and Malfunction Plans

Your plan should provide a detailed description of **all** the following:

- procedures you'll follow for operating and maintaining the source during periods of SSM. [§63.1439(b)(1), §63.6(e)(3)(i)] Your SSMP may also include written procedures that identify conditions that justify a delay of repair. [Subpart PPP, Table 1]
- a program of corrective action you'll implement for the malfunctioning process and air pollution control equipment used to comply with the standard. [§63.1439(b)(1), §63.6(e)(3)(i)]
- any provisions approved by the Administrator that allows you to cease the collection of monitoring data during a SSM that would otherwise be required by Subpart PPP. [§63.1420(h)(3), §63.1439(b)(1)]

A standard operating procedures (SOP) manual, or an Occupational Safety and Health Administration (OSHA) manual or other plan can be used to satisfy the requirements for writing a plan as long as the plan meets all requirements above. [§63.6(e)(3)(vi)]

Who sees my SSMP and how long do I keep it?

Your SSMP must be retained on site and available for inspection for the life of the affected source or until the source is no longer subject to Subpart PPP. If you revise your plan, you must make the previous version available for inspection for 5 years after each revision. [§63.1439(b)(1)]

Do I have to modify my SSMP periodically?

You must modify your SSMP if the Administrator asks you to or if you have a malfunction that your existing plan doesn't identify. The Administrator (that is, the EPA or a State, local, or tribal agency that has been delegated the authority to implement these provisions) can require you to make changes to the plan if the plan:

- doesn't address a SSM event that has occurred [§63.6(e)(3)(vii)(A)]
- fails to provide for the operation of the source during a SSM event in a manner consistent with air pollution control practices to minimize emissions to at least the levels required by the standard [§63.6(e)(3)(vii)(B)]
- does not provide adequate procedures for correcting the malfunctioning process or air pollution control equipment as quickly as practical [§63.6(e)(3)(vii)(C)]

Startup, Shutdown, and Malfunction Plans

If your plan fails to address (or inadequately addresses) an event that meets the characteristics of a malfunction, revise your plan within 45 days after the event to include procedures for operating and maintaining the source during similar malfunction events. [§63.6(e)(3)(vii)]

Do I have to maintain any records when operating under my SSMP?

When operating under your SSMP, you must keep **all** of the following records (including all reports and notifications).

- occurrence and duration of each SSM of process equipment or combustion, recovery, or recapture devices or continuous monitoring systems used to comply with Subpart PPP where excess emissions occur. [§63.1439(b)(1)(i)(A)]
- each period during which a CMS is malfunctioning or inoperative (including out-of-control periods) [§63 .10(b)(3)(vi)]

In addition, records are required for SSMs where **excess emissions** occurred. The type of records you'll keep depend on whether the actions you took were **consistent**, or **inconsistent** with your SSMP: [§63.1439(b)(1)(i)(B)]

- if the actions you took **are consistent** with procedures outline in the plan, keep records for that event that demonstrate that you followed the procedures specified in your plan.
- if the actions you took **aren't consistent** with procedures outlined in your plan, keep records on the actions taken for that event.

Example: If you have a startup, shutdown or malfunction and your SSMP includes procedures for routing a combustion, recovery, or recapture device to a backup system, keep records of whether the plan was followed.

Checklists or other effective forms of recordkeeping that show compliance with your SSMP are acceptable.

Startup, Shutdown, and Malfunction Plans

Do I have to submit any reports when I operate under my SSMP?

If you have a SSM, you must submit a semiannual SSM report. You'll submit your semiannual report on the same schedule as your other periodic reports required under §63.1439(e)(6). [§63.1439(b)(1)(ii), §63.10(d)((5)(i)]

The information you must submit in your **semiannual report** will depend on whether the actions you took were **consistent** or **inconsistent** with your SSMP. [§63.1439(b)(1)(ii), §63.10(d)(5)(i)]

- If the actions you took **are consistent** with procedures outline in your plan, state such information in a startup, shutdown, and malfunction report for the semiannual reporting period. You'll submit your semiannual malfunction reports by letter and include **all** of the following information: [§63.10(d)(5)(i)]

  < name of owner/operator

  < title

  < signature of owner/operator or other responsible official

  < statement that actions taken are consistent with the plan

- If actions you took **aren't consistent** with procedures you outlined in your plan, state such information in a startup, shutdown, and malfunction report for the semiannual reporting period. You'll submit your semiannual malfunction reports by letter and include **all** of the following information: [§63.10(d)(5)(i)]

  < name of owner/operator

  < title

  < signature of owner/operator or other responsible official

  < explanation of the circumstances of the event

  < actions you took that weren't consistent with the plan [§63.1439(b)(1)(ii)]

  < the reasons for not following the plan

  < whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred

Startup, Shutdown, and Malfunction Plans

Chapter 6 - Process Vents

What does this chapter cover?

This chapter covers the requirements that apply to all types of process vents, **except process vents producing (tetrahydrofuran) THF and Group 2 process vents**.

What is a process vent?

Definition. *Process vent* means a point of emission from a unit operation having a gaseous stream that is discharged to the atmosphere either directly or after passing through one or more combustion, recovery, or recapture devices. A process vent from a continuous unit operation is a gaseous emission stream containing more than 0.005 weight-percent total organic HAP. A process vent from a batch unit operation is a gaseous emission stream containing more than 225 kg per year (500 pounds per year) or organic HAP emissions. Unit operations that may have process vents are condensers, distillation units, reactors, or other unit operations within the PMPU. Process vents exclude pressure relief valve

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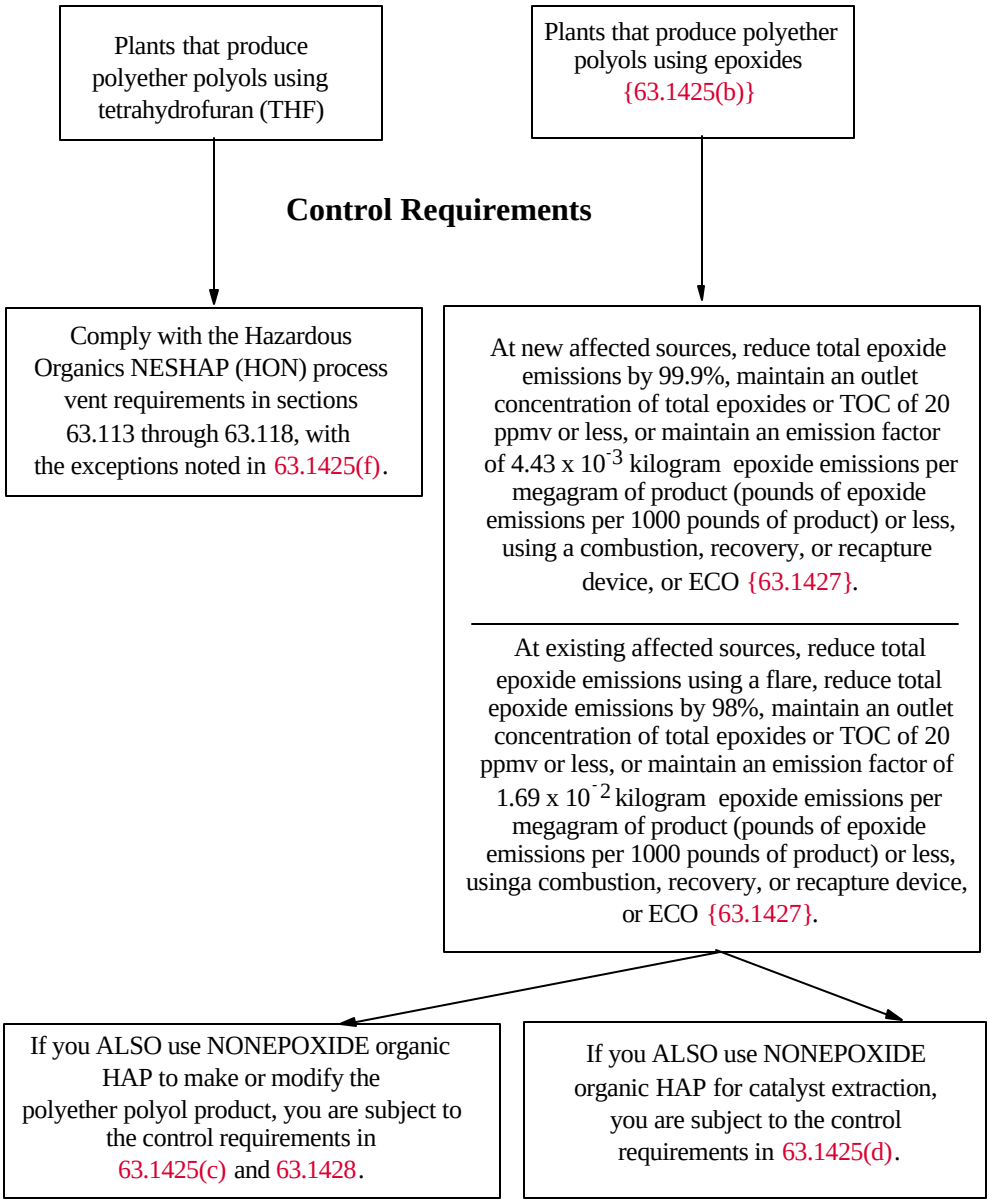
What process vents does Subpart PPP cover?

There is one set of process vent control requirements for sources producing polyether polyols using **epoxides** and another set of process vent control requirements for sources producing polyether polyols using **THF**.

If you use an epoxide to produce polyether polyols and **also use nonepoxide organic HAP** to modify your product or for catalyst extraction you'll have additional vent control requirements. If you use nonepoxide organic HAP to make or modify your product, your requirements will vary depending on whether the combination of process vents is Group 1 or Group 2. If you are producing polyether polyols using epoxides and you are using **extended cookout** to reduce epoxide emissions or maintain an emission factor , there are also additional requirements.

Figure 5 summarizes the various process vent requirements in Subpart PPP and shows how they relate to each other.

Figure 5. Illustration of Different Types of Polyether Polyols Production Plants and the Applicable Control Requirements for Process Vents



Are there other requirements for process vents?

In addition to the requirements in this chapter, there are more requirements for the various types of process vents. Table 4 explains where you will find those requirements.

Table 4. Process Vent Requirements in Subpart PPP

If you are producing polyether polyols using...	Then you must also	Find these requirements in...
epoxides	meet the epoxide emission limits in §1425(b)	Chapter 8
epoxides and using nonepoxide organic HAP to make or modify the product	meet the epoxide emission limits in §1425(b) **and** meet the nonepoxide organic HAP emission limits in §1425(c)	Chapter 8 and Chapter 9
epoxides and using nonepoxide organic HAP to make or modify the product and you have a Group 2 combination of process vents	meet the requirements in §1428	Chapter 8 and Chapter 9
epoxides and using nonepoxide organic HAP during catalyst extraction	meet the epoxide emission limits in §1425(b) **and** meet the nonepoxide organic HAP emission limits in §1425(d)	Chapter 8 and Chapter 10
epoxides **and** you are using extended cookout to reduce epoxide emissions or maintain an emission factor	meet the emission limits in §1425(b)(1)(i), §1425(b)(1)(iii), §1425(b)(2)(ii), or §1425(b)(2)(iv) **and** meet the requirements in §1427	Chapter 8 and Chapter 11
tetrahydrofuran (THF)	meet the emission limits in §1425(f)	Chapter 7

What are my monitoring installation and operation requirements?

For all process vents except THF and Group 2 process vents, you must install and operate monitoring equipment according to the requirements in §63.1429, which are summarized in Table 5. All monitoring equipment must be installed, calibrated, maintained, and operated according to the manufacturers' specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately. [§63.1429(a)]

Table 5. Monitor Installation and Operation Requirements for Process Vent Control Devices

Control Device	Monitor Installation and Operation	Parameter(s) to Monitor
Each Process Vent System with bypass lines that could divert emissions away from the combustion, recovery or recapture device and to the atmosphere*	Install, maintain, and operate a flow indicator that takes a reading at least once at approximately equal intervals of about 15 minutes. Flow indicator must 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. [§63.1429(c)(1)] **OR**	flow
	Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type of configuration, and visually inspect the seal or closure mechanism at least once every month, to ensure that the valve is maintained in the non-diverting position and that emissions are not diverted through the bypass line. [§63.1429(c)(2)]	valve position and emission route
Thermal Incinerators, Boilers, and Process Heaters**	Equip with a temperature monitoring device with a continuous recorder in a position before any substantial heat exchange occurs. [§63.1429(a)(1)(i)]	Firebox temperature
Catalytic Incinerator	Equip with temperature monitoring devices with continuous recorders in the gas stream immediately before and after the catalyst bed [§63.1429(a)(1)(ii)]	Temperature upstream of catalyst bed **AND** Temperature downstream of catalyst bed **AND** Temperature difference across catalyst bed
Flare	Install 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. [§63.1429(a)(2)]	Presence of a flame at the pilot light.

Table 5. Monitor Installation and Operation Requirements for Process Vent Control Devices

Control Device	Monitor Installation and Operation	Parameter(s) to Monitor
Absorbers (Batch Vents)	Install a scrubbing liquid flow rate meter equipped with a continuous recorder or a pressure monitoring device equipped with a continuous recorder. If you use an acid or base absorbent, you must also install a pH monitoring device, to monitor scrubber effluent If you use two or more absorbers in a series, you must install a scrubbing liquid flow rate meter, or a pressure monitoring device that's equipped with a continuous recorder, on each adsorber in the series. You may submit a request to the Administrator to install the scrubbing liquid flow rate meter, or pressure monitoring device on only the final absorber in a series by following §63.1429(a)(4) and §63.1439(f). [§63.1429(a)(4)]	Liquid flow rate into scrubber **OR** Liquid flow rate out of scrubber **OR** Pressure drop across scrubber If using acid or base absorbent, also scrubber effluent.
Absorbers (Continuous Vents)	Install a scrubbing liquid flow rate meter equipped with a continuous recorder or a pressure monitoring device equipped with a continuous recorder. If you use an acid or base absorbent, you must also install a pH monitoring device, to monitor scrubber effluent If you use two or more absorbers in a series, you must install a scrubbing liquid flow rate meter, or a pressure monitoring device that's equipped with a continuous recorder, on each adsorber in the series. You may submit a request to the Administrator to install the scrubbing liquid flow rate meter, or pressure monitoring device on only the final absorber in a series by following §63.1429(a)(4) and §63.1439(f). [§63.1429(a)(4)]	Exit temperature of absorbing liquid **AND** exit gravity of absorbing liquid If using acid or base absorbent, also scrubber effluent.
Condensers	Install condenser exit temperature (product side) monitoring device equipped with a continuous recorder. [§63.1429(a)(5)]	Exit temperature (product side)

Table 5. Monitor Installation and Operation Requirements for Process Vent Control Devices

Control Device	Monitor Installation and Operation	Parameter(s) to Monitor
Carbon Adsorber	Install integrating regeneration stream flow monitoring device with an accuracy of at least ±10%, capable of recording the total regeneration stream mass or volumetric flow for each regeneration cycle. Also install and use 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. [§63.1429(a)(6)]	Total regeneration stream mass or volumetric flow AND Carbon bed temperature
Absorber, Condenser, Carbon Adsorber (if not using parameters above)	Organic monitoring device equipped with a continuous recorder. [§63.1429(a)(7)]	Concentration at outlet of recovery device

* Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes aren't required to comply with the bypass line requirements in §63.1429(c).

** These requirements apply only to boilers or process heaters with a design heat input capacity less than 44 megawatts and where the process vents are not introduced with or used as the primary fuel.

What are my parameter monitoring requirements?

You must monitor parameters for each combustion, recovery, or recapture device used to control process vent emissions, as well as for bypass lines. These monitoring requirements will depend on what type of PMPU process you have (batch or continuous) and the type of control device you're using. §63.1429 and Tables 5 and 6 of Subpart PPP list your process vent monitoring requirements. We've summarized these requirements in Table 6.

For all options except the use of carbon absorbers and flares, you must monitor using a continuous recorder (that is, one that either records an instantaneous data value at least once every 15 minutes for continuous processes or records 1 hour or more frequent block average values for batch processes). You must record either each measured data value or each block average value. You must calculate the daily average value or each monitored parameter for each operating day according to §63.1439(d). You must define the operating day for each control device in your Notification of Compliance Status. [§63.1429(d)(3)]

For each parameter, you must establish a site-specific minimum or maximum level that indicates compliance during the performance test or TRE determination. Please see Table 7 of Subpart PPP and §63.1429(d) for establishing parameter monitoring levels.

What are my recordkeeping and reporting requirements?

Chapter 16 in this document describes the general recordkeeping and reporting requirements that apply to entire affected sources under this subpart. Table 6 includes the additional specific requirements for all process vents that are not Group 2 process vents or process vents producing polyether polyols using THF.

Table 6. Monitoring, Recordkeeping, and Reporting Requirements for Process Vent Control Devices*

Control Device	Parameter	Monitoring Requirement	Recordkeeping Requirement	Reporting Requirement**
All combustion, recovery, and recapture devices			information documenting your compliance status under §63.1430(b) information documenting your establishment of a parameter monitoring level under §63.1430(c) **if** you're complying with the percent reduction or annual epoxide emission limitations, record the percent reduction of organic HAP or TOC achieved [§63.1430(b)(2)(i)] **if** you're complying with an outlet concentration limitation, record the concentration of organic HAP or TOC at the outlet of the combustion [§63.1430(b)(2)(ii)]	information documenting your compliance status under §63.1430(b) **NOCS** information documenting your establishment of a parameter monitoring level under §63.1430(c) **NOCS** [§63.1430(g)]
Each Process Vent System with bypass lines that could divert emissions away from the combustion, recovery or recapture device and to the atmosphere	You must monitor flow indicator operation and process vent diversion OR monitor valves diverted and seals broken.			
	Flow indicator operation	monitor whether the flow indicator for bypass lines was operating hourly (for batch vents, only during batch emission episodes selected for control)	whether the flow indicator for bypass lines was operating each hour §63.1430(d)(3)	times of all periods when flow indicator is not operating (for batch vents, only during batch emission episodes selected for control)

Table 6. Monitoring, Recordkeeping, and Reporting Requirements for Process Vent Control Devices*

Control Device	Parameter	Monitoring Requirement	Recordkeeping Requirement	Reporting Requirement**
Each Process Vent System with bypass lines that could divert emissions away from the combustion, recovery or recapture device and to the atmosphere	Process vent diverted	monitor whether process vent was diverted from the combustion, recovery or recapture device hourly (for batch vents, only during batch emission episodes selected for control)	any times when the process vent was diverted from the combustion, recovery or recapture device each hour §63.1430(d)(3)	times of all periods when vent stream is diverted.(for batch vents, only during batch emission episodes selected for control) §63.1430(h)(3)
	Valves diverted or seals broken	monthly inspections whether valves are in the diverting position or a seal has been broken	records that monthly inspections of the seals or closure mechanisms were performed records of all occurrences when the seal mechanism is broken, the bypass line valve position has change, or the key for a lock-and-key type configuration has been checked out records of any monthly inspection that shows that a car-seal has broken. §63.1430(d)(4)	all monthly inspections that show valves are in the diverting position or that a seal has been broken §63.1430(h)(4)

Table 6. Monitoring, Recordkeeping, and Reporting Requirements for Process Vent Control Devices*

Control Device	Parameter	Monitoring Requirement	Recordkeeping Requirement	Reporting Requirement**
All Devices Except Flares and Carbon Adsorbers	Operating Parameter(s) specified in Table 8 of this document	Over the period of the performance test or during the period of the TRE determination (continuous)	Average during the performance test or during the period of the TRE determination (continuous)	Average during the performance test or during the period of the TRE determination (continuous) **NOCS**
		At least every 15 minutes	If all recorded values for the operating day are above the minimum or below the maximum value established during the performance test or TRE determination, a record of such [§63.1430(d)(2)(ii)]	Each daily average value that is below the minimum or above the maximum value established in the Notification of Compliance Status or operating permit §63.1430(h)(1) For batch processes, each instance when monitoring data are not collected. For continuous processes, each instance when sufficient monitoring data are not collected. §63.1430(h)(2)

