



State of Ohio Environmental Protection Agency

Street Address:

Lazarus Gov. Center  
122 S. Front Street  
Columbus, OH 43215

TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049  
Columbus, OH 43216-1049

11/14/03

**RE: Proposed Title V Chapter 3745-77 Permit  
07-44-00-0029  
The Dow Chemical Company - Hanging Rock**

Attn: Genevieve Damico AR-18J  
United States Environmental Protection Agency  
Region V  
77 West Jackson Blvd.  
Chicago, IL 60604-3590

Dear Ms. Damico:

The proposed issuance of the Title V permit for The Dow Chemical Company - Hanging Rock, has been created in Ohio EPA's State Air Resources System (STARS) on 11/14/03, for review by USEPA. This proposed action is identified in STARS as  3-Title V Proposed Permit T+C covering the facility specific terms and conditions, and  Title V Proposed Permit covering the general terms and conditions. This proposed permit will be processed for issuance as a final action after forty-five (45) days from USEPA's receipt of this certified letter if USEPA does not object to the proposed permit. Please contact me at (614) 644-3631 by the end of the forty-five (45) day review period if you wish to object to the proposed permit.

Very truly yours,

  
Michael W. Ahern, Supervisor  
Field Operations and Permit Section  
Division of Air Pollution Control

cc: Portsmouth Air Pollution Group  
File, DAPC PMU



State of Ohio Environmental Protection Agency

PROPOSED TITLE V PERMIT

Issue Date: 11/14/03

Effective Date: To be entered upon final issuance

Expiration Date: To be entered upon final issuance

This document constitutes issuance of a Title V permit for Facility ID: 07-44-00-0029 to:
The Dow Chemical Company - Hanging Rock
925 County Road 1A
Ironton, OH 45638-8687

Emissions Unit ID (Company ID)/Emissions Unit Activity Description

Table with 3 columns: Emissions Unit ID (Company ID), Emissions Unit Activity Description, and Emissions Unit Activity Description. Rows include units like B010, B015, B020, F001, L001, L002, P002, P003, P009, P010, P014, P015, P017, P018, P019, P020, P021, P022, P023, T003, T004, and T005.

You will be contacted approximately eighteen (18) months prior to the expiration date regarding the renewal of this permit. If you are not contacted, please contact the appropriate Ohio EPA District Office or local air agency listed below. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above.

Described below is the current Ohio EPA District Office or local air agency that is responsible for processing and administering your Title V permit:

Portsmouth Air Pollution Group  
605 Washington Street, Third Floor  
Portsmouth, OH 45662  
(740) 353-5156

OHIO ENVIRONMENTAL PROTECTION AGENCY

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Christopher Jones  
Director

## PART I - GENERAL TERMS AND CONDITIONS

### A. *State and Federally Enforceable Section*

#### 1. **Monitoring and Related Record Keeping and Reporting Requirements**

a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Section A.III of Part III of this Title V permit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

- i. The date, place (as defined in the permit), and time of sampling or measurements.
- ii. The date(s) analyses were performed.
- iii. The company or entity that performed the analyses.
- iv. The analytical techniques or methods used.
- v. The results of such analyses.
- vi. The operating conditions existing at the time of sampling or measurement.

*(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))*

b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

*(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))*

c. The permittee shall submit required reports in the following manner:

- i. **All reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations caused by malfunctions shall be submitted in the following manner:**

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted by January 31, April 30, July 31, and October 31 of each year in accordance with General Term and Condition A.1.c.ii below; and each report shall cover the previous calendar quarter.

In accordance with OAC rule 3745-15-06, a malfunction constitutes a violation of an emission limitation (or control requirement) and, therefore, is a deviation of the federally enforceable permit requirements. Even though verbal notifications and written reports are required for malfunctions pursuant to OAC rule 3745-15-06, the written reports required pursuant to this term must be submitted quarterly to satisfy the prompt reporting provision of OAC rule 3745-77-07(A)(3)(c).

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

Any scheduled maintenance, as referenced in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described above for malfunctions.