Table 6. Monitoring, Recordkeeping, and Reporting Requirements for Process Vent Control Devices*

Control Device	Parameter	Monitoring Requirement	Recordkeeping Requirement	Reporting Requirement**
Boilers and Process Heaters			for boilers and process heaters if your process vent streams **are** introduced with combustion air **or** are used as secondary fuel **and** aren't mixed with the primary fuel, you must record the percent reduction of organic HAP or TOC achieved, as required under §63.1426. [§63.1430(b)(2)(iv)] Boilers and process heaters: record a description of the location at which the process vent is introduced into the boiler or process heater. [§63.1430(b)(2)(iii) and Tables 5 and 6, 40 CFR part 63, subpart PPP] reduction of organic HAP or TOC achieved, as required under §63.1426. [§63.1430(b)(2)(iv)]	
Carbon Adsorber	Total regeneration stream mass or volumetric flow	monitor for each cycle during performance test (batch) or period of TRE determination (continuous) monitor for each cycle during the semiannual reporting period	record for each cycle during performance test (batch) or period of TRE determination (continuous) record for each cycle during the semiannual reporting period*	report for each cycle during performance test **NOCS** §63.1430(h)(3)

Table 6. Monitoring, Recordkeeping, and Reporting Requirements for Process Vent Control Devices*

Control Device	Parameter	Monitoring Requirement	Recordkeeping Requirement	Reporting Requirement**
Carbon Adsorber	carbon bed temperature	monitor after each regeneration and within 15 minutes of completing any cooling cycles during performance test (batch) or period of TRE determination (continuous) monitor after each regeneration and within 15 minutes of completing each cooling cycle during the semiannual reporting period	record after each regeneration and within 15 minutes of completing any cooling cycles during performance test (batch) or period of TRE determination (continuous)	report for each regeneration during the period of the performance test or TRE determination **NOCS** §63.1430(h)(6)

Table 6. Monitoring, Recordkeeping, and Reporting Requirements for Process Vent Control Devices*

Control Device	Parameter	Monitoring Requirement	Recordkeeping Requirement	Reporting Requirement**
Flare	Presence of flame at the pilot light	whether monitor is operating and flame is present	hourly records of whether the monitor was continuously operating and whether a flame was continuously present at the pilot light during each hour record the presence of a flame at the pilot light over the full period of the compliance determination record the times and durations of all periods when all flames were absent or the monitor was not monitoring, as required by §63.1437(c) [§63.1430(b)(1)(iii)] record the flare design and all visible emission readings, heat content determinations, flow rate determinations, and exit velocity determinations made during the flare specification determination, as required under §63.1437(c). [§63.1430(b)(1)(i), (ii)] [§63.1430(b)(1) and Tables 5 and 6, 40 CFR part 63, subpart PPP]	report the presence of a flame at the pilot light over the full period of the compliance determination report the times and durations of all periods when all pilot flames of a flare were absent [§63.1430(h)(5)]

Table 6. Monitoring, Recordkeeping, and Reporting Requirements for Process Vent Control Devices*

Control Device	Parameter	Monitoring Requirement	Recordkeeping Requirement	Reporting Requirement**
Absorber, Condenser, Carbon Adsorber (if monitoring HAP concentration)	HAP concentration level or reading at outlet of the recovery device	Over the period of the performance test or during the period of the TRE determination (continuous)	Average concentration level or reading measured during the performance test (batch) or TRE determination (continuous)	Average concentration level or reading measured during the performance test (batch) or TRE determination (continuous) **NOCS**
		At least every 15 minutes over the semiannual reporting period	Daily average concentration level	Each daily average concentration level or reading that is above the maximum concentration established in the NOCS or operating permit
				All instances when monitoring data not collected

* Requirements are from Tables 5 and 6, 40 CFR part 63, subpart PPP, except where otherwise noted.

** Report in Periodic Report unless Table 6 states Notification of Compliance Status (NOCS)

What is an excursion?

An excursion is when the daily average value of one or more monitored parameters is outside of the maximum or minimum level or when monitoring data is insufficient. [§63.1438(e) and (f)]

You're allowed a certain number of excursions (that is, "excused excursions") for each combustion, recovery, or recapture device for each semiannual reporting period. For each combustion , recovery, or recapture device, you're allowed the following number of excused excursions. [§63.1438(g)]

- 6 excused excursions for the first semiannual reporting period (that is, the 6-month period immediately following the date your Notification of Compliance Status (NOCS) is due)
- 5 excused excursions for the second semiannual reporting period
- 4 excused excursions for the third semiannual reporting period
- 3 excused excursions for the fourth semiannual reporting period
- 2 excused excursions for the fifth semiannual reporting period
- 1 excused excursion for the sixth and all subsequent semiannual reporting periods

Any excursion that is not an excused excursion is a violation of the emission limitation or the operating limit. [§63.1438(e)]

Table 7 explains what an excursion is for each type of combustion, recovery, or recapture device. It also states whether the excursion is a violation of the emission limit or the operating limit.

Table 7. Excursions

For each. . .	An excursion is. . .	The excursion is a violation of the. . .
Condenser [§63.1438(e)(1)(i)]	when the daily average exit temperature (product side) for an operating day is higher than the maximum value established during the performance test (batch vents) or TRE determination (continuous vents)	Emission limit
Recovery or recapture device other than a condenser where an organic monitoring device is used to monitor HAP concentration at the outlet of the control device [§63.1438(e)(1)(ii)]	when the daily average HAP concentration level or reading at the outlet of the control device for an operating day is higher than the maximum value established during the performance test (batch vents) or TRE determination (continuous vents)	Emission limit
Storage vessel where continuous monitoring is required AND each process vent from continuous unit operations using combustion, recovery, or recapture devices AND for process wastewater streams [§63.1438(f)(1)]	when the daily average value for one or more monitored parameters for an operating day is higher than the maximum value or below the minimum value established during the performance test §63.1438(f)(1)(i)	Emission limit
	Not including periods of SSM or non-operation, the period of combustion, recovery, or recapture device operation in an operating day is 4 hours or greater and monitoring data are insufficient to constitute a valid hour of data for at least 75 percent of the operating hours §63.1438(f)(1)(ii)	Operating limit
	Not including periods of SSM or non-operation, the period of combustion, recovery, or recapture device operation in an operating day is less than 4 hours and monitoring data are insufficient to constitute a valid hour of data for at least 2 of the operating hours §63.1438(f)(1)(iii)	Operating limit

Table 7. Excursions

For each. . .	An excursion is. . .	The excursion is a violation of the. . .
Storage vessel where continuous monitoring is NOT required [§63.1438(f)(2)]	when the average value of one or more parameters, averaged over the time during which the storage vessel is being filled (that is, when the liquid level in the storage vessel is being raised), is above the maximum level or below the minimum level established for the given parameters §63.1438(f)(2)(i)(A)	Operating limit
	when measured values are not available for at least 75 percent of the specific intervals at which parameters are to be monitored or recorded during which the storage vessel is being filled §63.1438(f)(2)(i)(B)	Emission limit
	an operating requirement included in the monitoring plan is not met (for example, the disposable carbon canister is not exchanged before the expiration of its rated service life) §63.1438(f)(2)(ii)	Operating limit
Process vent from batch operations [§63.1438 (f)(3)]	the daily average value of one or more monitored parameters is above the maximum or below the minimum established level for the given parameter [§63.1438 (f)(3)(i)]	Operating limit
	when monitoring data is insufficient for an operating day. That is, when measured values are not available due to monitoring system breakdowns, repairs, calibration checks, or zero (low-level) and high-level adjustments, for at least 75 percent of the 15-minute periods when batch emission episodes selected to be controlled are being vented to the control device during the operating day [§63.1438(f)(3)(ii)]	Emission limit
Process vent using ECO to reduce epoxide emissions	when the time from the end of the epoxide feed to the end of the ECO is less than the time established in the NOCS [§63.1427(i)(3)(i)]	Operating limit

Table 7. Excursions

For each. . .	An excursion is. . .	The excursion is a violation of the. . .
	when the reactor epoxide partial pressure at the end of the ECO is greater than the partial pressure established in the NOCS [§63.1427(i)(3)(ii)]	Operating limit
	when the epoxide concentration in the reactor liquid at the end of the ECO is greater than the epoxide concentration established in the NOCS [§63.1427(i)(3)(iii)]	Operating limit
	when the parameter is not measured and recorded at the end of the ECO [§63.1427(i)(3)(iv)]	Operating limit
	when the alternative monitoring parameter is outside the range established for proper operation of ECO as a control technique [§63.1427(i)(3)(v)]	Operating limit

Can I request an alternative method of monitoring for my process vents?

If you're subject to the monitoring parameters under §63.1429 for process vents, you may submit a request to use an alternative monitoring procedure. You may submit a request to use an **alternative monitoring parameter** if you meet **any** of the following conditions.

- You use a combustion device other than an incinerator, boiler, process heater or flare. [§63.1429(b)(2)]
- Your Group 2 continuous process vent maintains a TRE greater than 1.0 but less than or equal to 4.0 without a recovery device **or** with a recovery device other than the recovery devices listed in §63.1429(a). [§63.1429(b)(3)]
- You use an incinerator, flare, boiler, process heater, adsorber, condenser or carbon adsorber as identified in §63.1429(a), but you wish to monitor a parameter other than those identified in §63.1429(a). [§63.1429(b)(4)]

Your request for an alternative monitoring parameter must be approved by the Administrator before you can begin operating under that parameter. [§64.1429(b)] For additional information, see §63.1429(b) of Subpart PPP and §63.8(f) of the part 63 General Provisions.

Can I request an alternative method of recordkeeping for my process vents?

If you're subject to the continuous parameter operating and recordkeeping provisions under §63.1429 for process vents, you may submit a request to use an alternative continuous monitoring and recordkeeping procedure. For additional information, see §63.1439(g) of Subpart PPP and 63.10(f) of the part 63 General Provisions.

Can I request an alternative method of reporting for my process vents?

If you're subject to the continuous parameter operating and recordkeeping provisions under §63.1429 for process vents, you may submit a request to use an alternative reporting procedure.

For additional information, see §63.1430(k) and §63.1439(h) of Subpart PPP and 63.10(f) of the part 63 General Provisions.

Chapter 7 - Requirements for Process Vents Using THF

What does this chapter cover?

This chapter covers the requirements for PMPU producing polyether polyols using THF. For these PMPU, you must follow the Hazardous Organic NESHAP (HON) process vent requirements in §§63.113 through 63.118, **except** as noted in §63.1425(f)(1)-(10). The exceptions in §63.1425(f)(1)-(10) are summarized in Table 8.

Table 8. THF Process Vent Requirements

For each THF process vent subject to HON...	Then replace...	With (for the purposes of Subpart PPP)...
§63.113 [process vents]	the 12/31/92 date in §63.113	9/4/97
§63.114(c) and §63.117(e)	§63.151(f) [alternative monitoring parameters] and §63.152(e) [submission of operating permit application]	§63.1439(f) and §63.1439(e)(8)
§63.114, §63.117 and §63.118	§63.152(b) [Notification of Compliance Status]	§63.1439(e)(5) [Notification of Compliance Status]
§63.117 and §63.118	§63.152(c) [Periodic Reports]	§63.1439(e)(6) [Periodic Reports]
§63.118(f)(2)	§63.152(c)(2)(ii)(A) [excursion]	§63.1438(f) [definition of excursion]
§63.114(e)	§63.152(b) [provisions for establishing the parameter monitoring level]	§63.1438 [provisions for establishing the parameter monitoring level] and comply with §63.1439(e)(5)(ii) or §63.1439(e)(8) to report information related to parameter monitoring levels.
§63.114, §63.117 and §63.118	"range"	"level"
§63.118(g), (h), (i) or (j)	HON §63.18(g), (h), (i) or (j) requirements for reporting process changes	§63.1425(f)(7)(i) - (iv) [reports of process changes]
§63.118	§63.152(f) [recordkeeping requirements]	§63.1439(d) [recordkeeping requirements]
§63.115 and §63.116	"HAP" in Table 2 of 40 CFR part 60, Subpart F	"organic" HAP

Table 8. THF Process Vent Requirements

For each THF process vent subject to HON...	Then replace...	With (for the purposes of Subpart PPP)...
63.116(c)(3) and (4)	Method 18, 40 CFR part 60, appendix A	Either Method 18 or Method 25A, 40 CFR part 60, appendix A. However, if you use Method 25A, you must comply with §63.1425(f)91)(i) and (ii).

What are my monitoring installation and operation requirements?

You can find these requirements in the HON at §63.114(a).

What are my parameter monitoring requirements?

You will find these requirements in the HON at §63.114. However, you must establish your parameter monitoring range and report monitoring data according to the requirements in Subpart PPP, which are described in Table 6.

What are my recordkeeping and reporting requirements?

See Chapter 16 for general recordkeeping and reporting requirements.

What is an excursion?

See Table 7 in Chapter 6, which describes excursions for all process vents, including those producing polyether polyols using THF.

Can I request an alternative monitoring, recordkeeping, or reporting?

See the alternative monitoring, recordkeeping, and reporting sections in Chapter 6.

Chapter 8 - Requirements for Process Vents Using Epoxides

What does this chapter cover?

This chapter covers requirements for process vents producing polyether polyols using epoxides.

What compliance options do I have for new sources?

Table 9 explains **four** compliance options for your **new** process vents producing polyether polyols using epoxides.

Table 9. Compliance Options for New Process Vents Producing Polyether Polyols Using Epoxide

Compliance Option	Description	To meet these requirements, you may use a(n). . .
Option 1 §63.1425(b)(1)(i)	Reduce total epoxide emissions from the group of process vents in the PMPU by an aggregated 99.9 percent.	incinerator, adsorber, carbon adsorber, or condenser
Option 2 §63.1425(b)(1)(ii)	Maintain an outlet concentration of total epoxides or TOC after each combustion, recapture, or recovery device within the PMPU of 20 ppmv or less.	incinerator, adsorber, carbon adsorber, or condenser
Option 3 §63.1425(b)(1)(iii)	Maintain an emission factor of no greater than 4.43×10^{-3} kilogram epoxide emissions per megagram of product for all process vents in the PMPU.	incinerator, adsorber, carbon adsorber, condenser, or boiler or process heater
Option 4 §63.1425(b)(1)	Reduce total epoxide emissions from a group of process vents in the PMPU by an aggregated 99.9 percent. Then, for all process vents that haven't reduced aggregated emissions to 99.9 percent, maintain an outlet concentration of total epoxides or TOC (after each combustion, recapture, or recovery device) of 20 ppmv or less.	incinerator, adsorber, carbon adsorber, or condenser

What compliance options do I have for existing sources?

Table 10 shows your **six** compliance options for your **existing** process vents using epoxides.

Table 10. Compliance Options for Existing Process Vents Using Epoxide

Compliance Option	Emission Limitation	Meet the limitation using a(n). . .
Option 1 §63.1425(b)(2)(i)	Reduce the total epoxide emissions from each process vent in the PMPU using a flare.	flare
Option 2 §63.1425(b)(2)(ii)	Reduce total epoxide emissions from the group of process vents in the PMPU by an aggregated 98 percent.	incinerator, adsorber, carbon adsorber, or condenser
Option 3 §63.1425(b)(2)(iii)	Maintain an outlet concentration of total epoxides or TOC after each combustion, recapture, or recovery device within the PMPU of 20 ppmv or less.	incinerator, adsorber, carbon adsorber, or condenser
Option 4 §63.1425(b)(2)(iv)	Maintain an emission factor of no greater than 1.69×10^{-2} kilogram epoxide emissions per megagram of product (1.69×10^{-2} pounds epoxide emissions per 1,000 pounds of product) for all process vents in the PMPU. You may use an incinerator, adsorber, carbon adsorber, or condenser to meet these requirements.	incinerator, adsorber, carbon adsorber, condenser, or boiler or process heater
Option 5 §63.1425(b)(2)	Reduce total epoxide emissions from a group of process vents in the PMPU by an aggregated 98 percent. Then, for all process vents that haven't reduced aggregated emissions to 98 percent, maintain an outlet concentration of total epoxides or TOC (after each combustion, recapture, or recovery device) of 20 ppmv or less.	incinerator, adsorber, carbon adsorber, or condenser
Option 6 §63.1425(b)(2)	Reduce the total epoxide emissions from each process vent in the PMPU using a flare. AND maintain an outlet concentration of total epoxides or TOC after each combustion, recapture, or recovery device within the PMPU of 20 ppmv or less.	flare and incinerator, adsorber, carbon adsorber, or condenser

What are my monitoring installation and operation requirements?

You'll find these requirements in §63.1429, and in Table 5.

What are my parameter monitoring requirements?

You'll find these requirements in Table 6 and in §63.1429 and Tables 5 and 6 of Subpart PPP .

What are my recordkeeping and reporting requirements?

Chapter 16 in this document describes the general recordkeeping and reporting requirements that apply to entire affected sources under this subpart. Table 6 includes the additional specific requirements for all process vents, including epoxide process vents.

What is an excursion?

See Table 7, which describes excursions for process vents, including those producing polyether polyols using epoxides.

Can I request alternative monitoring, recordkeeping, or reporting?

See the alternative monitoring sections in Chapter 6.

Chapter 9 - Requirements for Process Vents Using Nonepoxide HAP to Make or Modify the Product

What does this chapter cover?

This chapter describes the requirements for new or existing process vents using nonepoxide HAP to make or modify the product. You'll find these requirements in the rule at §63.1425(c). This chapter also covers group determinations for process vents using nonepoxide HAP to make or modify the product, which are in the rule at §63.1428.

Definition. *Make or modify the product* means to produce the polyether polyol by polymerization of epoxides or other cyclic ethers with compounds having one or more reactive hydrogens, and to incorporate additives (e.g., preservatives, antioxidants, or diluents) in order to maintain the equality of the finished products before shipping. Making and modifying the product for this regulation doesn't

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How do I determine the group status of my combination of batch process vents?

Your combination of batch process vents is Group 1 if it has **annual nonepoxide organic HAP emissions** of more than 11,800 kg/yr, **AND** if the cutoff flow rate for that combination of batch process vents is greater or equal to the annual average flow rate. Use Table 11 to determine annual nonepoxide HAP emissions, annual average flow rate, and cutoff flow rate. If the combination of batch process vents is not Group 1, it is Group 2.

Table 11. Group Determinations for Combinations of Batch Process Units

Procedure	Description
Determine annual nonepoxide organic HAP emissions from combination of batch process vents	First, you need to determine the **annual** nonepoxide organic HAP emissions (using the methods described in §63.488(b) of subpart U) 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 [§63.1428(b)] Next, you must add up the annual nonepoxide organic HAP emissions from all individual process vents from batch unit operations associated with the use of a nonepoxide organic HAP to make or modify a polyether polyol product.
Determine annual average flow rate	First, you must determine the annual average flow rate (using the methods described in §63.488(e) of subpart U) for **each** process vent from a batch unit operation associated with the use of a nonepoxide organic HAP to make or modify the product [§63.1428(d)(1)] Next, you must add up the annual average flow rates from all individual process vents from batch unit operations in the PMPU, to obtain the **total annual average flow rate** for the combination of process vents associated with the use of a nonepoxide organic HAP to make or modify the product [§63.1428(d)(2)]
Determine cutoff flow rate for each PMPU using Equation 14 in subpart PPP: [§63.1428(e)]	CFR = (0.00437)(AE) - 5.16 In this equation, "CFR" stands for "cutoff flow rate," in standard cubic meters per minute (scmm). "AE" stands for "Annual TOC or nonepoxide organic HAP emissions from the combination of process vents from batch unit operations that are associated with the use of nonepoxide organic HAP to make or modify the product" in kilograms per year (kg/yr).

How do I determine the group status of my continuous process vents?

A process vent with all of the following characteristics is a Group 1 continuous process vent.

- It is from a continuous unit operation that is associated with the use of a nonepoxide organic HAP to make or modify the product.
- It has a flow rate greater than or equal to 0.005 standard cubic meters per minute.
- It has a total organic HAP concentration greater than or equal to 50 parts per million by volume (ppmv).
- It has a total resource effectiveness (TRE) index value less than or equal to 1.0.

A Group 2 continuous process vent is a process vent from a continuous unit operation that is associated with the use of a nonepoxide organic HAP to make or modify the product, and that does not meet the conditions which identify a process vent as a Group 1 continuous process vent.

How do I calculate the TRE index value for my continuous process vent?

You must determine the TRE index value at the point in the production process where all applicable control techniques have been applied to reduce epoxide emissions (i.e., after the last nonepoxide recovery device; at the exit of the combustion, recovery, or recapture device; or at the exit of the continuous unit operation, if extended cookout is used without a recovery device). You must use the following equation (as described in §63.115(d)(3) of subpart G) to calculate the TRE index value:

$$TRE = \frac{1}{E_{HAP}}\left[a + b\left(Q_S\right) + c\left(H_T\right) + d\left(E_{TOC}\right)\right]$$

In this equation, "TRE" represents the TRE index value, "E_{HAP}" represents the hourly emission rate of total organic HAP (kg/hr), "Q_S" represents the vent stream flow rate (scmm), "E_{TOC}" represents the emission rate of TOC (minus methane and ethane), kg/hr, and "a", "b", "c", and "d" are coefficients presented in Table 1 of subpart G of part 63.

However, if your Group 1 continuous process vent is subject to the control requirements under §63.1425(c)(3), you don't have to determine the TRE index for each process vent stream. [§63.1430(e)(2)].

How do I calculate TRE if I combine batch and continuous process vents?

If you combine a process vent from a batch unit operation that is associated with the use of nonepoxide organic HAP to make or modify a product with a process vent from a continuous unit operation that is associated with the use of a nonepoxide, either prior to the epoxide control technique or prior to a nonepoxide recovery device that is after the epoxide control technique, then the following requirements apply to your combined process vents.

- You are **not** required to include the process vent from that batch unit operation in the group determination for the "combination of process vents from batch unit operations." [§63.1428(i)(1)]

- You must calculate the TRE index value of the combined stream as it would be for any other process vent from a continuous unit operation, but during a period when nonepoxide organic HAP emissions are being generated by the batch unit operation. [§63.1428(i)(2)]

What are my monitoring installation and operation requirements?

For Group 1 unit operations and Group 2 continuous process vents, you'll find these requirements in §63.1429, and in Table 5. There are no monitoring requirements for Group 2 combinations of batch process vents.

What are my compliance, monitoring, recordkeeping, and reporting requirements?

Table 12 explains these requirements. For Group 2 combinations of batch process vents, you will need to determine the annual total emissions for one batch cycle for each unique product class. For a discussion of determining product class, see Chapter 11.

Table 12. Requirements for Process Vents Using Nonepoxide HAP to Make or Modify the Product

Process Vents	Compliance Options	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements*
Group 1 Batch	Reduce nonepoxide organic HAP emissions using a flare [§63.1425(c)(1)(i)] **OR** Reduce nonepoxide organic HAP emissions by 90 percent using a combustion, recovery, or recapture device. You may use an incinerator, adsorber, carbon adsorber, or condenser to meet these requirements. [§63.1425(c)(1)(ii)]	Meet the monitoring requirements in §63.1429, which are described in Table 6.	Meet the recordkeeping requirements in §63.1430(b-d), which are described in Table 6.	Meet the reporting requirements in §63.1430(g), which are described in Table 6.

Table 12. Requirements for Process Vents Using Nonepoxide HAP to Make or Modify the Product

Process Vents	Compliance Options	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements*
Group 2 Batch	None. If you make a process change that affects a Group 2 combination of batch process vents such that the change could change the group status from Group 2 to Group 1, reevaluate group status.	None	If the total annual emissions are < 11,800 kg/yr, only need description and an emission estimate for each batch emission episode; total emissions for one batch cycle for each unique product class ; and total annual uncontrolled TOC or nonepoxide organic HAP emissions [§63.1430(e)(1)(i-ii)] If the total annual emissions are $ 11,800 kg/yr, also need the annual average flow rate; cutoff flow rate; and results of the PMPU group determination [§63.1430(e)(1)(iii-v)] combined total annual nonepoxide organic HAP emissions [§63.1430(f)(1)]	information on group determination **NOCS** [§63.1430(g)(2)] report of process change that causes unit to become Group 1 [§63.1430(i)]

Table 12. Requirements for Process Vents Using Nonepoxide HAP to Make or Modify the Product

Process Vents	Compliance Options	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements*
Group 1 Continuous	Reduce nonepoxide organic HAP emissions using a flare. [§63.1425(c)(3)(i)] **OR** Reduce nonepoxide organic HAP emissions by 98 percent using a combustion, recovery, or recapture device. You may use an incinerator, adsorber, carbon adsorber, or condenser to meet these requirements. [§63.1425(c)(3)(ii)]	Meet the monitoring requirements in §63.1429, which are described in Table 6.	Meet the recordkeeping requirements in §63.1430(b-d), which are described in Table 6. For continuous unit operations with flow rates < 0.005 scmm: any process change that increases the process vent stream flow rate and any recalculation of the flow rate [§63.1430(f)(4)(i-ii)] For continuous unit operations with organic HAP concentration < 50 ppmv, any process change that increases the organic HAP concentration of the process vent stream and any recalculation of the concentration [§63.1430(f)(5)(i-ii)]	Meet the reporting requirements in §63.1430(g), which are described in Table 6.

Table 12. Requirements for Process Vents Using Nonepoxide HAP to Make or Modify the Product

Process Vents	Compliance Options	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements*
Group 2 Continuous with TRE index value > 1.0 and <4.0	Recalculate the TRE index value according to §63.1428(h)(2) whenever you make a change to the process that could change your Group 2 combination of process vents to Group 1. [§63.1425(c)(4)(i)]	Meet the requirements in §63.1429, which are described in Table 6.	Meet the recordkeeping requirements in §63.1430(d). See Table 6. For continuous unit operations with flow rates < 0.005 scmm: any process change that increases the process vent stream flow rate and any recalculation of the flow rate. Also, TRE determination if flow rate increases to $ 0.005 scmm [§63.1430(f)(4)(i-iii)] For continuous unit operations with organic HAP concentration < 50 ppmv, any process change that increases the organic HAP concentration of the process vent stream and any recalculation of the concentration. Also, TRE determination if organic HAP concentration $ 50 ppmv [§63.1430(f)(5)(i-iii)] records of measurements and calculations to determine TRE index value of each process stream [§63.1430(e)(2)] records of combined total annual nonepoxide organic HAP emissions	information on group determination **NOCS** [§63.1430(g)(3)]

Table 12. Requirements for Process Vents Using Nonepoxide HAP to Make or Modify the Product

Process Vents	Compliance Options	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements*
Group 2 Continuous with TRE index value > **4.0**	None. Recalculate the TRE index value according to §63.1428(h)(2) whenever you make a change to the process that could change your Group 2 combination of process vents to Group 1. [§63.1425(c)(4)(ii)]	None	records of measurements and calculations to determine TRE index value of each process stream [§63.1430(e)(2)] any process changes and any recalculation of the TRE index value [§63.1430(f)(3)(i-ii)] For continuous unit operations with flow rates < 0.005 scmm: any process change that increases the process vent stream flow rate and any recalculation of the flow rate. Also, TRE determination if flow rate increases to $ 0.005 scmm [§63.1430(f)(4)(i-iii)] For continuous unit operations with organic HAP concentration < 50 ppmv, any process change that increases the organic HAP concentration of the process vent stream and any recalculation of the concentration. Also, TRE determination if organic HAP concentration $ 50 ppmv [§63.1430(f)(5)(i-iii)]	information on group determination **NOCS** [§63.1430(g)(3)] information regarding process change that causes unit to change to Group 2 with TRE index value <4.0 [§63.1430(j)(1)] information regarding process change that causes unit to increase flow rate above 0.005scmm [§63.1430(j)(2)] information regarding process change that causes unit to increase organic HAP above 50 ppmv and TRE index <4.0 [§63.1430(j)(3)]

* Report in Periodic Report, except where Table 12 indicates Notification of Compliance Status. (NOCS)

What is a process change?

Any change that could reasonably be expected to change the status of the process vent or combination of batch process vents from Group 2 to Group 1 is considered to be a process change. Table 13 lists changes that are and are not considered process changes. [§63.1428(g)(1) and (h)(2)]

Table 13. Process Changes

Actions that are process changes	Actions that are not process changes
increases in production capacity or production rate	process upsets
changes in feedstock type or catalyst type	unintentional, temporary process changes
whenever there is replacement, removal, or modification of recovery equipment	For Group 2 continuous process vents, changes that are within the range on which the original TRE calculation was based.
For Group 2 combinations of batch vents, any change that results in an increase (over the estimate used in the group determination) in the annual nonepoxide organic HAP emissions	For Group 2 combinations of batch vents, changes that are within the margin of variation on which the original group determination was based.

What must I do if I have a process change?

If you have a process change, you must redetermine the Group status of your continuous unit operation process vents or combination of batch vents. If the Group status changes from Group 2 to Group 1, you must comply with the Group 1 requirements and submit a report of the process change in the next Periodic Report that covers the period during which the process change occurred. [§63.1428(g)(3)(i-ii) and (h)(ii-iii)]

How do I redetermine group status for Group 2 batch process vents?

You may choose between two options following a process change affecting your Group 2 combination of batch process vents. [§63.1428(g)(2)]

Option 1: redetermine the group status of the combination of batch process vents by repeating the procedures in §63.1428(b) through (e), as applicable, and determining if the combination of process vents is a Group 1 combination of batch process vents. Table 11 describes these procedures.

Option 2: use engineering assessments under §63.488(b)(6)(i) to determine the effects of a process change.

How do I redetermine group status for Group 2 continuous process vents?

After a process change, redetermine group status according to and meet the requirements in Table 14.

Table 14. Group Determinations for Continuous Process Vents

First, redetermine Group Status Using One of These Options **[§63.1428(h)(1) and (2)(i)]**	Then, if your recalculation shows any of the following, the continuous unit operation is Group 1 and you must meet the requirements for Group 1 continuous process vents. [§63.1428(h)(2)]	If your recalculation shows any of the following, you must also submit the recalculation in the next Periodic Report. **You are not subject to the Group 1 requirements. [§63.1430(j)(2) & (j)(3)]**
Option 1: Recalculate TRE index value based on process vent stream flow rate, TOC, nonepoxide organic HAP, HON heating values in §63.115(d)(1) or (2) and the TRE equation in §63.115(d)(3).	The recalculated TRE index value is less than or equal to 1.0.	the recalculated flow rate is greater than or equal to 0.005 scmm

Table 14. Group Determinations for Continuous Process Vents

First, redetermine Group Status Using One of These Options **[§63.1428(h)(1) and (2)(i)]**	Then, if your recalculation shows any of the following, the continuous unit operation is Group 1 and you must meet the requirements for Group 1 continuous process vents. [§63.1428(h)(2)]	If your recalculation shows any of the following, you must also submit the recalculation in the next Periodic Report. **You are not subject to the Group 1 requirements. [§63.1430(j)(2) & (j)(3)]**
Option 2: Recalculate TRE index value based on best engineering assessments according to the HON provisions in §63.115(d)(1).	The TRE index value was greater than 4.0 before the process change, and the recalculated TRE index value is between 1.0 and 4.0.	the recalculated concentration is greater than or equal to 50 ppmv [§63.1430(j)(2) & (j)(3)]

What are my parameter monitoring requirements?

You'll find these requirements in Table 6 and in §63.1429 and Tables 5 and 6 of Subpart PPP .

What are my recordkeeping and reporting requirements?

Chapter 16 in this document describes the general recordkeeping and reporting requirements that apply to entire affected sources under this subpart. Table 6 includes the additional specific requirements for all process vents, including epoxide process vents.

What is an excursion?

See Table 7, which describes excursions for process vents, including those producing polyether polyols using epoxides.

Can I request alternative monitoring, recordkeeping, or reporting?

See the alternative monitoring sections in Chapter 6.

Chapter 10 - Process Vent Requirements for Nonepoxide HAP Emissions from Catalyst Extraction

What does this chapter cover?

This chapter describes the requirements for controlling **nonepoxide HAP emissions** from new or existing process vents that use **catalyst extraction** to produce polyether polyols. You'll find these requirements in §63.1425(d).

What do we mean by "catalyst extraction"?

The term "catalyst extraction" refers to the removal of catalysts using either solvent or physical extraction methods. [§63.1423]

What compliance options do I have for new and existing sources?

You have **two** compliance options for new or existing process vents that use catalyst extraction to produce polyether polyols.

- **Option 1:** Reduce emissions of nonepoxide organic HAP from all process vents associated with catalyst extraction by using a flare. [§63.1425(d)(1)]

- **Option 2:** Reduce emissions of nonepoxide organic HAP emissions from the sum total of all process vents associated with catalyst extraction by an aggregated 90 percent for each PMPU. You may use an incinerator, adsorber, carbon adsorber, or condenser to meet these requirements. [§63.1425(d)(2)]

What are my monitor installation and operation requirements?

You'll find these requirements in §63.1429, and in Table 5.

What are my parameter monitoring requirements?

You'll find these requirements in Table 6 and in §63.1429 and Tables 5 and 6 of Subpart PPP .

What are my recordkeeping and reporting requirements?

Chapter 16 in this document describes the general recordkeeping and reporting requirements that apply to entire affected sources under this subpart. Table 6 includes the additional specific requirements for all process vents, including epoxide process vents.

What is an excursion?

See Table 7, which describes excursions for process vents, including those producing polyether polyols using epoxides.

Can I request alternative monitoring, recordkeeping, or reporting?

See the alternative monitoring sections in Chapter 6.

Chapter 11 - Process Vent Requirements For Processes Using Extended Cookout

What does this chapter cover?

This chapter identifies requirements for new and existing affected sources using extended cookout as a control technique when producing polyether polyols using epoxides. These requirements are found in Subpart PPP at §63.1427.

What do we mean by "extended cookout"?

"Extended Cookout," or ECO, is a control technique that reduces the amount of unreacted ethylene oxide and/or propylene oxide (epoxides) in the reactor, simultaneously reducing potential epoxide emissions. This is accomplished by allowing the product to react for a longer time period, thereby having less unreacted epoxides and reducing epoxides emissions that may have otherwise occurred. [§63.1423]

What is a product class?

If each of the polyether polyols has a similar **pressure decay curve** and is manufactured within **similar operating conditions**, then they are a **product class**. You'll determine the pressure decay curve for each product by using Equation 13 under §63.1427(h). The following operating conditions must be similar. [§63.1423]

- a minimum reaction temperature
- the same number of -OH groups in the polyol
- a minimum catalyst concentration
- the same type of catalyst
- the epoxide ratio or range for that ratio
- the same reaction conditions for the system

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

What compliance options do I have when using ECO?

You have two compliance options when using ECO to comply with Subpart PPP [§63.1427(a)].

Option 1: Meet a percent emission reduction.

Option 2: Maintain an emission factor.

If you are using ECO to maintain an emission factor, you must determine emissions at the end of ECO according to §63.1427(d). If you are using ECO to meet a percent emission reduction, follow the requirements in Table 15.

Table 15. Using ECO To Meet Percent Emission Reduction

If uncontrolled epoxide emissions are. . .	Then you must. . .	You must also. . .
< 10 tons (9.1 mg) per year	Determine emissions at the end of ECO according to §63.1427(d) **and** determine percent epoxide emission reduction according to §63.1427(e)	
$ 10 tons (9.1 mg) per year	Directly measure the concentration of the unreacted epoxide for one product from each product class and compare with the estimated epoxide concentration. If the calculated epoxide concentration is within 25 % of the directly measured concentration, use it instead of direct measurement . **OR** Directly measure the concentration of the unreacted epoxide for each product from each product class.	Define the end of epoxide feed according to §63.1427(b) Define the onset of ECO according to§63.1427(c) Determine emissions at the end of ECO according to §63.1427(d) Determine percent epoxide emission reduction according to§63.1427(e)

If you use additional control devices to further reduce HAP emissions from a process vent already controlled by ECO, then you must comply with the testing, monitoring, recordkeeping and reporting requirements for that control device under §63.1426, §63.1429, and §63.1430. [§63.1427(a)] You'll find these requirements in Table 6.

What are the requirements for new and existing sources using ECO?

The monitoring, recordkeeping, and reporting requirements will depend on your compliance option. Table 16 shows these requirements for new and existing sources.

Table 16. Requirements for ECO*

Affected Source	Compliance Option	Monitoring	Recordkeeping	Reporting
Existing	**Option 1:** Reduce the total epoxide emissions by an aggregated 98 percent. [§63.1425(b)(2)(ii)]	Establish and monitor one of the following parameters [§63.1427(i)(2)]: time from end of epoxide feed to end of ECO; reactor epoxide partial pressure at end of ECO; epoxide concentration in reactor liquid at end of ECO when reactor liquid is still in reactor, or after reactor liquid has been transferred to another vessel; an alternative monitoring parameter approved by the Administrator.	For batch processes, keep the following records for each batch cycle. Listing of all products in each product class and information on operating conditions for each product within a product class, including information in §63.1427(j)(1). Update each time a product class or product is added or changed. [§63.1427(l and m)]. Initial determination of percent epoxide emission reduction information. Include information in §63.1427(j)(1). Record initial determination each time there is a new product or a product class is added or changed. [§63.1427(l) and (m)]. If able to define end of epoxide feed by reactor epoxide partial pressure at time when all epoxide reactants have been added to the reactor, information in §63.1427(j)(1)(x). If not, information in §63.1427(j)(1)(i-ix). For batch cycles, value of parameter monitored to determine whether an excursion has occurred. [§64.1427(j)(2)(ii)] Records of time and duration of any epoxide emissions occurring before end of ECO. [§64.1427(j)(2)(v)]	Precompliance Report containing information in §63.1427(k)(1) within 180 days after beginning production of new polyether polyol **product**, submit an updated product list with your next Periodic Report. [§63.1427(l)(1)(ii)] initially and within 180 days after beginning production of new polyether polyol **product class**, submit information in §63.1427(k)(2)(i) and (ii) in a Notification of Compliance Status Report. Periodic Reports containing information in [§63.1427(k)(3)]

Table 16. Requirements for ECO*

Affected Source	Compliance Option	Monitoring	Recordkeeping	Reporting
New	**Option 1:** Reduce total epoxide emissions by an aggregated 99.9 percent. [§63.1425(b)(1)(i)]	Same as above for Existing sources, Option 1.	Same as above for Existing sources, Option 1.	Same as above for Existing sources, Option 1.
Existing	**Option 2:** Maintain an emission factor of no greater than 1.69 x 10^{-2} kilogram epoxide emissions per megagram of product for all process vents. [§63.1425(b)(2)(iv)]	Same as above for Existing sources, Option 1. [§63.1427(d)(3)]	Meet requirements in Table 6. [§63.1427(d)(4)]	Meet requirements in Table 6. [§63.1427(d)(4)] Submit estimate of annual epoxide emissions after extended cookout with Precompliance Report or operating permit application. [§63.1427(d)(1)] Submit annual epoxide emissions after extended cookout with NOCS. [§63.1427(d)(2)]

Table 16. Requirements for ECO*

Affected Source	Compliance Option	Monitoring	Recordkeeping	Reporting
New Sources	**Option 2:** Maintain an emission factor of no greater than 4.43 x 10^{-3} kilogram epoxide emissions per megagram of product for all process vents. [§63.1425(b)(1)(iii)]	Same as above for Existing sources, Option 1.	Meet requirements in Table 6. [§63.1427(d)(4)]	Meet requirements in Table 6. [§63.1427(d)(4)] Submit estimate of annual epoxide emissions after extended cookout with Precompliance Report or operating permit application. [§63.1427(d)(1)] Submit annual epoxide emissions after extended cookout with NOCS. [§63.1427(d)(2)]

* If you use additional control devices to further reduce HAP emissions from a process vent already controlled by ECO, then you must comply with the testing, monitoring, recordkeeping and reporting requirements for that control device under §63.1426, §63.1429, and §63.1430. [§63.1427(a)] You'll find these requirements in Table 6.