*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

- ii. **Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Section A.IV of Part III of this Title V permit or, in some cases, in Part II of this Title V permit, all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:**

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as provided below, the written reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

In identifying each deviation, the permittee shall specify the emission limitation(s), operational restriction(s), and/or control device operating parameter limitation(s) for which the deviation occurred, describe each deviation, and provide the estimated magnitude and duration of each deviation.

These written reports shall satisfy the requirements (in part) of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations. OAC rule 3745-77-07(A)(3)(c) is not fully satisfied until the permittee addresses all other deviations of the federally enforceable requirements specified in the permit.

If an emissions unit has a deviation reporting requirement for a specific emission limitation, operational restriction, or control device operating parameter limitation that is not on a quarterly basis (e.g., within 30 days following the end of the calendar month, or within 30 or 45 days after the exceedance occurs), that deviation reporting requirement overrides the reporting requirements specified in this General Term and Condition for that specific emission limitation, operational restriction, or control device parameter limitation. Following the provisions of that non-quarterly deviation reporting requirement will also satisfy the requirements (in part) of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations, and additional quarterly deviation reports for that specific emission limitation, operational restriction, or control device parameter limitation are not required pursuant to this General Term and Condition.

See B.6 below if no deviations occurred during the quarter.

*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

- iii. **All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with General Term and Condition A.1.c.ii above shall be submitted in the following manner:**

Written reports that identify all other deviations of the federally enforceable requirements contained in this permit, including the monitoring, record keeping, and reporting requirements, which are not reported in accordance with General Term and Condition A.1.c.ii above shall be

submitted to the appropriate Ohio EPA District Office or local air agency by January 31 and July 31 of each year; and each report shall cover the previous six calendar months.

In identifying each deviation, the permittee shall specify the federally enforceable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation.

These semi-annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with General Term and Condition A.1.c.ii above.

If no such deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no such deviations occurred during that period.

*(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii))*

- iv. Each written report shall be signed by a responsible official certifying that, "based on information and belief formed after reasonable inquiry, the statements and information in the report (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete."  
*(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))*
- v. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.  
*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

## 2. **Scheduled Maintenance**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in General Term and Condition A.1.c.i above.

*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

## 3. **Risk Management Plans**

If applicable, the permittee shall develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq. ("Act"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

- a. a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or
- b. as part of the compliance certification submitted under 40 C.F.R. 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 C.F.R. Part 68 and OAC Chapter 3745-104, including the registration and submission of the risk management plan.

*(Authority for term: OAC rule 3745-77-07(A)(4))*

## 4. **Title IV Provisions**

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

*(Authority for term: OAC rule 3745-77-07(A)(5))*

**5. Severability Clause**

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

*(Authority for term: OAC rule 3745-77-07(A)(6))*

**6. General Requirements**

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with A.10 below. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

*(Authority for term: OAC rule 3745-77-07(A)(7))*

**7. Fees**

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78.

*(Authority for term: OAC rule 3745-77-07(A)(8))*

**8. Marketable Permit Programs**

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.

*(Authority for term: OAC rule 3745-77-07(A)(9))*

**9. Reasonably Anticipated Operating Scenarios**

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these general terms and conditions shall apply to all operating scenarios authorized in this permit.

*(Authority for term: OAC rule 3745-77-07(A)(10))*

**10. Reopening for Cause**

This Title V permit will be reopened prior to its expiration date under the following conditions:

- a. Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.
- b. This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.
- c. The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.
- d. The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

*(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))*

**11. Federal and State Enforceability**

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

*(Authority for term: OAC rule 3745-77-07(B))*

**12. Compliance Requirements**

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.
  - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
  - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.
- d. Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:
  - i. Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.
  - ii. Compliance certifications shall include the following:
    - (a) An identification of each term or condition of this permit that is the basis of the certification.
    - (b) The permittee's current compliance status.
    - (c) Whether compliance was continuous or intermittent.
    - (d) The method(s) used for determining the compliance status of the source currently and over the required reporting period.
    - (e) Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
  - iii. Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

*(Authority for term: OAC rules 3745-77-07(C)(1),(2),(4) and (5) and ORC section 3704.03(L))*