What is an excursion?

For each batch cycle where ECO is used to reduce epoxide emissions, you must record the value of the monitored parameter at the end of the ECO and compare it with the level established in §63.1427(2)(i)(2) to determine if an excursion has occurred. You have an ECO excursion when **any** of the following events occur.

- The time from the end of the epoxide feed to the end of the ECO is less than the established minimum time. [§63.1427(i)(3)(i)]
- The reactor epoxide partial pressure at the end of the ECO is greater than the established partial pressure. [§63.1427(i)(3)(ii)]
- The epoxide concentration in the reactor liquid at the end of the ECO is greater than the established epoxide concentration. [§63.1427(i)(3)(iii)]
- The necessary parameters are not measured and recorded at the end of the ECO. [§63.1427(i)(3)(iv)]
- The alternative monitoring parameter is outside of the established range for proper operation of the ECO as a control technique. [§63.1427(i)(3)(v)]

What if I use a new polyether polyol or change operations?

If you want to use ECO when producing a new polyether polyol of if you change operations, you must meet additional requirements according to Table 17. A change in operation includes a change in catalyst. Polyether-polyol has occurred if **any** of the following criteria is met. [§63.1427(m)(1)]

- significant change in reaction kinetics
- different oxide reactant
- different EO/PO ratio
- lower reaction temperature
- lower catalyst feed on a mole/mole fraction OH basis
- shorter cookout
- lower reactor pressure
- different type of reaction (for example, a self-catalyzed instead of a catalyzed reaction)
- marked change in reaction conditions (for example, a markedly different liquid level)

Table 17. Requirements when Adding Products or Changing Operations While Using ECO

If you are. . .	Then you must. . .
Making a new product in the same product class	Update the list of products for the product class and record the information in §63.1427(j)(1)(i)(A-F). [§63.1427(l)(1)(i)] Submit the updated product list within 180 days in a periodic report. [§63.1427(l)(1)(ii)]
Making a new product in a new product class or changing operations such that you create a new product class	Establish the batch cycle percent epoxide emission reduction. [§63.1427(l)(2)(i); §63.1427(m)(3)(ii)(A)] Establish records in §63.1427(j)(1) for product class. [§63.1427(l)(2)(ii);§63.1427(m)(3)(ii)(B)] Submit the updated product class information in §63.1427(k)(2)(i) and (ii) within 180 days in a periodic report. [§63.1427(l)(1)(ii); §63.1427(m)(3)(ii)(c)]
Changing operations but the product class **does not** change	Update your records of the operating conditions for the product class. [§63.1427(m)(2)]
Changing operations such that a product switches product classes	Update lists of products in each product class. For the product that switched product classes, update your records of the operating conditions. [§63.1427(m)(3)(i)(A)] Submit the updated product list within 180 days in a periodic report. [§63.1427(m)(3)(i)(B)]

Chapter 12 - Storage Vessels

What does this chapter cover?

This chapter covers the requirements for storage vessels subject to subpart PPP.

What is a storage vessel?

A storage vessel is a tank or other vessel that is used to store liquids that contain one or more organic HAP. The following emission points are **not** considered to be storage vessels under subpart PPP: [§63.1423]

- vessels permanently attached to motor vehicles such as trucks, railcars, barges, or ships
- pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere
- vessels with capacities smaller than 38 cubic meters
- vessels that store and/or handle material that contains no organic HAP or organic HAP as impurities only
- surge control vessels and bottoms receiver tanks
- wastewater storage tanks

Which storage vessels does Subpart PPP cover?

If your storage vessel meets all of the following criteria, then it is subject to subpart PPP and you must meet the requirements in the rule. [§63.1420(c) and (f)(1)]

- It was not already subject to another subpart of 40 CFR part 63 on June 1, 1999 [§63.1420(f)(1)]
- It is used to store liquids/material that contain one or more organic HAP.
- It is assigned to a PMPU subject to this rule.

The following storage vessels are part of the affected source (that is, they are subject to subpart PPP), but are not subject to the storage vessel requirements in subpart PPP. [§63.1420(c)]

- vessels that store and/or handle material that contains no organic HAP or organic HAP as impurities only [§63.1420(c)(8)]

- vessels that store organic HAP for less than 300 hours during the calendar year

What compliance options do I have?

You must comply with the requirements for storage vessels in the HON, which are found at §§63.119 through 63.123 [§63.1432(a)]. The HON storage vessel provisions are not summarized in this document, but are described at http://www.epa.gov/ttn/uatw/hon/honpg.html

Must I follow all of the HON requirements for storage vessels?

You must follow all requirements in the HON rule for storage vessels, with the following exceptions. [§63.1432(a)]

- The definitions of "group 1 storage vessel" and "group 2 storage vessel" that are contained in §63.1423 will be used instead of the HON definition in §63.111. [§63.1432(c) and (d)]

- The definition of "storage vessel" in §63.1423 will be used instead of the HON definition in §63.101. [§63.1432(b)]

- The proposal date and the promulgation date for 40 CFR part 63 subpart PPP will apply to your source (in particular, when designating "new" or "existing" sources and determining their compliance dates) instead of the HON proposal and promulgation dates. [§63.1432(e) and (f)]

- You are not required to prepare a design evaluation for a combustion, recovery, or recapture device if that device is also used to comply with the subpart PPP requirements for any other emission point and you have demonstrated compliance with those other subpart PPP requirements, provided that the performance test that you used to demonstrate compliance demonstrates that the device achieves the control efficiency required by the HON storage vessel requirements under §63.119(e)(1) or (e)(2) and the the performance test is submitted as part of the Notification of Compliance Status [§63.1432(g)(1-2)]

- The term "level" applies, instead of the term "range" [as used in §63.120(d)(3)(i)] [§63.1432(h)]

- You may use the General Provisions' **alternative nonopacity emission provisions** in §63.6(g), but not the **determination of equivalence criteria** in the HON at §63.102(b) [§63.1432(o)]

- The compliance dates outlined in Figure 1 and described in §63.1422 apply to polyether polyols producers, instead of the compliance dates for storage vessels that are described in the HON. [§63.1432(p)]

- You must meet the Periodic Reporting requirements in Subpart PPP instead of those in the HON. [§63.1432(l)]

What monitoring must I do?

You have two options for monitoring storage vessels. Table 18 describes these options, as well as the excursions from the requirements.

Table 18. Storage Vessel Monitoring and Excursions

Monitoring	Excursion
Option 1: Follow continuous monitoring requirements in §63.1438.	
Establish the parameters to indicate continuous compliance by conducting a performance test or using engineering assessment and manufacturer's recommendations. Set a daily average maximum or minimum level that indicates compliance for each parameter to be monitored. Include the parameters to be monitored and the maximum or minimum level for each parameter in the monitoring plan. Monitor each parameter at least once every 15 minutes.	The daily average value for any parameter is above the maximum level or below the minimum level in your monitoring plan. The period of combustion, recovery, or recapture is at least 4 hours a day and you have insufficient monitoring data for 3 or less hours. The period of combustion, recovery, or recapture is less than 4 hours a day and you have insufficient monitoring data for 2 or more hours.
Option 2: Follow the monitoring plan provisions in the HON at §63.120(d)(2)(i)	

Table 18. Storage Vessel Monitoring and Excursions

Monitoring	Excursion
A description of the parameter(s) to be monitored, to ensure that the device is being properly operated and maintained An explanation of the criteria used for selecting the parameters The frequency that the monitoring will be performed	The average value of one or more parameters, averaged over the time when the liquid level in the storage vessel is being raised, is above the maximum level or below the minimum level. You do not have monitoring data for at least 75 percent of the specific intervals at which parameters are to be monitored and recorded, during which the liquid level in the storage vessel is being raised.

What records must I keep?

You must keep the records specified in the HON at §63.123 and the following parameter monitoring records.

- each measured data value
- block average values for 1 hour or shorter periods

If you are complying with the storage vessel provisions using a monitoring plan and the monitoring plan does not specify continuous monitoring, you must also keep the following records.

- all times when the liquid level in the storage vessel is being raised, including the time when each filling period begins and ends [§63.1432(q)]

What reports must I submit?

For your storage vessels, you must submit the notification and reporting requirements in the polyether polyols production rule at in §63.1439(e), which are described below and in Chapter 16 of this document, instead of the notification and reporting requirements in the HON at §63.152(b) through (d). [§§63.1432(j) through (n) & (q) and 63.1439(e)]

Table 19. Storage Vessel Reports

Report	Contents
Precompliance Report [§63.1439(e)(4)(viii)(A)]	description of how you intend to establish the parameter monitoring levels for each storage vessel
Initial Notification [§§63.1432(n) and 63.1432(e)(3)] Only for new affected sources with an initial startup before August 30, 1999. [§63.1439(e)(3)]	your name and mailing address physical address of the affected source identification of the storage vessels subject to subpart PPP statement of whether affected source is a major source
Notification of Compliance Status [§§63.1432(k) and 63.1432(e)(5)]	specific maximum or minimum parameter monitoring level(s) for each storage vessel results for each predominant use determination [§63.1439(e)(5)(v)] If following the HON monitoring plan requirements, a monitoring plan with description of parameters to be monitored to ensure combustion, recovery, or recapture device is being properly operated and maintained; explanation of criteria used for selecting monitoring parameters; description of monitoring frequency; and parameter values established by performance test, engineering assessment, or manufacturer's specifications [§63.1432(i) and (j)]
Periodic Reports [§63.1432(l)]	all information specified in the HON periodic reporting requirements in §63.122(a)(4) the daily average values of monitored parameters for all excursions [§63.1439(e)(6)(iii)(B)] the periods when monitoring data were not collected [§63.1439(e)(6)(iii)(C)] notification of process changes that cause a change in the group status of any storage vessel [§63.1439(e)(6)(iii)(D)(1)] notification if a storage vessel is added to a PMPU (and notification of the group status of the new storage vessel) [§63.1439(e)(6)(iii)(D)(2)]
Notifications [§§63.1432(m) and 63.1439(e)(7)(i)]	inspections of storage vessels

Chapter 13 - Wastewater

What does this chapter cover?

This section covers the requirements for wastewater in §63.1433, which are based on the HON wastewater requirements in §63.132 through 149.

What is wastewater?

Wastewater is process wastewater or maintenance water. If a wastewater stream meets the requirements in Table 20, it is a process wastewater stream. Wastewater that is discarded from a PMPU that is part of an affected source is maintenance wastewater.

Table 20. Process Wastewater

Each wastewater stream is a process wastewater stream if the total annual concentration of compounds in Table 4 of subpart PPP is....	And the annual average flow rate is...
$ 5 ppm by weight	$ 0.02 liter per minute
$ 10,000 ppm by weight	any flow rate

Which wastewater streams does Subpart PPP cover?

Subpart PPP covers all process and maintenance wastewater streams, except the following. [§63.1420(c)]

- stormwater managed in segregated sewers
- water from fire-fighting and deluge systems in segregated sewers
- spills
- water from safety showers
- water from testing of deluge systems
- water from testing of firefighting systems

What are Group 1 and Group 2 wastewater streams?

If the process wastewater stream meets the criteria in Table 21, it is a Group 1 process wastewater stream. All other process wastewater streams are Group 2.

Table 21. Group 1 Process Wastewater

Each wastewater stream is a Group 1 process wastewater stream if the total annual concentration of compounds in Table 4 of subpart PPP is....	And the annual average flow rate is...
$ 10,000 ppm by weight	any flow rate
$ 1,000 ppm by weight	$10 liters per minute

What compliance options do I have?

You must comply with the requirements for wastewater in the HON, which are found at §§63.119 through 123. The HON wastewater provisions are not summarized in this document, but are described at http://www.epa.gov/ttn/uatw/hon/honpg.html.

Must I follow all the HON requirements for wastewater?

You must follow all requirements in the HON rule for wastewater, with the following exceptions.

- Do not follow the HON requirements for new wastewater streams. Instead, follow the HON requirements for existing wastewater sources for all affected wastewater streams. [§63.1433(a)(1)]
- You are only required to control emissions of hazardous air pollutants that meet the definition of organic HAP in §63.1423. (In other words, you may disregard references to Table 8 of subpart G or to List 1 or 2 of Table 36 of subpart G in the HON wastewater requirements.) [§63.1433(a)(2)]
- When the HON wastewater requirements refer to the HON storage vessel requirements (in §§63.119 through 63.123), you should refer to the subpart PPP storage vessel requirements instead of the HON storage vessel requirements. [§63.1433(a)(4)]
- Similarly, the definitions of the terms existing affected source, new affected source, Group 1 wastewater stream, and Group 2 wastewater stream in subpart PPP apply to your polyether polyols production facility, and you may disregard the parallel definitions of those terms in subpart F or subpart G in the HON. [§63.1433(a)(7), (a)(8), & (a)(10)]
- Exempted wastewater streams are those in §63.1420(c), which are those described above.

- To apply for an alternative standard, use the procedures in the General Provisions at §63.6(g) instead of those in the HON at 63.102(b). [§63.1433(a)(3)]
- Use the compliance dates in Subpart PPP. [§63.1433(a)(9)]
- You do not have to comply with the 95 percent mass removal requirement for biological treatment processes in §63.138(g). [§63.1433(a)(18)]
- You may use Method 18 **or** Method 25A to test for concentration of Table 4 compounds in vented gas streams exiting the combustion process. [§63.1433(a)(19)]

What monitoring must I do?

You must monitor wastewater streams by following the continuous monitoring requirements in §63.1438 for combustion, recovery, or recapture devices controlling each wastewater stream. They are as follows.

- Establish a daily average parameter monitoring level (that indicates continuous compliance for each parameter to be monitored) either by conducting a performance test supplemented by engineering assessments and manufacturer's recommendations or by solely using engineering assessments and manufacturer's recommendations. [§§63.1433(a)(15) and (a)(16) and §63.1438(c) or (d)]

- Monitor each parameter at least once every 15 minutes and record either each measured data value or block average values for 1 hour or shorter periods.

What is an excursion of a monitoring parameter?

You have an excursion of a monitoring parameter if one of the following occurs.

- the daily average value for any parameter is above the maximum level or below the minimum level in your monitoring plan
- the period of combustion, recovery, or recapture is at least 4 hours a day and you have insufficient monitoring data for 3 or more hours
- the period of combustion, recovery, or recapture is less than 4 hours a day and you have insufficient monitoring data for 2 or more hours

What records must I keep?

You must keep the following records.

- a monitoring plan, including the parameters to be monitored, and the maximum or minimum level for each parameter monitoring level for each combustion, recovery, or recapture device
- each measured data value or block average value
- each daily average value for each monitored parameter

However, if all recorded values for a monitored parameter during an operating day are above the minimum level or below the maximum level, you may just record that all values are above the minimum level or below the maximum level. [§§63.1433(a)(6) and 63.1439(d)(1-6)]

What reports must I submit?

In addition to the general reporting requirements outlined in Chapter 16 of this document, you must also comply with the following requirements.

- Submit a Notification of Compliance Status report containing the name and location of any Group 1 wastewater stream that is being sent to a treatment facility rather than being treated on site, and information on parameter levels [§§63.1433(a)(13) & (a)(17) and 63.1439(e)(5)]
- Submit Periodic Reports containing the name and location (and the information required in the HON at §§63.122(a)(4) and 63.146(c)-(f)) of any Group 1 wastewater stream that is being sent to a treatment facility rather than being treated on site, as the result of a process change [§§63.1433(a)(14) and 63.1439(e)(6)]
- If you are requesting to monitor alternative monitors, you must follow the reporting requirements that accompany a request to monitor alternative parameters, as described in §63.1439(f), and you may disregard the similar HON requirements described in §§63.146(a) and 63.152(g) or (e) [§63.1433(a)(5)]

Chapter 14 - Equipment Leaks

What does this chapter cover?

This chapter covers the requirements for equipment leaks subject to Subpart PPP, which are based on the HON wastewater requirements in §63.132 through §63.147.

What is an equipment leak?

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

What equipment leaks does this rule cover?

This rule covers leaks from all equipment in organic HAP service. Equipment that is in organic service is any piece of equipment that contains or contacts a fluid that is at least 5 percent total organic HAP (by weight) on an annual average basis [§63.1423(d)(1)]

What are the requirements for equipment leaks?

You must comply with the requirements for equipment leaks in the HON, which are found in §§63.160 through 63.182. The HON equipment leak provisions are not summarized in this document, but are described at http://www.epa.gov/ttn/uatw/hon/honpg.html.

Must I follow all HON requirements for equipment leaks?

You must follow all requirements in the HON for equipment leaks, with the following exceptions. [§63.1434(a)]

- You must follow the notification and reporting requirements in the polyether polyols production rule in §63.1439(e) [described in the Chapter 16 of this document], instead of the notification, recordkeeping and reporting requirements in the HON at §63.152(b) through (d) [§63.1434(d) through (f)]
- You must meet the compliance dates in subpart PPP. [§63.1434(b)]

When must I comply with the requirements for compressors?

For most components in HAP service, you must be in compliance on the same date as for the rest of the source (see Figure 1). For a compressor at an existing source that does not meet any of the criteria in Table 22 (below), you must comply with the equipment leak provisions no later than December 1, 1999. The rule allows compressors to come into compliance at a later date if they are being upgraded to reduce the possibility of equipment leaks. Those compressors must be in compliance according to the dates in Table 22.

Table 22. Compliance Dates for Compressors

If you upgrade the compressor and you...	You must comply. . .
replace the seal system, install a barrier fluid system, utilize a new barrier fluid that will require changes to the existing system, or modify the compressor to connect it to a closed vent system	no later than June 1, 2000 [§63.1422(d)(1)]
can accomplish the work without a shutdown, need additional time to get parts because of factors beyond your control, and you submitted a compliance extension request prior to October 18, 1999	no later than December 1, 2000
cannot achieve compliance without replacing the compressor, recasting the distance piece, or completing design modifications to connect it to the close vent system.	June 1, 2002

You must comply with the surge control vessel and bottoms receiver provisions no later than June 1, 2002.

What records must I keep?

You must keep the records in the HON rule at §63.181. [§63.1434(a)]

What reports must I submit?

You must submit the reports described in Chapter 16 of this document. They must contain the specific information for equipment leaks that is specified in the HON rule at §63.182.

Chapter 15 - Heat Exchange Systems

What does this chapter cover?

This chapter covers the requirements for heat exchanger systems subject to Subpart PPP, which are based on the requirements in the HON at §63.104.

What is a heat exchange system?

A heat exchange system is any cooling tower system or once-through cooling water system (for example, river or pond water). A heat exchange system can include more than one heat exchanger and can include an entire recirculating or once-through cooling system. [§63.101]

Which heat exchange systems does Subpart PPP cover?

Subpart PPP covers each heat exchange system used to cool process equipment in a PMPU subject to Subpart PPP. However, the following heat exchanger systems are not covered and are not subject to the requirements of the rule. [§63.1435(a); §63.104(a)].

- The heat exchange system is operated with the minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side.

- There is an intervening cooling fluid, containing less than 5 percent by weight of total hazardous air pollutants listed in Table 4 of Subpart PPP, between the process and the cooling water. This intervening fluid serves to isolate the cooling water from the process fluid and the intervening fluid is not sent through a cooling tower or discharged. Discharge does not include emptying for maintenance purposes.

- The once-through heat exchange system is subject to a National Pollution Discharge Elimination System (NPDES) permit with an allowable discharge limit of 1 ppm or less above influent concentration or 10 percent or less above influent concentration, whichever is greater.

- The once-through heat exchange system is subject to an NPDES permit that requires monitoring of a parameter(s) or condition(s) to detect a leak of process fluids into cooling water; specifies or includes the normal range of the parameter or condition; requires monitoring for the parameters selected as leak indicators no less frequently than monthly for the first six months and quarterly thereafter; and requirements the owner or operator to report and correct leaks to the cooling water when the parameter or condition exceeds the normal range.

- The recirculating heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutants in Table 4 of Subpart PPP.
- The once-through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of the total hazardous air pollutants listed in Table 4 of Subpart PPP.

What are the requirements for heat exchanger systems?

You must comply with the requirements for heat exchangers in the HON, which are found in §63.104. The HON heat exchanger provisions are not summarized in this document, but are described at http://www.epa.gov/ttn/uatw/hon/honpg.html.

Must I follow all HON requirements for heat exchanger systems?

You must follow all requirements in the HON for heat exchanger systems, with the following exceptions.

- The organic HAP covered for heat exchangers. The organic HAP that are covered for heat exchangers are identified in the polyether polyols production rule in Table 4. Do not follow the HAP for heat exchangers in the HON rule at Table 4 to Subpart F.
- The notification, recordkeeping and reporting requirements in the HON at §63.152(b) through (d). You must follow the notification and reporting requirements in the polyether polyols production rule at in §63.1439(e). These are described in the Chapter 16 of this document.
- The compliance dates in the HON. You must comply with the requirements for these emission units according to the schedule in Chapter 2 and Figure 1. [§63.1432(e) and (f)]

What records must I keep?

You must keep the records in the HON rule at §63.104(f)(1).

What reports must I submit?

You must submit the reports described in Chapter 16 of this document. They must contain the information in the HON rule at §63.104(f)(2).

Chapter 16 - General Recordkeeping, Notification, and Reporting Requirements

What does this chapter cover?

This chapter lists and describes your general recordkeeping, notification, and reporting requirements. It tells you where to send your general notifications and reports, and what you must do to meet the notification and reporting requirements. These requirements are in addition to the specific recordkeeping and reporting requirements that we have already described in Chapters 6 through 15 for each type of process unit.

General Recordkeeping Requirements	This section explains your general recordkeeping requirements, including the requirements that apply to your whole facility rather than just to some process units.
Notifications	This section describes the notifications that you must submit and explains when to submit them.
General Reporting Requirements	This section explains which reports you must submit, when you must send them in, and what they must contain.

Where do I send my reports and notifications?

You must send all notifications and reports to the EPA at the applicable address or by electronic mail. The applicable address is listed in the §63.13 for EPA Regional Offices, and State air pollution control agencies are listed in the General Provisions.

How do I meet the notification and reporting requirements?

If you meet all of the following criteria, then you will not be in violation of the requirements if you do not submit a notification or report.

- The required information was not known in time for inclusion in the report.
- The owner or operator has been diligent in obtaining the specified information.
- You submit the required information either in a report supplement, a request for revision to the operating permit, or with the first Periodic Report.

General Recordkeeping Requirements

What records must I keep?

You are required to keep the records specified in the General Provisions at 40 CFR part 63, subpart A, which includes the following specific records.

- A start-up, shutdown, and malfunction plan [§63.1439(b)(1)]
- Applications for approval of construction or reconstruction as specified in §63.5 excluding §§63.5(d)(1)(ii)(H), (d)(1)(iii), (d)(2) and (d)(3)(ii)
- HON equipment leak reporting and recordkeeping except as specified in §63.1343(b)-(g)
- Continuous records, except as in §63.1432(i), the alternative monitoring plan for storage vessels

How long must I keep records?

You must keep all information, including reports and notifications, readily available for five years. Material from the most recent six months years must be kept on-site or accessible by a central computer so that information may be provided within two hours after a request. You may keep these records on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.

You are not required to keep copies of reports submitted to an EPA Regional Office. In addition, you are not required to keep copies of reports if the EPA Regional Office has waived the requirement for submittal of copies of reports.

What records must I keep for Continuous Monitoring Systems?

You must keep the records in Table 23, unless an alternative recordkeeping system has been approved or the reduced recordkeeping program is followed.

General Recordkeeping Requirements

Table 23. Required Records for Continuous Monitoring Systems

The records you must keep for continuous monitoring systems are...	The records must include...	You do not have to keep these records if...
CMS measurements	CMS data values for at least each 15-minute interval OR block averages for 1 hour or shorter periods	
	Daily averages of each continuously monitored parameter	All recorded values for a parameter are above the minimum and below the maximum, you may instead record that all values were above the minimum and below the maximum
CMS inoperative periods	Date and time and duration for each period CMS was inoperative, including source in-operation, startup, shutdown, malfunction, and monitoring system breakdown, calibration, repair, low level adjustment, high level adjustment	
CMS maintenance	Documentation of calibration checks and maintenance procedures according to manufacturer's instructions	
CMS waiver of recordkeeping or	Information, if any, specified as a condition of the waiver	

How do I request an alternative to continuous monitoring and recordkeeping?

The General Provisions requirements for the use of an alternative monitoring method in §63.8(f)(5)(i) governs the review and approval of requests. Requests must be submitted with the Precompliance Report and include the information in Table 24.

General Recordkeeping Requirements

Table 24. Requests for Alternative Monitoring

If you have...	The requested system must provide...	Requests must include...
No automated monitoring and recording system that can measure once per 15-minute interval	The ability to visually read and record values at least one per hour	A description of the planned monitoring and recordkeeping system Documentation that the source does not have an automated monitoring and recording system Justification for requesting the alternative program A demonstration that the proposed monitoring frequency will appropriately represent combustion, recovery or recapture device operating conditions
An automated data compression recording system that doesn't record vales at a set frequency, but records when criteria for variation is met	A system that can measure at least one per 15-minute period Record at least 4 values per hour of operation Record the date and time the monitors are turned off or on Recognize unchanging data that may signal malfunction, alert the operator and record the incident Calculate daily averages of the	A description of the monitoring system and data compression recording system Criteria used to determine which monitored values are recorded and kept The method for calculating daily averages A demonstration that the system meets all the required monitoring capabilities

General Recordkeeping Requirements

What is the reduced recordkeeping program?

Instead of continuous monitoring and recordkeeping, the reduced recordkeeping program allows you to keep only daily records of a parameter value. You can discontinue recordkeeping after 6 months if you do not have any unexcused excursions. You must meet the requirements in Table 25.

Table 25. Reduced Recordkeeping Program

The equipment you must have is...	Data you must keep for this monitoring system are...
A monitoring system capable of detecting impossible data during periods of operation other than start-up, shutdown, or malfunction, and can alert operator	Record each alarm (all alarms in one operating day is considered a single occurrence)
A monitoring system that generates a running average of values, updated at least hourly, and this number is visible to an observer	Record all instances where running average is above maximum or below minimum limit
A monitoring system capable of detecting unchanging data when unexpected during normal operations and can alert an operator	Record all occurrences of these alerts
A monitoring system that will alert if the running average reaches a point appropriately related to the limit for that parameter	

You must keep all of the following additional records for the reduced recordkeeping program.

- Verify proper functioning of monitoring system; document verifications occurred upon initial installation, annually after that, and after any change to monitoring system that may alter its functioning.
- Identification of each parameter and each item of equipment for which you will use the reduced recordkeeping program.
- Description of applicable monitoring systems and how reduced recordkeeping compliance will be achieved, including equipment location and record format kept.
- Description and date of any change to monitoring system that might affect functioning.
- A description of current system as long as description is current, with superseded descriptions kept available for 5 years, and kept on-site for at least 6 months.

General Recordkeeping Requirements

You must report using the reduced recordkeeping program in the Notification of Compliance Status, or in the Periodic Report just before using it if you have already submitted the Notification of Compliance Status.

When can I stop taking daily records?

You may stop keeping daily records after 6 months if no inexcusable excursions (values below the minimum or above the maximum) occur. The provisions you must follow if you stop taking daily records include all of the following:

- Notify the EPA of all changes in recordkeeping frequency in the next Periodic Report
- Identify each parameter and equipment unit for which you will stop keeping daily records in the notification
- After an inexcusable excursion, resume recording the daily average value until 6 continuous months with no inexcusable excursions occurs
- Record and keep at least one parameter value taken during operation once per week, if no values are otherwise recorded

Notifications

What notifications must I submit for the reduced recordkeeping program?

You must submit notifications as indicated in Table 26. The citations in Table 26 refer to the General Provisions at 40 CFR §§63.1 through 63.11. You must submit the notifications by the applicable dates listed in Table 26.

Table 26. Notifications

You must submit a(n). . .	If you . . .	You must submit the notification . . .
Notification of compliance status [§63.9(h), §63.1439(e)(5)]	Are a new or existing affected source	Within 150 days of compliance dates specified in §63.1422
Notifications of inspections	Meet the HON storage vessel requirements in §63.120(b)(a)	By the HON provisions in §63.122(h)(1) and (2)

When must I submit an Initial Notification?

An Initial Notification was only required all new affected sources with an initial startup before 8-30-99. All other new affected sources must submit an Application for Approval of Construction or Reconstruction. Existing affected sources are not required to submit an Initial Notification.

What must I include in the Notification of Compliance Status?

The notification of compliance must contain the information in Table 27.

Table 27. Notification of Compliance Status

In the notification you must include...	The information you must include is...
Test reports for each test method for each emission point [§63.1439(e)(5)(i)]	Information required by HON in §63.182(c) for equipment leaks subject to §63.1434
	Results of any emission point group determinations
	Determination that controls are needed
	Process section applicability determinations
	Performance test results
	Inspection results
	Continuous monitoring system performance evaluations
	Values of monitored parameters during performance tests
	Anything else from the HON for storage vessel provisions in §§63.1422(j), 63.122 or 63.1432 or process wastewater reporting provisions in §63.14
	Brief process description for each emission point
	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 lab analyses
	Documentation of calculations
	Any other information required by a test method to be in the test report

Table 27. Notification of Compliance Status

In the notification you must include...	The information you must include is...
Monitored parameter maximum and minimum level for process vents, process wastewater and storage vessels [§63.1439(e)(5)(ii)]	The established maximum or minimum level of the monitored parameter for each emission point The rationale for that level Data and calculations used to develop the level Description of how this level will ensure compliance A definition of the source's operating day
Determination of applicability for flexible operation units [§63.1439(e)(1)(iii)]	The primary product
Parameter monitoring levels for flexible operation units [§63.1439(e)(5)(iv)]	The basis on which the levels were selected OR A demonstration that the levels are appropriate at all times
Results for predominant use determination for storage vessels [§63.1439(e)(5)(v)]	Determined predominant use
Option of standards [§63.1439(e)(5)(vi)]	Statement of which rule's requirements will be followed if an emission point is subject to this subpart and to those in §63.1422(j), and if §63.1422(j) allows choice in provisions for testing, monitoring, reporting and recordkeeping
Group I wastewater stream or residual transferee [§63.1439(e)(5)(vi)]	Name and location of transferee Description of stream or residual transferred

Notifications

What must I include in the Notification of Inspection?

You must submit a statement of inspection will occur at least 30 days prior to the refilling of each storage vessel or the inspection of each storage vessel.

Reports

What reports must I submit?

You must submit reports according to the requirements in Table 28.

Table 28. Required Reports

You must submit...	If you...	You must submit the report...
Precompliance Report [§63.1439(e)(4)]	Have an affected source requesting an extension for compliance, are requesting approval to use alternative monitoring, recordkeeping or controls, are requesting an approval to stop collecting monitoring data during a start-up, shutdown or malfunction under §63.1420(h)(3), or are requesting approval to establish parameter monitoring levels under §63.1438(c) or (d)	No later than 12 months before the compliance date
	Have a new affected source	With the application for approval of construction or reconstruction
Periodic Reports [§63.1439(e)(6)]	Have an existing or new affected source	No later than 60 days after the end of each 180 day period The first report must be no later than 240 days after the date the Notification of Compliance Status is due
Quarterly Reports [§63.1439(e)(6)(viii)]	Have a combustion, recovery or recapture device with more excursions than allowed for a semiannual period or the EPA requests quarterly reports for an emission point or process section	No later than 60 days after the end of each 90 day period
Reports of changes to storage vessels [§63.1439(e)(7)(i)]	Have a source meeting HON storage vessel provisions in §63.122(h)(1) or (h)(2)	In the Notification of Inspection

Reports

Table 28. Required Reports

You must submit...	If you...	You must submit the report...
Reports of changes to the primary product for a PMPU or process unit [§63.1439(e)(7)(ii)]	Have a source meeting the provisions in §63.1420(e)(9) or (e)(10)(iii)	Notification to the Administrator
Reports for changes or additions to plant sites [§63.1439(e)(7)(iii)]	Have a PMPU or emission point subject to provision for changes or additions to plant sites in §63.1420(g)(1) or (2)	180 days before compliance date
Alternative monitoring parameter report [§63.1439(e)(4)(iii)]	Are requesting alternative monitoring parameters for storage vessels, process vents or process wastewater	In the Precompliance Report
Alternative continuous monitoring and recordkeeping report [§63.1439(e)(4)(iv)]	Are requesting alternative continuous monitoring and recordkeeping provisions	In the Precompliance Report

What must I include in my Precompliance Report?

The precompliance report must contain the information in Table 29. Unless otherwise notified, the precompliance report is automatically approved within 45 days after its receipt.

Table 29. Precompliance Report

The sections you must include are...	The information you must include in each section is...
Any requests for extension for compliance [§63.1439(e)(ii)]	The data outlined in the General Provisions in §63.6(i)(6)(i)(A),(B), and (D)
Any requests for alternative monitoring parameters [§63.1439(e)(iii)]	A description of parameter to be monitored to ensure it's operation is within its design limits and will meet the emission limit An explanation of criteria used to select the parameter A description of the methods and procedures that will be used to demonstrate proper operation A schedule of the proper operation demonstration A statement that a maximum or minimum level will be established A description of proposed monitoring, recordkeeping, and reporting system, including frequency of each Rationale of the monitoring, recordkeeping, and reporting system if monitoring and recordkeeping isn't continuous or if daily average values won't be included in Periodic Reports
Any requests for alternative continuous monitoring and recordkeeping requirements [§63.1439(e)(iv)]	Information required in Table 2 of this publication
Any requests to use alternative controls [§63.1439(e)(v)]	The intent to use alternative control
Parameter monitoring [§63.1439(e)(viii)]	Identification of parameter monitoring procedures to be use. Description of how parameter monitoring level is to be established.
Any requests to stop collecting monitoring data during a start-up, shutdown or malfunction because it will harm the monitoring equipment [§63.1439(e)(vi)]	Documentation supporting claim that monitoring equipment would be damaged if used during start-up, shutdown or malfunction period A request to incorporate a provision to stop collecting monitoring data during start-up, shutdown, or malfunction into the start-up, shutdown and malfunction plan

Reports

When may I use a supplement to the Precompliance Report?

Supplements may be submitted to clarify or modify information already submitted, or to request approval to use alternative monitoring parameters, alternative continuous monitoring and recordkeeping, alternative controls, or to include a provisions in the start-up, shutdown, and malfunction plan to stop monitoring during those times.

What must I include in my Periodic Reports?

Periodic reports must include the information in Table 30. Remember that we have already described some additional specific information that must be included in the periodic reports for various process units.

Table 30. Periodic Reports

The sections you must include are...	If...	The information you must include this section is...
Statement of no compliance exceptions [§63.1439(e)(6)(ii)]	No compliance exception occurred in the 6 month reporting period	Statement that no compliance exceptions occurred in the reporting period
Reports for storage vessels and process wastewater [§63.1439(e)(6)(iii)]	You are complying with the storage vessel or wastewater provisions in §§63.1432 through 63.1433 for any emission point	All information required by the HON for periodic reporting in §63.122(a)(4), and §63.146(c) through (f) Daily averages of monitored parameters for all excursions Periods when monitoring data were not collected Notification if a process change is made that changes group status from 2 to 1 Notification if emission points or PMPU is added to an affected source, including: C A description of the addition C Notification of group status or control requirement for the additional point or all emission points in the PMPU Reports of changes in identity of treatment facility or transferee of process wastewater streams
Start-up shutdown and malfunction reports [§63.1439(b)(1)(ii)]	You are an affected source	Name, title, signature of official certifying accuracy Records of each start-up, shutdown, and malfunction of process equipment, CMS, or combustion, recovery, or recapture device during which excess emissions occurred Documentation of whether procedures followed during a start-up, shutdown, or malfunction were in accordance with the plan

Table 30. Periodic Reports

The sections you must include are...	If...	The information you must include this section is...
Performance tests	You must complete any performance tests	Test report for each test method for an emission point, containing: Brief process description description of sampling and analysis procedures and modification to standard procedures Record of operating conditions during the test Record of preparation of standards, if appropriate Record of calibrations Raw data sheets for field sampling Raw data sheets for field and lab analyses Documentation of calculations Information specifically required by test method to be in the test report for additional tests
Changes to primary product	A change is made to the primary product	The results of each change made to a primary product determination for a PMPU
Reevaluation of applicability	A storage vessel begins receiving or sending material to or from a process unit that was not included in the initial determination	The results of each evaluation
Equipment leak periodic report	You are subject to the storage vessel provision of the HON [§63.1434(f)]	The periodic reports required by §63.182(a)(3) and §63.182(d)

Reports

What must I include in my Quarterly Reports?

If you have excursions that are not excused excursions, you must submit Periodic Reports quarterly instead of semiannually. You must include all the information required in periodic reports for the applicable emission point or process section. You can return to semiannual Periodic Reports when the number of excursions does not exceed the number of excused excursions for 1 year.

How do I report process changes or additions?

If you've added a PMPU or made process changes at your PMPU, submit a Precompliance Report and include **all** of the following information: [§§63.1420(g)(4), 63.1439(e)(7)(ii)]

- provide a description of the process change or addition
- report the planned start-up date and the appropriate compliance date
- identify the group status of all changed or added emission points

You must submit the Precompliance Report no later than 180 days before the compliance date. [§63.1439(e)(7)(iii)(B)]

Chapter 17 - Other Requirements and Information

What does this chapter cover?

This chapter includes information about who regulates you, your permitting requirements, and how the General Provisions apply to facilities subject to subpart PPP.

Who administers this regulation?

Your State or local agency for air pollution control, **or** your EPA Regional Office, will regulate you. If your plant is in Indian Country, then your Tribe **or** your EPA Regional Office will regulate you. You will be regulated by more than one agency if a state, local or tribal agency has been granted delegation of this rule.

Not all States have been granted delegation, or, if they have been granted delegation, they may not have been delegated all portions of the rule. Our EPA Regional Offices may also have retained certain rights even after delegation (for example, you may continue to have dual reporting requirements as explained in Chapter 16). You should check with your EPA Regional Office or State for the latest information.

Do I need a Title V permit?

You'll need a Title V permit if you're subject to the Polyether Polyols Production NESHAP.

How do I change my permit to include this rule?

If you've already been issued a final title V permit and you have three or more years left on your permit, your permitting authority will reopen your permit within 18 months of the publication date of the final rule or final amendments. If you have less than three years left on your permit, update your permit during your renewal period. If your permit hasn't been issued in final form, update your application or draft permit.

To summarize, your options are as follows.