### **13. Permit Shield**

- a. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.
- b. This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

*(Authority for term: OAC rule 3745-77-07(F))*

### **14. Operational Flexibility**

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the appropriate Ohio EPA District Office or local air agency with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the appropriate District Office of the Ohio EPA or local

air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).  
(Authority for term: OAC rules 3745-77-07(H)(1) and (2))

**15. Emergencies**

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met. This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.  
(Authority for term: OAC rule 3745-77-07(G))

**16. Off-Permit Changes**

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

- a. The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.
- b. The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA. Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.
- c. The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).
- d. The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.
- e. The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit to install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.

(Authority for term: OAC rule 3745-77-07(I))

**17. Compliance Method Requirements**

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding.

(This term is provided for informational purposes only.)

**18. Insignificant Activities**

Each insignificant activity that has one or more applicable requirements shall comply with those applicable requirements.

(Authority for term: OAC rule 3745-77-07(A)(1))

**19. Permit to Install Requirement**

Prior to the “installation” or “modification” of any “air contaminant source,” as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.

*(Authority for term: OAC rule 3745-77-07(A)(1))*

**20. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

*(Authority for term: OAC rule 3745-77-07(A)(1))*

**21. Permanent Shutdown of an Emissions Unit**

The permittee may notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification by the responsible official of the date on which the emissions unit was permanently shut down. Authorization to operate the affected part or activity of the stationary source shall cease upon the date certified by the responsible official that the emissions unit was permanently shut down.

If an emissions unit is permanently shut down (i.e., that has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent “modification” or “installation” as defined in OAC Chapter 3745-31 and therefore ceases to meet the definition of an “emissions unit” as defined in OAC rule 3745-77-01(O)), rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the date of the certification and submission to Ohio EPA, to meet any monitoring, record keeping, reporting, or testing requirements, applicable to that emissions unit, except for any residual requirements, such as the quarterly deviation reports, semi-annual deviation reports and annual compliance certification covering the period during which the emissions unit last operated. All records relating to the shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law.

No emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.

**B. State Only Enforceable Section**

**1. Reporting Requirements Related to Monitoring and Record Keeping Requirements**

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

**2. Records Retention Requirements**

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

**3. Inspections and Information Requests**

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

**4. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

**5. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

**6. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)**

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

The permittee is not required to submit a quarterly report which states that no deviations occurred during that quarter for the following situations:

- a. where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in General Term and Condition A.1.c.ii;
- b. where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potentials to emit; and
- c. where the company's responsible official has certified that an emissions unit has been permanently shut down.

## Part II - Specific Facility Terms and Conditions

### A. State and Federally Enforceable Section

1. The permittee may be subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR Part 63, Subpart DDDDD. U.S. EPA failed to promulgate this standard by May 15, 2002, the Maximum Achievable Control Technology (MACT) hammer date. In accordance with 40 CFR Part 63, Subpart B (40 CFR Parts 63.50 through 63.56), the permittee shall submit an application to revise the permit to include equivalent emission limitations as a result of a case-by-case MACT determination. The application shall be submitted in two parts. The deadline to submit the Part I application, as specified in 40 CFR Part 63.53, was May 15, 2002.
2. If the final NESHAP standard is not promulgated by the deadline specified by U.S. EPA, the permittee shall submit the Part II application as specified in 40 CFR Part 63.53. The Part II application shall be submitted within 60 days after the deadline to promulgate the respective standard or by May 15, 2003, whichever is later. It must contain the following information, unless otherwise specified by future U.S. EPA regulations:
  - a. for a new affected source, the anticipated date of startup of operation;
  - b. the hazardous air pollutants (HAPs) emitted by each affected source in the relevant source category and an estimated total uncontrolled and controlled emission rate for HAPs from the affected source;
  - c. any existing federal, State, or local limitations or requirements applicable to the affected source;
  - d. for each affected emission point or group of affected emission points, an identification of control technology in place;
  - e. information relevant to establishing the MACT floor (or MACT emission limitation), and, at the option of the permittee, a recommended MACT floor; and
  - f. any other information reasonably needed by the permitting authority including, at the discretion of the permitting authority, information required pursuant to Subpart A of 40 CFR Part 63.