As of 6-1-99, if you have . . .	**Then . . .**
Not been issued a final Title V permit	Update your permit application or draft permit.
Less than three years left on your permit	Update your Title V permit during renewal.
Three or more years left on your permit	Your permitting authority will reopen your permit within 18 months after the publication date of the final rule or final amendments.

Title V permitting rules may change after the publication of this document. Keep abreast of any changes by checking the *Federal Register* **or** visit our Title V websites at http://www.epa.gov/ttn/oarpg/t5main.html and http://www.epa.gov/oar/oaqps/permits/.

What parts of the General Provisions apply?

The General Provisions were published in the *Federal Register* on March 16, 1994 (Volume 59, page 12408) and apply to all NESHAP, including the Polyether Polyols Production rule.

This means that when you became subject to this rule, you also became subject to the General Provisions. Some sections in this rule over-ride the General Provisions. You'll find that Table 1 of the final rule shows you which sections of the General Provisions apply to this rule and which don't. General Provision requirements, except for notification, recordkeeping, and reporting, are not addressed in this document.

Chapter 18 - Getting Additional Help

What does this chapter cover?

This chapter gives information about where to go for help.

Where do I go for help?

You can go to a lot of places for help, including all of the following.

- Your State, local or tribal agency for air pollution control
- Your State's Small Business Assistance Program (SBAP)
- Local, regional, or national trade associations
- Your EPA Regional Office

State and local contacts can change frequently. To get the most current contact information, go to the STAPPA/ALAPCO website *(www.4cleanair.org)* and then the membership directory. The directory will give you the latest contacts for major air programs (that is, emission standards for toxic air pollutants, ozone, etc.) at the State and local level.

If you have questions about this rule, you should contact your State, local or Tribal agency before calling the EPA. Their rules may be more stringent than Federal requirements.

One Trade Association representing the polyether polyols industry is listed below. Trade associations sometimes have rule information for their members.

Trade Association	Telephone #	Address
The Society of the Plastics Industry, Inc. (SPI)	(202) 974-5200	Maureen A. Healey Suite 600K 1801 K Street, NW Washington, DC 20006-1301
American Plastics Council (APC)	1-800-2-HELP-90	American Plastics Council 1300 Wilson Blvd., Suite 800 Arlington, VA 22209
Alliance for Polyurethanes Industry (API)	(703) 253-0656	Alliance for Polyurethanes Industry (API) 1300 Wilson Blvd., Suite 800 Arlington, VA 22209

Many States have a **Small Business Assistance Program.** If you're a small business and don't know how to contact your SBAP, you can call EPA's Control Technology Center Hotline [at (919) 541-0800 or visit EPA's SBAP at *www.epa.gov/oar/oaqps/sbap* for help].

Contact numbers for **EPA's Regional Air Division Offices** may also change frequently. To obtain the most up-to-date information, you may want to visit your Regional Office's website. Table 31 lists each of our Regional Offices, the Air Toxics Division Phone and Address, and the Regions internet home page. Make all written inquiries to the attention of "Polyether Polyols Production NESHAP Contact."

Can I get more information on the Web?

You can get a wealth of information on the World Wide Web (WWW). Some of the more popular ways to get information on this rule include the following.

- EPA's **Unified Air Toxics Website** (***http://www.epa.gov/ttn/uatw***)
  You can download copies of preambles, regulations, background information documents, policy memos, and other guidance materials here. All rule pages can be found under the Rules and Implementation page. The Society of the Plastics Industry, Inc. can be found under *www.plasticsindustry.org*.

- EPA's **Applicability Determination Index** (ADI)
  (http://es.epa.gov/oeca/main/compasst/chem.html)
  EPA's Office of Enforcement and Compliance Assurance (OECA) posts memos dealing with applicability and compliance at this site.

- OECA **Compliance Assistance Centers**
  (*http://www.epa.gov/epahome/business.htm*)
  You can find information on compliance with federal regulations at this site. There are centers for printing, automotive services and repair, agriculture, and metal finishing industries. We plan to add centers for the chemical industry, printed wiring board manufacture, transportation, and local governments.

- **STAPPA/ALAPCO** home page *(http://www.4cleanair.org)*
  STAPPA/ALAPCO is the State and Territorial Air Pollution Program Administrators (STAPPA) and The Association of Local Air Pollution Control Officials (ALAPCO) organization. STAPPA/ALAPCO has members representing each State and local agency for air pollution control.

You can get air pollution information at this site, including a document entitled *"Communicating Air Quality: A Compendium of Resources."* It lists educational materials on air pollution that State and local agencies have created.

Table 31. - MACT Implementation Contact for EPA Regional Offices*

Region	States	Address	Phone/Home Page
Region I	CT, ME, MA, NH, RI & VT	Office of Environmental Stewardship (SEA) **or** Office of Ecosystem Protection (CAP) 1 Congress Street, Suite 1100 Boston, MA 02114-2023 Attention: NESHAP (MACT) Contact	(617) 918-1510 ***www.epa.gov/region1***
Region II	NJ, NY, Puerto Rico & Virgin Islands	Division of Environmental Planning and Protection 290 Broadway 21st Floor New York, NY 10007-1866	(212) 637-3735 ***www.epa.gov/region2***
Region III	DE, MD, PA, VA, WV & DC	Air Protection Division, 3AP111 1650 Arch Street Philadelphia, PA 19103-2029	(215) 814-2056 ***www.epa.gov/region3***
Region IV	AL, FL, GA, KY, MS, NC, SC & TN	Air, Pesticides and Toxics Management Division Atlanta Federal Center 61 Forsyth Street Atlanta, GA 30303-3104	(404) 562-9077 ***www.epa.gov/region4***
Region V	IL, IN, MI, WI, MN & OH	Air and Radiation Division 77 West Jackson Blvd. Chicago, IL 60604-3507	(312) 353-2212 ***www.epa.gov/region5***
Region VI	AR, LA, NM, OK & TX	Multimedia Planning and Permitting Division (6PD) **or** Compliance Assurance & Enforcement Division (6EN) 1445 Ross Avenue Dallas, TX 75202-2733	(214) 665-7250/ (214) 665-7220 ***www.epa.gov/region6***
Region VII	IA, KS, MO & NE	Air, RCRA and Toxics Division 901 North 5th Street Kansas City, KS 66101	(913) 551-7020 ***www.epa.gov/region7***
Region VIII	CO, MT, ND, SD, UT & WY	Office of Enforcement, Compliance and Environmental Justice (ECEJ) **or** Office of Partnerships and Regulatory Assistance (OPRA) 999 18th Street 1 Denver Place, Suite 500 Denver, CO 80202-2405	(303) 312-7028/ (303) 312-6294 ***www.epa.gov/region8***
Region IX	AZ, CA, HI, NV, American Samoa, & Guam	Air Division 75 Hawthorne Street San Francisco, CA 94105	(415) 744-1219 ***www.epa.gov/region9***
Region X	AK, ID, WA & OR	Office of Air Quality 1200 Sixth Avenue Seattle, WA 98101	(206) 553-1505 ***www.epa.gov/region10***

* Information subject to change without notice. For the latest information, please visit the Regional Office Website.

Chapter 19 - Inspection Checklist

What does this chapter cover?

First , you will find instructions on using the inspection checklist. Then, you will find a comprehensive checklist that you can use to determine if you are meeting all of the requirements in Subpart PPP. Start at the beginning of the checklist and work your way through.

How do I use the checklist?

To complete the inspection, follow the checklist in chronological order. The checklist will direct you regarding which questions you must answer for each part of your facility. Here is an overview of the questions in the checklist that apply to each part of your facility.

How do I use this checklist?

Checklist Questions on Applicability

Applicability	Questions
Is my facility subject to this rule?	**1-2**
Is this vent, which does not use extended cookout, subject to the requirements in the rule?	**3**
Is this vent, which uses extended cookout, subject to the requirements in the rule?	**77-78**

How do I use this checklist?

Checklist Questions on Process Vent Requirements

	Questions			
	Compliance	Monitoring	Recordkeeping	Reporting
New Epoxide	4-7	30-41	42-49 unless using a flare; 61-63 if using a flare	64-76
Existing Epoxide	8-11	30-41	42-49 unless using a flare; 61-63 if using a flare	64-76
Group1 Batch Nonepoxide HAP	12-13	30-41	42-49 unless using a flare; 61-63 if using a flare	64-76
Group1 Continuous Nonepoxide HAP	14-15	30-41	42-49 unless using a flare; 61-63 if using a flare	64-76
Group 2 Batch Nonepoxide HAP	NA	NA	50-60	NA
Group 2 Continuous Nonepoxide HAP	16-17	30-41	42-49 unless using a flare; 61-63 if using a flare; 50-60 for all	64-76
Nonepoxide Organic HAP Emissions from Catalyst Extraction	18-19	30-41	42-49 unless using a flare; 61-63 if using a flare	64-76
THF	20-22	30-41	42-49 unless using a flare; 61-63 if using a flare	64-76
Halogenated Group 1 Process Vents Using Tetrahydrofuran	23-25	30-41	42-49 unless using a flare; 61-63 if using a flare	64-76
Halogenated Group 2 Process Vents Using Tetrahydrofuran	26-29	30-41	42-49 unless using a flare; 61-63 if using a flare	64-76
Process Vents Using Extended Cookout	68-76	77-79	80-101	102-106

How do I use this checklist?

The requirements for storage tanks, wastewater, equipment leaks, and heat exchangers are the same as those in the Hazardous Organic NESHAP (HON). You will find inspection checklists for storage tanks, equipment leaks, and wastewater at the following address: http://www.epa.gov/ttn/uatw/hon/honpg.html. You will find the requirements for heat exchangers in the HON rule at §63.104.

Checklist for Other Emission Points				
Storage Vessels	HON Inspection Checklist, Chapter 7, pg. II-37			
Wastewater	HON Inspection Checklist, Chapter 8, pg. II-61			
Equipment Leaks	HON Inspection Checklist, Chapter 9, pg. II-86			
Heat Exchangers	Compliance	Monitoring	Records	Reports
	§63.104(a), (d), and (e)	§63.104(b-c)	§63.104(f)(1)	§63.104(f)(2)

Inspection Checklist for Compliance with Subpart PPP, Polyether Polyol Production

General Information

Facility Name _____

Facility Location _____

_____

Facility TRI ID# _____

Date of Inspection _____

Inspector(s)

Name	Title/Affiliation	Phone Number

If you answer YES to both questions 1 and 2, your facility is subject to the rule. If you answer no to either question, do not continue. This rule does not apply to your facility.

Applicability

Facility Applicability

#	Question	Answer	Comments
1.	My facility contains a group of one or more process units that manufacture polyether polyols as their primary product (i.e., polyether polyol manufacturing process units, or PMPU). [§63.1420(a)(2); (e)]	**9** Yes **9** No	
2.	My facility is a major source [that is, emits at least 10 tons/yr of any HAP **OR** at least 25 tons/yr of any combination of Hazardous Air Pollutants (HAP)]. [§63.1420(a)(2)]	**9** Yes **9** No	

Even if you answered yes to questions 1 and 2, some parts of your plant may be exempt from the requirements of this rule. Do not complete this checklist for any of the following.

- Polyether polyol processes devoted solely to research and development of new products and processes. [§63.1420(d)(1)]
- Solvent reclamation, recovery or recycling operations at a hazardous waste treatment, storage, and disposal facility (TSDF) requiring a permit under CFR part 270 that is not part of a Polyol Manufacturing Process Unit (PMPU) to which this rule applies. [§63.1420(d)(2)]
- Reactions or processes that occur after epoxide polymerization and all catalyst removal steps are complete. [§63.1420(d)(3)]

If you answered yes to questions 1 and 2, you will need to answer questions for each part of your plant. Start with question 3 and answer each question that applies to you.

Compliance for Process Vents Without Extended Cookout

This section covers requirements for all types of process vents located at PMPU that do not use extended cookout. The checklist requirements for process vents using extended cookout begin with question 77.

Compliance Options for Process Vents Using Epoxides

Applicability			
#	**Question**	**Answer**	**Comments**
3.	Are you using epoxides in the production of polyether polyols? [§63.1425(b)]	**9** Yes **9** No	

If you answer no to question 3, skip to question 12. The process vent is not subject to the compliance requirements in questions 4 through 11 for process vents using epoxides to produce polyether polyols. It may, however, be subject to other requirements in the rule.

For each **new** process vent using epoxides to produce polyether polyols, to be in compliance you must answer yes to one of the following questions 4-7. In the comments column, list the identification number of each process vent using epoxides to produce polyether polyols that is using the identified compliance option.

Compliance Options for New Epoxide Process Vents			
#	**Question**	**Answer**	**Comments**
4.	I am reducing total epoxide emissions from the group of process vents by an aggregated 99.9 percent. [§63.1425(b)(1)(i)]	**9** Yes **9** No	
5.	I am maintaining an outlet concentration of total epoxides or TOC after each combustion, recapture, or recovery device of 20 ppmv or less. [§63.1425(b)(1)(ii)]	**9** Yes **9** No	
6.	I am maintaining an emission factor of no greater than 4.43×10^{-3} kilogram epoxide emissions per megagram of product for all process vents in the PMPU. [§63.1425(b)(1)(iii)]	**9** Yes **9** No	
7.	I am reducing total epoxide emissions from a group of process vents by an aggregated 99.9 percent, then maintain an outlet concentration of total epoxides or TOC (after each combustion, recapture, or recovery device) of 20 ppmv or less, for all other process vents in the PMPU. [§63.1425(b)(1)]	**9** Yes **9** No	

Compliance for Process Vents Without Extended Cookout

For each **existing** process vent using epoxides to produce polyether polyols, to be in compliance you must answer yes to one of the following questions 8-11. In the comments column, list the identification number of each existing process vent using epoxides to produce polyether polyols that is using the identified compliance option.

Compliance Options for Existing Epoxide Process Vents

#	Question	Answer	Comments
8.	I am reducing the total epoxide emissions from each process vent using a flare. [§63.1425(b)(2)(i)]	**9** Yes **9** No	
9.	I am reducing the total epoxide emissions from the group of process vents by an aggregated 98 percent. [§63.1425(b)(2)(ii)]	**9** Yes **9** No	
10.	I am maintaining an outlet concentration of total epoxides or TOC after each combustion, recapture, or recovery device of 20 ppmv or less. [§63.1425(b)(2)(iii)]	**9** Yes **9** No	
11.	I am maintaining an emission factor of no greater than 1.69 x 10^{-2} kilogram epoxide emissions per megagram of product (1.69 x 10^{-2} pounds epoxide emissions per 1,000 pounds of product) for all process vents in the PMPU. [§63.1425(b)(2)(iv)]	**9** Yes **9** No	

Compliance Options for Nonepoxide HAP Emission Process Vents

For each Group 1 combination of batch process vents using nonepoxide organic HAP to make or modify polyether polyols, to be in compliance you must answer yes to one of the following questions 12 -13. Do not answer these questions for Group 2 batch process vents. There are no control requirements for Group 2 batch process vents. Requirements for continuous process vents are found in questions 14-17. In the comments column, list the identification number of each process vent that is using the identified compliance option.

Compliance Options for Nonepoxide Organic HAP Emissions from Group 1 Batch Process Vents

#	Question	Answer	Comments
12.	Are you reducing nonepoxide organic HAP emissions from each process vent using a flare? [§63.1425(c)(1)(i)]	**9** Yes **9** No	
13.	Are you reducing nonepoxide organic HAP emissions by 90% using a combustion, recapture, or recovery device? [§63.1425(c)(1)(ii)]	**9** Yes **9** No	

Compliance for Process Vents Without Extended Cookout

For each Group 1 continuous process vent using nonepoxide organic HAP to make or modify polyether polyols, to be in compliance you must answer yes to one of the following questions 14-15. Requirements for Group 2 continuous process vents are found in questions 16-17. In the comments column, list the identification number of each Group 1 continuous process vent that is using the identified compliance option.

Compliance Options for Nonepoxide Organic HAP Emissions from Group 1 Continuous Process Vents

#	Question	Answer	Comments
14.	Are you reducing nonepoxide organic HAP emissions from each process vent using a flare? [§63.1425(c)(3)(i)]	**9** Yes **9** No	
15.	Are you reducing nonepoxide organic HAP emissions by 98% using a combustion, recapture, or recovery device? [§63.1425(c)(3)(ii)]	**9** Yes **9** No	

For each Group 2 continuous process vent using nonepoxide organic HAP to make or modify polyether polyols, to be in compliance you must answer yes to one of the following questions 16-17. In the comments column, list the identification number of each Group 2 continuous process vent that is using the identified compliance option.

Compliance Options for Nonepoxide Organic HAP Emissions from Group 2 Continuous Process Vents

#	Question	Answer	Comments
16.	If the TRE for the process vent is between 1.0 and 4.0, are you monitoring according to §63.1429(a), keeping records according to §63.1420(d), and recalculating the TRE index value when process changes occur according to §63.1428(h)(2)? [§63.1425(c)(4)(i)]	**9** Yes **9** No	
17.	If the TRE for the process vent is above 4.0, are you calculating the TRE value when process changes occur according to §63.1428(h)(2)? [§63.1425(c)(4)(ii)]	**9** Yes **9** No	

Compliance for Process Vents Without Extended Cookout

Compliance Options for Nonepoxide Organic HAP Emissions from Catalyst Extraction

If you are using nonexpoxide organic HAP emissions to produce polyether polyols using catalyst extraction, to be in compliance you must answer yes to either question 18 or 19 for each process vent. In the comments column, list the identification number of each process vent that is using the identified compliance option.

Compliance Options for Nonepoxide Organic HAP Emissions from Catalyst Extraction

#	Question	Answer	Comments
18.	Are you reducing nonepoxide organic HAP emissions from each process vent associated with catalyst extraction using a flare? [§63.1425(d)(1)]	9 Yes 9 No	
19.	Are you reducing emissions of nonepoxide organic HAP from all process vents associated with catalyst extraction by 90% overall for each PMPU? [§63.1425(d)(2)]	9 Yes 9 No	

Compliance Options for Non-halogenated Group 1 Process Vents Using Tetrahydrofuran

For each non-halogenated Group 1 process vent in a PMPU that uses tetrahydrofuran (THF) to produce one or more polyether polyol products, to be in compliance you must answer yes to at least one of the questions 20-22.

Compliance Options for Non-halogenated Group 1 Process Vents Using Tetrahydrofuran

#	Question	Answer	Comments
20.	Are you reducing organic HAP emissions using a flare? [§63.113(a)(1)]	9 Yes 9 No	
21.	Are you reducing emissions of total organic HAP by 98 weight percent or to a concentration of 20 ppmv? [§63.113(a)(2)]	9 Yes 9 No	
22.	Are you achieving and maintaining a TRE index value greater than 1.0 at the outlet of the final recovery device, or prior to release of the vent stream to the atmosphere? [§63.113(a)(3)]	9 Yes 9 No	

Compliance for Process Vents Without Extended Cookout

Compliance Options for Halogenated Group 1 Process Vents Using Tetrahydrofuran

For each halogenated Group 1 process vent in a PMPU that uses tetrahydrofuran (THF) to produce one or more polyether polyol products, to be in compliance you must answer yes to question 23, and to question 24 or 25, if applicable.

Compliance Options for Halogenated Group 1 Process Vents Using Tetrahydrofuran

#	Question	Answer	Comments
23.	If you are using a combustion device to reduce organic HAP emissions to 98 percent or to a concentration of 20 ppmv, is the vent stream exiting the combustion device ducted to a halogen reduction device before it is discharged to the atmosphere? [§63.113(c)(1)]	**9** Yes **9** No	
24.	If the halogen reduction device was installed on or after September 4, 1997, does it reduce overall emissions of hydrogen halides and halogens by 99 percent, or reduce the outlet mass of total hydrogen halides and halogens to less than 0.45 kg/hr? [§63.113(a)(1)(i)]	**9** Yes **9** No	
25.	If the halogen reduction device was installed prior to September 4, 1997, does it reduce overall emissions of hydrogen halides and halogens by 95 percent, or reduce the outlet mass of total hydrogen halides and halogens to less than 0.45 kg/hr? [§63.113(a)(1)(ii)]	**9** Yes **9** No	

Compliance for Process Vents Without Extended Cookout

Compliance Options for Group 2 Process Vents Using Tetrahydrofuran

For each Group 2 process vent in a PMPU that uses tetrahydrofuran (THF) to produce one or more polyether polyol products, to be in compliance you must be able to answer yes to question 26, 27, 28, or 29, as appropriate.

Compliance Options for Halogenated Group 2 Process Vents Using Tetrahydrofuran

#	Question	Answer	Comments
26.	If your Group 2 process vent has a flow rate greater than or equal to 0.005 scmm, a HAP concentration greater than or equal to 50 ppmv, and a TRE index value greater than 1.0 but less than 4.0, are you maintaining the TRE index value above 1.0? [§63.113(d)]	**9** Yes **9** No	
27.	If your Group 2 process vent has a TRE index value greater than or equal to 4.0, are you maintaining the TRE index value above 4.0? [§63.113(e)]	**9** Yes **9** No	
28.	If your Group 2 process vent has a flow rate less than 0.005 scmm, are you maintaining the flow rate at less than 0.005 scmm? [§63.113(f)]	**9** Yes **9** No	
29.	If your Group 2 process vent has a HAP concentration less than 50 ppmv, are you maintaining the HAP concentration below 50 ppmv? [§63.113(g)]	**9** Yes **9** No	

Monitoring for Process Vents Without Extended Cookout

The monitoring requirements for all types of process vents without extended cookout are the same. Questions 30-41 apply to epoxide HAP emissions, nonepoxide organic HAP emissions, catalyst extraction, and process vents using THF. You are meeting the monitoring requirements if you answer yes to all portions of questions 30-41 for each of these types of process vents, as appropriate. List the identification number for each control device in the comments column.

Monitoring Requirements for Any Process Vent Without Extended Cookout

#	Question	Answer	Comments
30.	Is each incinerator equipped with a temperature monitoring device with a continuous recorder? [§63.1429(a)(1)]	9 Yes 9 No	
31.	Is the monitoring device for each incinerator that is not a catalytic incinerator installed in the firebox of the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs? [§63.1429(a)(1)(i)]	9 Yes 9 No	
32.	For each catalytic incinerator, is the temperature monitoring device installed in the gas stream immediately before and after the catalyst bed? [§63.1429(a)(1)(ii)]	9 Yes 9 No	
33.	Is each flare equipped with a device capable of continuously detecting the pilot flame presence? [§63.1429(a)(2)]	9 Yes 9 No	
34.	Is each boiler or process heater of less than 44 megawatts design heat input capacity equipped with a temperature monitoring device with a continuous recorder in the firebox? [§63.1429(a)(3)]	9 Yes 9 No	
35.	Is either a scrubbing liquid flow rate meter, a pressure monitoring device, or an organic monitoring device equipped with a continuous recorder installed on each absorber? [§63.1429(a)(4)]	9 Yes 9 No	
36.	If you are using acid or base absorbent, is each absorber equipped with a pH monitoring device to monitor scrubber effluent? [§63.1429(a)(4)]	9 Yes 9 No	
37.	Is each condenser equipped with either a condenser exit temperature (product side) monitoring device or an organic monitoring device equipped with a continuous recorder? [§63.1429(a)(5)]	9 Yes 9 No	
38.	Is each carbon adsorber equipped with an integrated regeneration stream flow monitoring device with an accuracy of at least +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? [§63.1429(a)(6)]	9 Yes 9 No	

Monitoring for Process Vents Without Extended Cookout

Monitoring Requirements for Any Process Vent Without Extended Cookout				
#	**Question**	**Answer**		**Comments**
39.	For each process vent system that contains bypass lines that could divert a process vent stream away from a required combustion, recovery, or recapture device, have you either installed a flow indicator at the entrance to the bypass line or secured the bypass line with a car lock and seal? [§63.1429(c)]	**9** Yes	**9** No	
40.	If you have installed a flow indicator at the bypass line, does it take a reading approximately every 15 minutes? [§63.1429(c)(1)]	**9** Yes	**9** No	
41.	If you have a car lock and seal, do you visually inspect the seal or closure mechanism at least once every month? [§63.1429(c)(2)]	**9** Yes	**9** No	

Recordkeeping for Process Vents Without Extended Cookout

For each new source and each existing source not using a flare for emission control, you are meeting the recordkeeping requirements if you answer yes to each portion of questions 42-49 for each process vent, as appropriate. List the identification number for each control device in the comments column.

To meet the recordkeeping requirements for each Group 2 process vent, you must also answer yes to questions 50-54.

Records for Process Vents without Extended Cookout

#	Question	Answer	Comments
42.	If you're complying using a thermal incinerator, do you keep the following records? [§63.1430(d)(1) and Table 5 of Subpart PPP]		
	C Continuous records of firebox temperature	**9** Yes **9** No	
	C Average firebox temperature during performance test	**9** Yes **9** No	
	C Daily average firebox temperature	**9** Yes **9** No	
43.	If you are complying using a catalytic incinerator, do you keep the following records? [§63.1430(d)(1) and Table 5 of Subpart PPP]		
	C Continuous records of the temperature upstream and downstream of the catalyst bed	**9** Yes **9** No	
	C Average upstream and downstream temperatures	**9** Yes **9** No	
	C Average temperature difference across the catalyst bed during performance test	**9** Yes **9** No	
	C Daily average upstream temperature	**9** Yes **9** No	
	C Daily average temperature difference across the catalyst bed	**9** Yes **9** No	
44.	If you are complying using an absorber for process vents from batch unit operations, do you keep the following records? [§63.1430(d)(1) and Table 5 of Subpart PPP]		
	C Either the liquid flow rate into or out of the scrubber, or pressure drop across the scrubber every 15 minutes	**9** Yes **9** No	
	C Either the average liquid flow rate into or out of the scrubber, or average pressure drop across the scrubber	**9** Yes **9** No	
	C pH of the scrubber effluent recorded once daily	**9** Yes **9** No	
	C Average pH of scrubber effluent during performance test	**9** Yes **9** No	

Recordkeeping for Process Vents Without Extended Cookout

Records for Process Vents without Extended Cookout			
#	**Question**	**Answer**	**Comments**
45.	If you are complying using an absorber for process vents from continuous unit operations, do you keep the following records? [§63.1430(d)(1) and Table 5 of Subpart PPP]		
	C Continuous records of the exit temperature and specific gravity of absorbing liquid	**9** Yes **9** No	
	C Exit temperature and specific gravity of absorbing liquid averaged over full period of TRE determination	**9** Yes **9** No	
	C Daily average exit temperature and specific gravity ?	**9** Yes **9** No	
46.	If you are complying using a condenser, do you keep the following records? [§63.1430(d)(1) and Table 5 of Subpart PPP]		
	C Continuous records of exit (product side) temperature	**9** Yes **9** No	
	C Average exit temperature during performance test (for batch unit operations) or during TRE determination (for continuous unit operations)	**9** Yes **9** No	
47.	If you are complying using a carbon adsorber, do you keep the following records? [§63.1430(d)(1) and Table 5 of Subpart PPP]		
	C Total regeneration stream mass or volumetric flow for each carbon bed regeneration cycle, including during the performance test or TRE determination	**9** Yes **9** No **9** Yes **9** No	
	C Temperature of the carbon bed after each regeneration and within 15 minutes of completing any cooling cycles, including during performance test or TRE determination		
48.	If you are complying using an absorber, condenser, **and** carbon adsorber, do you keep the following records? [§63.1430(d)(1) and Table 5 of Subpart PPP]		
	C Continuous records of concentration level or reading indicated by the organic monitoring device at the outlet of the recovery device	**9** Yes **9** No	
	C Average concentration or reading during performance test or TRE determination	**9** Yes **9** No	
	C Daily average concentration level or reading	**9** Yes **9** No	

Recordkeeping for Process Vents Without Extended Cookout

Records for Process Vents without Extended Cookout			
#	**Question**	**Answer**	**Comments**
49.	If you are complying using a boiler or process heater, do you keep the following record? [§63.1430(b)(2)(iii)]	**9** Yes **9** No	
	C A description of the location at which the process vent is introduced into the boiler or process heater		
	In addition, if you have a new source and are complying by maintaining an emission factor no greater than 4.43 x 10^{-3} kg epoxide emissions per Mg product, do you keep the following records for your boiler or process heater with a design heat capacity of less than 44 megawatts? [§63.1430(b)(2)(iv)]	**9** Yes **9** No	
	C Records of the percent reduction of organic HAP or TOC, if the process vent steam is introduced with combustion air or is used as a secondary fuel not mixed with primary fuel		
	OR, if the process vents are not introduced or used with the primary fuel, do you have the following records?	**9** Yes **9** No	
	C Continuous records of firebox temperature	**9** Yes **9** No	
	C Average firebox temperature during performance test	**9** Yes **9** No	
	C Daily average firebox temperature		

Recordkeeping for Process Vents Without Extended Cookout

For each Group 2 process vent that is associated with the use of nonepoxide organic HAP to make or modify the product, you are meeting the recordkeeping requirements for the Group 2 determination if you answer yes to questions 50-54. You will need the Group 2 Determination records to demonstrate that each process vent is not a Group 1 process vent. If you are declaring all process vents as Group 1 process vents, you do not need the records in questions 50-54.

Records for Group 2 Determination for Process Vents Using Nonepoxide HAP

#	Question	Answer	Comments
50.	Do you have a record of the description and the emission estimate for each batch emission episode and the total emissions associated with one batch cycle for each unique product class in the PMPU? [§63.1430(e)(1)(i)]	**9** Yes **9** No	
51.	Do you have a record of the total annual uncontrolled TOC or nonepoxide organic HAP emissions from the combination of process vents form batch unit operations associated with the use of nonepoxide organic HAP to make or modify the product? [§63.1430(e)(1)(ii)]	**9** Yes **9** No	
52.	If the total annual emissions are 11,800 kg per year or more, do you have a record of the annual average flow rate for the combination of process vents from batch unit operations associated with the use of organic HAP to make or modify the product? [§63.1430(e)(1)(iii)]	**9** Yes **9** No	
53.	If the total annual emissions are 11,800 kg per year or more, do you have a record of the cutoff flow rate? [§63.1430(e)(1)(iv)]	**9** Yes **9** No	
54.	Do you have a record of the measurements and calculations performed to determine the TRE index value of each continuous process vent stream? [§63.1430(e)(1)(vii)]	**9** Yes **9** No	

Recordkeeping for Process Vents Without Extended Cookout

For each Group 2 process vent that is associated with the use of nonepoxide organic HAP to make or modify the product, you are meeting the recordkeeping requirements if you answer yes to questions 55-60.

Records for Group 2 Process Vents Using Nonepoxide HAP				
#	**Question**	**Answer**		**Comments**
55.	For each combination of batch process vents, do you have a record of the combined total annual nonepoxide organic HAP emissions? [§63.1430(f)(1)]	9 Yes	9 No	
56.	For each continuous process vent using a recovery device to achieve a TRE index value greater than 1.0 but less than 4.0, do you have a continuous record of the equipment operating parameters? [§63.1430(f)(2)(i)]	9 Yes	9 No	
57.	For each continuous process vent using a recovery device or means other than a carbon adsorber to achieve a TRE index value greater than 1.0 but less than 4.0, do you have records of the daily average value of each continuously monitored parameter for each operating day? [§63.1430(f)(2)(ii)]	9 Yes	9 No	
58.	For each continuous process vent with TRE index value greater than 4.0 or 1.0, do you have a record of process changes and a record of any recalculation of the TRE value? [§63.1430(f)(3)(i) and (ii)]	9 Yes	9 No	
59.	For each continuous process vent complying by maintaining a flow rate less than 0.005 standard cubic meters per minute, do you have a record of any process changes that increase the vent stream flow rate and any recalculation or measure of the flow rate? [§63.1430(f)(4)(i) and (ii)]	9 Yes	9 No	
60.	For each continuous process vent complying by maintaining a total organic concentration less than 50 ppmv, do you have a record of any process changes that increase the total organic concentration and a record of the recalculation or measurement of the concentration? [§63.1430(f)(5)(i) and (ii)]	9 Yes	9 No	

Recordkeeping for Process Vents Without Extended Cookout

For each process vent using a flare for emission control, you are meeting the recordkeeping requirements if you answer yes to questions 61-63.

Records for Flares			
#	**Question**	**Answer**	**Comments**
61.	Do you have records of the flare design? [§63.1430(b)(1)]	**9** Yes **9** No	
62.	Do you have the following records from flare specification determination? [§63.1430(b)(1)]		
	C All visible emission readings	**9** Yes **9** No	
	C Heat content determinations	**9** Yes **9** No	
	C Flow rate determinations	**9** Yes **9** No	
	C Exit velocity determinations	**9** Yes **9** No	
63.	Do you have the following records for each operating period? [Table 5 of Subpart PPP]		
	C Hourly records of whether the monitor was continuously operating during batch emission episodes selected for control	**9** Yes **9** No	
	C Hourly records of whether a flame was continuously present at the pilot light during batch emission episodes selected for control	**9** Yes **9** No	
	C Records of the presence of a flame at the pilot light over the full period of compliance determination	**9** Yes **9** No	
	C Records of the time and durations of all periods when any flames were absent or the monitor was not monitoring	**9** Yes **9** No	

Reporting for Process Vents Without Extended Cookout

For each process vent that is not using ECO, you are meeting the process change periodic reporting requirements if you answer yes to questions 64-66.

Process Change Reports for Process Vents without Extended Cookout			
#	**Question**	**Answer**	**Comments**
64.	If you have made a process change that caused a Group 2 combination of batch process vents to become a Group 1 combination of batch process vents, did you submit a report within 180 days after the process change ?	**9** Yes **9** No	
	Did the report include a description of the process change? [§63.1430(i)]	**9** Yes **9** No	
65.	If you have made a process change that causes a Group 2 process vent from a continuous unit operation to become a Group 1 process vent from a continuous unit operation, did you submit a report within 180 days after the process change, either in a Periodic Report or in a separate submittal to the Administrator?	**9** Yes **9** No	
	Did the report include a description of the process change, a statement that you intend to comply with the requirements for a Group 1 process vent from a continuous unit operation, the results of the recalculation of the TRE index value? [§63.1430(j)]	**9** Yes **9** No	
66.	If you wish to use an alternative combustion, recovery, or recapture device to monitor an alternative parameter, or to use extended cookout and monitor an alternative parameter, did you submit a plan of your planned reporting and recordkeeping procedures as part of your Precompliance Report? [§63.1430(k)]	**9** Yes **9** No	

Reporting for Process Vents Without Extended Cookout

For each process vent that is not using ECO, you are meeting the Notification of Compliance Status reporting requirements if you answer yes to questions 67-71. List the identification number for each control device in the comments column.

Notification of Compliance Status for Process Vents without Extended Cookout			
#	**Question**	**Answer**	**Comments**
67.	If you are using a flare to comply with the process vent requirements, did you report the following? [§63.1430(g)]		
	• flare design (i.e., steam-assisted, air-assisted, or non-assisted)	9 Yes 9 No	
	• all visible emission readings, heat content determinations, flow rate determination, exit velocity determinations made during the flare specification determination	9 Yes 9 No	
	• all periods during the flare specification determination when all pilot flames were absent.	9 Yes 9 No	
68.	If you are using a combustion, recovery, or recapture device other than a flare to comply with the process vent requirements, did you report the following? [§63.1430(g)]		
	• percent reduction of organic HAP or TOC achieved, if you are complying with the percent reduction or annual epoxide emission limitations.	9 Yes 9 No	
	• concentration of organic HAP or TOC at the outlet of the combustion device if you are complying with an outlet concentration limitation	9 Yes 9 No	
69.	If you are using a boiler or a process heater, did you include a description of the location at which the process vent is introduced into the boiler or process heater? [§63.1430(g)]	9 Yes 9 No	
70.	If you are using a boiler or process heater with a design heat capacity of less than 44 megawatts and the process vent stream is introduced with combustion air or is used as a secondary fuel and is not mixed with the primary fuel, did you report the percent reduction of organic HAP or TOC achieved? [§63.1430(g)]	9 Yes 9 No	

Reporting for Process Vents Without Extended Cookout

Notification of Compliance Status for Process Vents without Extended Cookout			
#	**Question**	**Answer**	**Comments**
71.	Did you include the following information? [§63.1430(g)]		
	• Documentation showing the establishment of each parameter monitoring level that indicates that a combustion, recovery, or recapture device is operated in a manner that ensures compliance	9 Yes 9 No	
	• Documentation of parameter monitoring data used to establish parameter monitoring levels	9 Yes 9 No	
	• Information used to perform the group determination for each Group 2 process vent or combination of process vents	9 Yes 9 No	

Reporting for Process Vents Without Extended Cookout

For each process vent that is not using ECO, you are meeting the periodic reporting requirements if you answer yes to questions 72-76.

Periodic Reports for Process Vents without Extended Cookout			
#	**Question**	**Answer**	**Comments**
72.	For each periodic report, did you report the daily average values of monitored parameters for all operating days when the daily average values recorded were above the maximum, or below the minimum, level established in the Notification of Compliance Status ? [§63.1430(h)(1)]	**9** Yes **9** No	
73.	For each periodic report, did you report all periods in which a seal or closure mechanism is broken, a bypass line valve position has changed, or the key to unlock the bypass line valve has been checked out [§63.1430(h)(4)]	**9** Yes **9** No	
74.	For each periodic report, did you report the times and durations of all periods during which a flare had no pilot flame present? [§63.1430(h)(5)]	**9** Yes **9** No	
75.	For each periodic report, did you report the duration of periods when monitoring data was not collected, for each excursion caused by insufficient collection of monitoring data? [§63.1430(h)(2)]	**9** Yes **9** No	
76.	For each periodic report, did you report the times and durations of all periods when the process vent stream is diverted away from the combustion, recovery, or recapture device through a bypass line? [§63.1430(h)(3)]	**9** Yes **9** No	

Requirements for Process Vents Using Extended Cookout

Applicability for Process Vents Using Extended Cookout				
#	**Question**	**Answer**		**Comments**
77.	Are you using ECO as a control technique to reduce epoxide emissions by 99.9% for new sources or 98% for existing sources? [§63.1427(a)]	**9** Yes	**9** No	
78.	For sources using epoxides, are you using ECO to maintain an emission factor no greater than 4.43×10^{-3} for new sources or 1.69×10^{-2} for existing sources? [§63.1427(a)]	**9** Yes	**9** No	

If you answered NO to questions 77 and 78, do not continue. The process vent is not subject to these requirements. If you answered yes to either question 77 or 78, you must follow the extended cookout (ECO) requirements. You are in compliance with ECO requirements if you answer yes to questions 79-87. List the identification number of each control device in the comments column.

Compliance Requirements for Process Vents Using Extended Cookout				
#	**Question**	**Answer**		**Comments**
79.	Did you determine the batch cycle percent epoxide emission reduction for the polyether polyol that is manufactured with the slowest pressure decay curve? [§63.1427(a)(1)]	**9** Yes	**9** No	
80.	Unless uncontrolled epoxide emissions prior to the end of the ECO are under 10 tons per year, did you determine the batch cycle emission reduction by directly measuring the concentration of unreacted epoxide or by using an estimation method that is determined to be less than 25% different from actual measurements? [§§63.1427(a)(2)(i)and (ii)]	**9** Yes	**9** No	
81.	Did you define the end of epoxide feed? [§63.1427(b)]	**9** Yes	**9** No	
82.	Did you define the onset of the ECO? [§63.1427(c)]	**9** Yes	**9** No	
83.	Did you determine emissions at the end of the ECO? [§63.1427(d)]	**9** Yes	**9** No	
84.	Did you determine the percent epoxide emission reduction? [§63.1427(e)]	**9** Yes	**9** No	
85.	Did you determine the epoxide concentrations? [§63.1427(f)]	**9** Yes	**9** No	
86.	Did you determine total pressure of the system? [§63.1427(g)]	**9** Yes	**9** No	
87.	Did you determine whether pressure decay curves for different products are similar? [§63.1427(h)]	**9** Yes	**9** No	

For each process vent using extended cookout, you are meeting the monitoring requirements if you answer yes to each question 88-90, as appropriate. List the identification number of each process vent in the comments column.