The Part II application for a MACT determination may, but is not required to, contain the following information:

- a. recommended emission limitations for the affected source and support information (the permittee may recommend a specific design, equipment, work practice, or operational standard, or combination thereof, as an emission limitation);

- b. a description of the control technologies that would be applied to meet the emission limitation, including technical information on the design, operation, size, estimated control efficiency and any other information deemed appropriate by the permitting authority, and identification of the affected sources to which the control technologies must be applied; and
  - c. relevant parameters to be monitored and frequency of monitoring to demonstrate continuous compliance with the MACT emission limitation over the applicable reporting period.
- 3.** If the NESHAP is promulgated before the Part II application is due for the relevant source category, the permittee may be subject to the rule as an existing major source with a compliance date as specified in the NESHAP. If subject, the permittee shall submit the following notifications:
- a. Unless otherwise specified in the relevant Subpart, within 120 days after promulgation of a 40 CFR Part 63 Subpart to which the source is subject, the permittee shall submit an Initial Notification Report that contains the following information, in accordance with 40 CFR Part 63.9(b)(2):
    - i. the name and mailing address of the permittee;
    - ii. the physical location of the source if it is different from the mailing address;
    - iii. identification of the relevant MACT standard and the source's compliance date;
    - iv. a brief description of the nature, design, size, and method of operation of the source, and an identification of the types of emission points within the affected source subject to the relevant standard and the types of HAPs emitted; and
    - v. a statement confirming the facility is a major source for HAPs.
  - b. Unless otherwise specified in the relevant Subpart, within 60 days following completion of any required compliance demonstration activity specified in the relevant Subpart, the permittee shall submit a notification of compliance status that contains the following information:
    - i. the methods used to determine compliance;
    - ii. the results of any performance tests, visible emission observations, continuous monitoring systems performance evaluations, and/or other monitoring procedures or methods that were conducted;

- iii. the methods that will be used for determining continuous compliance, including a description of monitoring and reporting requirements and test methods;
- iv. the type and quantity of HAPs emitted by the source, reported in units and averaging times in accordance with the test methods specified in the relevant Subpart;
- v. an analysis demonstrating whether the affected source is a major source or an area source;
- vi. a description of the air pollution control equipment or method for each emission point, including each control device or method for each HAP and the control efficiency (percent) for each control device or method; and
- vii. a statement of whether or not the permittee has complied with the requirements of the relevant Subpart.

4. "This subpart," as used in this section (A.2 through A.39), refers to the relevant subpart of 40 CFR Part 63, Subpart JJJ.

5. ***[40 CFR 63.1310]***  
***Applicability and designation of affected sources.***

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

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

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

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

(i) At a site without HAP emission points before March 29, 1995 (i.e., a "greenfield" site), each group of one or more TPPU and associated equipment, as listed in paragraph (a)(4) of this section, that is manufacturing the same primary product and that is part of a major source on which construction commenced after March 29, 1995;

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

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

(4) *Emission points and equipment.* The affected source also includes the emission points and equipment specified in paragraphs (a)(4)(i) through (a)(4)(vi) of this section that are associated with each applicable group of one or more TPPU constituting an affected source.

(i) Each waste management unit.

(ii) Maintenance wastewater.

(iii) Each heat exchange system.

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

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

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

(5) TPPUs and associated equipment, as listed in paragraph (a)(4) of this section, that are located at plant sites that are not major sources are neither affected sources nor part of an affected source.

(b) *TPPUs without organic HAP.* The owner or operator of a TPPU that is part of an affected source, as defined in paragraph (a) of this section, but that does not use or manufacture any organic HAP shall comply with the requirements of either paragraph (b)(1) or (b)(2) of this section. Such a TPPU is not subject to any other provisions of this subpart and is not required to comply with the provisions of subpart A of this part.

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

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

(c) *Emission points not subject to the provisions of this subpart.* The affected source includes the emission points listed in paragraphs (c)(1) through (c)(9) of this section, but these emission points are not subject to the requirements of this subpart or to the provisions of subpart A of this part.