Requirements for Process Vents Using Extended Cookout

Monitoring Requirements for Any Process Vent Using Extended Cookout

#	Question	Answer	Comments
88.	Did you monitor one of the following? [§63.1427(i)(1)]		
	C Time from end of epoxide feed to end of ECO	9 Yes 9 No	
	C The epoxide partial pressure in the closed reactor	9 Yes 9 No	
	C Epoxide concentration in the reactor liquid at the end of the ECO when the liquid is still in the reactor or after transfer to another vessel	9 Yes 9 No	
	C Another parameter approved by the EPA	9 Yes 9 No	
89.	Did you establish a level to be maintained during periods of operation for one of the following parameters for each product class? [§63.1427(i)(2)]		
	C Time from end of epoxide feed to the end of ECO	9 Yes 9 No	
	C Reactor epoxide partial pressure at the end of ECO	9 Yes 9 No	
	C Epoxide concentration in the reactor liquid at the end of ECO, when the liquid is still in the reactor or afer transfer to another vessel	9 Yes 9 No	
	C Another parameter approved by the EPA	9 Yes 9 No	
90.	Did you record the value of the monitored value at the end of ECO for each batch cycle where ECO is used to reduce epoxide emissions? [§63.1427(i)(3)]	9 Yes 9 No	

For each process vent using extended cookout, you are meeting the recordkeeping requirements if you answer yes to each portion of questions 91-107 for each process vent, as appropriate. List the identification number for each process vent in the comments column.

Records for Process Vents Using Extended Cookout

#	Question	Answer	Comments
91.	For each product in each product class, do you have records of pressure decay curve? [§63.1427(j)(1)(i)(A)]	9 Yes 9 No	
92.	For each product in each product class, do you have records of minimum reaction temperature? [§63.1427(j)(1)(i)(B)]	9 Yes 9 No	
93.	For each product in each product class, do you have record of the number of reaction hydrogens in the raw material? [§63.1427(j)(1)(i)(C)]	9 Yes 9 No	
94.	For each product in each product class, do you have records of the minimum catalyst concentration? [§63.1427(j)(1)(i)(D)]	9 Yes 9 No	
95.	For each product in each product class, do you have records of the ratio of EO/PO at the end of the epoxide feed? [§63.1427(j)(1)(i)(E)]	9 Yes 9 No	

Requirements for Process Vents Using Extended Cookout

Records for Process Vents Using Extended Cookout				
#	**Question**	**Answer**		**Comments**
96.	For each product in each product class, do you have records of reaction conditions, including the size of the reactor or batch? [§63.1427(j)(1)(i)(F)]	**9** Yes	**9** No	
97.	For each product in each product class, do you have a list of all the products in the product class for each product? [§63.1427(j)(1)(ii)]	**9** Yes	**9** No	
98.	For each product in each product class, do you have records of the uncontrolled epoxide emissions at the onset of the ECO with the background data, measurements, and assumptions used in calculation in initial determination of percent epoxide emission reduction? [§63.1427(j)(1)(v)]	**9** Yes	**9** No	
99.	For each product in each product class, do you have records of the epoxide emissions at the end of the ECO with background data, measurements, and assumptions used in calculation in initial determination of percent epoxide emission reduction? [§63.1427(j)(1)(vi)]	**9** Yes	**9** No	
100.	For each product in each product class, do you have records of the percent epoxide reduction for the batch cycle with background data, measurements, and assumptions used in calculation in initial determination of percent epoxide emission reduction? [§63.1427(j)(1)(vii)]	**9** Yes	**9** No	
101.	For each product in each product class, do you have records of the established parameter level to maintain in initial determination of percent epoxide emission reduction? [§63.1427(j)(1)(viii)]	**9** Yes	**9** No	
102.	For each product in each product class, do you have records of the time and duration of all emission episodes that occur before the end of the ECO in initial determination of percent epoxide emission reduction? [§63.1427(j)(1)(ix)]	**9** Yes	**9** No	
103.	For each product in each product class, do you have records of each product produced and its product class for each batch cycle? [§63.1427(j)92)(i)]	**9** Yes	**9** No	
104.	For each product in each product class, do you have records of the values of all parameters measured in determining excursions? [§63.1427(j)(2)(ii)]	**9** Yes	**9** No	
105.	For each product in each product class when you are using combustion, recovery, or recapture devices in conjunction with ECO, do you have records for those devices in addition to those for the ECO? [§63.1427(j)(2)(iii)]	**9** Yes	**9** No	
106.	For each product in each product class, do you have records of the time and duration of all epoxide emission episodes that occurred before the end of the ECO? [§63.1427(j)(2)(v)]	**9** Yes	**9** No	

Requirements for Process Vents Using Extended Cookout

Records for Process Vents Using Extended Cookout			
#	**Question**	**Answer**	**Comments**
107.	If you are using ECO as a control option for a new polyether polyol not previously assigned to a product class, have you updated your records to include information for the new product? [§63.1427(l)(1)(i); 63.1427(m)(2)]	**9** Yes **9** No	

Requirements for Process Vents Using Extended Cookout

If any of the following occur, you must keep additional records for each product in each product class, and you must answer yes to questions 108-112 to be in compliance with this portion of the rule.

- Epoxide is emitted before the end of the ECO
- ECO is not the only control technique used to reduce epoxide emissions
- You determine percent epoxide emission reduction for the ECO using reactor epoxide partial pressure.

Additional Records for ECO			
108.	Do you have records of the concentration of epoxide at the end of epoxide feed in initial determination of percent epoxide emission reduction? [§63.1427(j)(1)(iii)]	9 Yes	9 No
109.	Do you have records of the concentration of epoxide at the onset of the ECO in initial determination of percent epoxide emission reduction? [§63.1427(j)(1)(iv)]	9 Yes	9 No
110.	For each product in each product class, do you have records of the reactor epoxide partial pressure at the end of the epoxide feed, at the onset of the ECO or at the end of the ECO? [§63.1427(j)(1)(x)(A)]	9 Yes	9 No
111.	For each product in each product class, do you have records of the percent epoxide reduction for each batch cycle with measurements and assumptions used in calculation? [§63.1427(j)(1)(x)(B)]	9 Yes	9 No
112.	For each product in each product class, do you have records of the reactor epoxide partial pressure at the end of the ECO? [§63.1427(j)(1)(x)(C)]	9 Yes	9 No

Requirements for Process Vents Using Extended Cookout

For each process vent using ECO, you are meeting the notification and reporting requirements if you answer yes to questions 113-117.

Notifications and Reports			
#	**Question**	**Answer**	**Comments**
113.	Did you submit a Precompliance Report with the following information? [§63.1427(k)(1)]		
	C The standard operating procedure for taking reactor liquid samples and the method that will be used to determining the epoxide concentration in the liquid	**9** Yes **9** No	
	C Requests to monitor alternate parameters, if applicable	**9** Yes **9** No	
114.	Did you submit a Notification of Compliance Status with the following information? [§63.1427(k)(2)]		
	C All the operating conditions for each product class	**9** Yes **9** No	
	C A list of all products produced in a product class	**9** Yes **9** No	
	C The percent epoxide emission reduction	**9** Yes **9** No	
	C The parameter for each product class	**9** Yes **9** No	
	C A list of times and durations of all epoxide emissions that occur before the end of the ECO during the initial demonstration of batch cycle efficiency	**9** Yes **9** No	
	C Records to demonstrate compliance and establishment of parameter monitoring levels for combustion, recovery or recapture devices used in addition to ECO to reduce emissions	**9** Yes **9** No	
115.	Did you submit a Periodic Report with the following information? §63.1427(k)(3)		
	C Reports of each batch cycle for which an ECO excursion occurred	**9** Yes **9** No	
	C The time and duration of each batch cycle where epoxide emissions occur before the end of the ECO exceeds the time and duration of the emission episodes that occurred during the initial epoxide emission percentage reduction determination	**9** Yes **9** No	

Requirements for Process Vents Using Extended Cookout

Notifications and Reports				
#	**Question**	**Answer**		**Comments**
116.	If you are using ECO as a control option and you have a change in the polyether polyol products or operating conditions, have you submitted a report updating the product list and containing the information required for a Notification of Compliance Status within 180 days? [§63.1427(m)(3)(i)(B); 63.1427(m)(3)(ii)(B)]	**9** Yes	**9** No	
117.	If you are using ECO as a control option for a new polyether polyol not previously assigned to a product class, have you submitted a report updating the product list and containing the information required for a Notification of Compliance Status within 180 days? [§63.1427(l)(1)(i); §63.1427(l)(2)(iii)]	**9** Yes	**9** No	

If you answered yes to questions 6, 11, or 78, you must complete questions 118-122. To be in compliance, you must answer yes to each question that applies to you.

Requirements for Process Vents Complying Using an Emission Factor				
#	**Question**	**Answer**		**Comments**
118.	Did you develop an epoxides emission factor plan and submit it with either the Precompliance Report or the operating permit application? [§63.1431(b); §63.1431(c)(1); §63.1431(d)(1); §63.1341(e)(1)]	**9** Yes	**9** No	
119.	If you are not using extended cookout and you are using a combustion, recovery, or recapture device, did you determine annual epoxide emissions using Equation 15 and submit the annual epoxide emissions with the Notification of Compliance Status? [§63.1431(c)(2)]	**9** Yes	**9** No	
120.	If you are using extended cookout and you are not using a combustion, recovery, or recapture device, did you determine annual epoxide emissions according to §63.1427(d) and submit the annual epoxide emissions with the Notification of Compliance Status? [§63.1431(d)(2)]	**9** Yes	**9** No	
121.	If you are using extended cookout and you are using a combustion, recovery, or recapture device, did you determine annual epoxide emissions and submit the annual epoxide emissions with the Notification of Compliance Status? [§63.1431(e)(2)]	**9** Yes	**9** No	
122.	If you are not using extended cookout and you are not using a combustion, recovery, or recapture device, did you determine annual epoxide emissions and submit the annual epoxide emissions with the Notification of Compliance Status? [§63.1431(f)(2)]	**9** Yes	**9** No	

Appendix A - Final Rule
40 CFR part 63, subpart PPP

You can find the final rule at the following address:

http://www.epa.gov/ttn/uatw/polyol/polyolpg.html

Appendix B - Example Forms

Application for Approval of Construction or Reconstruction

This is a sample application for approval of construction or reconstruction, which must be submitted for new sources with initial start-up on or after August 30,1999, to meet the requirements in §63.1439(e)(3)(ii)(B).

Application for Approval of Construction or Reconstruction

Applicable Rule: 40 CFR Part 63, Subpart PPP - National Emission Standards for Hazardous Air Pollutants for Polyether Polyols Production. Initial Notification is being made in accordance with §63.1439(e)(3).

1. Print or type the following general information for each plant in which polyether polyol production operations are performed (§63.1439(e)(3)) :

   Owner/Operator/Title:_____
   Street Address: _____
   City: _____ State: _____ Zip Code: _____
   Plant Name: _____
   Plant Contact/Title: _____
   Plant Contact Phone Number (optional): _____
   Plant Address (if different than owner/operator's)
   Street Address: _____
   City: _____ State: _____ Zip Code: _____

2. When do you plan to commence construction or reconstruction of the new major affected source? _____

3. In addition to the information requested above, please include the following information in each application for approval of construction or reconstruction:

- Notification that you intend to construct a new major affected source or make any physical change or operational change to a major affected source that may meet or has been determined to meet the criteria for a "reconstruction," as defined in §63.1423.

- The expected completion date of the construction or reconstruction:_____

- The anticipated date of initial start-up of the source:_____
- The type and quantity of HAP emitted by the source, reported in units and averaging times, **or**, if actual emissions data are not yet available, an estimate of the type and quantity of HAP expected to be emitted by your source (in units and averaging times):

  _____

Application for Approval of Construction or Reconstruction

4. In addition to the information requested above, please include the following information in each application for approval of reconstruction:

- A brief description of the affected source and the components that are to be replaced:
- A description of present and proposed emission control systems, including each control device, its estimated control efficiency, and calculations of emission estimates in sufficient detail for the EPA to evaluate the control efficiency determination:
- An estimate of the fixed capital cost of the replacements:
- An estimate of the cost of constructing a comparable entirely new source:
- The estimated life of the affected source after the replacements
- Discuss any economic or technical problems that you may have in complying with these requirements after the proposed replacements:

Precompliance Report

This is a sample Precompliance Report form that can be used by facilities at their discretion to meet the requirements in §63.1439(e)(4).

Applicable Rule: 40 CFR Part 63, Subpart PPP - National Emission Standards for Hazardous Air Pollutants for Polyether Polyols Production. Initial Notification is being made in accordance with §63.1439(e)(3).

1. Print or type the following general information for each plant in which polyether polyol production operations are performed (§63.1439(e)(3)) :

   Owner/Operator/Title:_____
   Street Address: _____
   City: _____ State: _____ Zip Code: _____
   Plant Name: _____
   Plant Contact/Title: _____
   Plant Contact Phone Number (optional): _____
   Plant Address (if different than owner/operator's)
   Street Address: _____
   City: _____ State: _____ Zip Code: _____

2. Are you requesting a compliance extension? **9** Yes **9** No

If yes, please provide the following information:

- A description of the controls you will install to comply with the standard:_____
  _____
  _____
- Your compliance schedule, with a date by which each step towards compliance will be reached. At a minimum, provide the following information in your compliance schedule:

  (1) The date by which contracts for emission control systems or process changes will be awarded (and/or the date by which you will issue orders for the purchase of necessary components):_____
  _____

(2) The date by which on-site construction, installation of emission control equipment, or process change will be initiated:_____

(3) The date by which the above steps will be completed:_____

(4) The date by which initial compliance will be achieved:_____

- Are you also requesting an extension of other applicable requirements in subpart PPP?
  9 Yes **9** No [If yes, please provide the information requested above for the other requirements for which you are requesting a compliance extension.]

- Do you wish to use a control technique other than those for which monitoring parameters are specified by subpart PPP, and/or do you with to comply with the provisions of subpart PPP by monitoring a different parameter than those specified in subpart PPP? **9** Yes **9** No

- Do you wish to comply with the provisions of subpart PPP by using alternative continuous monitoring and recordkeeping, as described in §63.1439(g)?
  9 Yes **9** No [If yes, submit information in §63.8(f)(4)(ii)

- Do you wish to comply with the provisions of subpart PPP by using alternative controls (to those described in subpart PPP)? **9** Yes **9** No [If yes, submit information in §63.69g)?

- Are you requesting approval to incorporate a provision for ceasing to collect monitoring data during a start-up, shutdown, or malfunction, into the start-up, shutdown, and malfunction plan? **9** Yes **9** No
  If yes, please provide documentation supporting your claim that your monitoring equipment would be damaged if you did not cease to collect monitoring data during a contemporaneous start-up, shutdown, or malfunction:_____

Precompliance Report

Are you establishing your parameter monitoring levels based exclusively on parameter values measured during a performance test? **9** Yes **9** No

If no, please identify the procedures (i.e., those in §63.1438(c) or (d)) that you will use to establish your parameter monitoring levels, and describe how the parameter monitoring levels will be established:

Notification of Compliance Status For Equipment Leaks

This is a sample form for Notification of Compliance Status for Equipment Leaks that can be used by facilities at their discretion to meet the requirements in §63.1439(e)(5) and §63.182(c).

Applicable Rule: 40 CFR Part 63, Subpart PPP - National Emission Standards for Hazardous Air Pollutants for Polyether Polyols Production.

1. Print or type the following general information for your polyether polyol production plant:

   Owner/Operator/Title:_____
   Street Address: _____
   City: _____ State: _____ Zip Code: _____
   Plant Name: _____
   Plant Contact/Title: _____
   Plant Contact Phone Number (optional): _____
   Plant Address (if different than owner/operator's)
   Street Address: _____
   City: _____ State: _____ Zip Code: _____

2. For each process unit subject to subpart PPP, please list:

- Process unit identification number:_____
- Number of each equipment type (e.g., valves or pumps), excluding equipment in vacuum service:

Notification of Compliance Status For Equipment Leaks

Equipment type	Number	Method of Compliance with the Standard

- Planned compliance schedule for each phase of the equipment leak requirements.

3. Are you using pressure testing to show compliance with the equipment leak requirements for batch product process equipment? **9** Yes **9** No
   If yes, please list:
   - All batch products or product codes subject to the equipment leak provisions in subpart PPP:_____
   - Your planned schedule for pressure testing when equipment is producing polyether polyols:

Notification of Compliance Status For Equipment Leaks

4. If your process vents are enclosed, so that all emissions from equipment leaks are vented through a closed-vent system to an approved control device, and the enclosure is maintained under negative pressure during all production periods, please provide the following information:

- Process unit identification:_____
  _____
  _____
  _____

- A description of the system used to create negative pressure in the enclosure and of the control device used:_____
  _____
  _____
  _____

Notification of Compliance Status

This is a sample form for Notification of Compliance Status that can be used by facilities at their discretion to meet the requirements in §63.1439(e)(5). Use this form for all emission points, except Equipment Leaks.

Applicable Rule: 40 CFR Part 63, Subpart PPP - National Emission Standards for Hazardous Air Pollutants for Polyether Polyols Production.

1. Print or type the following general information for your polyether polyol production plant:

   Owner/Operator/Title:_____
   Street Address: _____
   City: _____ State: _____ Zip Code: _____
   Plant Name: _____
   Plant Contact/Title: _____
   Plant Contact Phone Number (optional): _____
   Plant Address (if different than owner/operator's)
   Street Address: _____
   City: _____ State: _____ Zip Code: _____

5. Provide the following information, as appropriate: (1) the results of all emission point group determinations; (2) the results of all process section applicability determinations; (3) the results of all performance tests; (4) the results of all inspections; (5) the results of all continuous monitoring system performance evaluations; (6) any other information required to be in the test report used to demonstrate compliance; (7) the values of monitored parameters established during performance tests; and (8) any other information required to be included in the Notification of Compliance Status by subpart PPP.

TECHNICAL REPORT DATA

(Please read Instructions on reverse before completing)

1. REPORT NO.	2.	3. RECIPIENT'S ACCESSION NO.
EPA-456/R-00-002		

4. TITLE AND SUBTITLE	5. REPORT DATE
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	6. PERFORMING ORGANIZATION CODE
7. AUTHOR(S)	8. PERFORMING ORGANIZATION REPORT NO.
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9. PERFORMING ORGANIZATION NAME AND ADDRESS	10. PROGRAM ELEMENT NO.
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	14. SPONSORING AGENCY CODE EPA/200/04

15. SUPPLEMENTARY NOTES

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16. ABSTRACT

National emission standards to control emissions of HAP from major sources producing polyether polyols were published in the *Federal Register* 6/1/99, 64 FR 29420. This document contains information to help State and local agencies for air pollution control, as well as the regulated community, to carry out these standards. This document summarizes the NESHAP requirements and also provides inspection checklists and example notification and reporting forms. The electronic version of this document can be downloaded at www.epa.gv/ttn/uatw/polyol/polyolpg.html.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Air pollution National emission standards Hazardous air pollutants Polyether Polyols Production Title III NESHAP Compliance 40 CFR 63 Subpart PPP	Air Pollution control Polyether polyols production	

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