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

- (2) Stormwater from segregated sewers;
  - (3) Water from fire-fighting and deluge systems in segregated sewers;
  - (4) Spills;
  - (5) Water from safety showers;
  - (6) Water from testing of deluge systems;
  - (7) Water from testing of firefighting systems;
  - (8) Vessels and equipment storing and/or handling material that contain no organic HAP and/or organic HAP as impurities only; and
  - (9) Equipment that is intended to operate in organic HAP service for less than 300 hours during the calendar year.
- (d) *Processes exempted from the affected source.* The processes specified in paragraphs (d)(1) through (d)(5) of this section are exempted from the affected source:
- (1) Research and development facilities;
  - (2) Polymerization processes occurring in a mold;
  - (3) Processes which manufacture binder systems containing a thermoplastic product for paints, coatings, or adhesives;
  - (4) Finishing processes including equipment such as compounding units, spinning units, drawing units, extruding units, and other finishing steps; and
  - (5) Solid state polymerization processes.
- (e) *Applicability determination of nonthermoplastic equipment included within the boundaries of a TPPU.* If a polymer that is not a thermoplastic product is produced within the equipment (i.e., collocated) making up a TPPU and at least 50 percent of that polymer is used in the production of a thermoplastic product manufactured by the same TPPU, then the unit operations involved in the production of that polymer are considered part of the TPPU and are subject to this subpart, with the following exception. Any emission points from such unit operations that are subject to another subpart of this part with an effective date prior to September 5, 1996 shall remain subject to that other subpart of this part and are not subject to this subpart.
- (f) *Primary product determination and applicability.* An owner or operator of a process unit that produces or plans to produce a thermoplastic product shall determine if the process unit is subject to this subpart in accordance with this paragraph. The owner or operator shall initially determine whether a process unit is designated as a TPPU and subject to the provisions of this subpart in accordance with either paragraph (f)(1) or (f)(2) of this section. The owner or operator of a flexible operation unit that was not initially designated as a TPPU, but in which a thermoplastic product is produced, shall conduct an annual re-determination of the applicability of this subpart

in accordance with paragraph (f)(3) of this section. Owners or operators that anticipate the production of a thermoplastic product in a process unit that was not initially designated as a TPPU, and in which no thermoplastic products are currently produced, shall determine if the process unit is subject to this subpart in accordance with paragraph (f)(4) of this section. Paragraphs (f)(3) and (f)(5) through (f)(7) of this section discuss compliance only for flexible operation units. Other paragraphs apply to all process units, including flexible operation units, unless otherwise noted. Paragraph (f)(8) of this section contains reporting requirements associated with the applicability determinations. Paragraphs (f)(9) and (f)(10) of this section describe criteria for removing the TPPU designation from a process unit.

(1) *Initial determination.* The owner or operator shall initially determine if a process unit is subject to the provisions of this subpart based on the primary product of the process unit in accordance with paragraphs (f)(1)(i) through (iii) of this section. If the process unit never uses or manufactures any organic HAP, regardless of the outcome of the primary product determination, the only requirements of this subpart that might apply to the process unit are contained in paragraph (b) of this section. If a flexible operation unit does not use or manufacture any organic HAP during the manufacture of one or more products, paragraph (f)(5)(i) of this section applies to that flexible operation unit.

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

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

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

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

(iii) If a process unit is designed and operated as a flexible operation unit, the primary product shall be determined as specified in paragraphs (f)(1)(iii)(A) or (B) of this section based on the anticipated operations for the 5 years following September 12, 1996 at existing process units, or for the first year after the process unit begins production of any product for new process units. If operations cannot be anticipated sufficiently to allow the determination of the primary product for the specified period, applicability shall be determined (in accordance with paragraph (f)(2) of this section.

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

(B) If the flexible operation unit will manufacture multiple products equally based on operating time, then the product with the greatest expected production on a mass basis over the specified 5

year period for existing process units, or the specified 1 year period for new process units shall represent the primary product of the flexible operation unit.

(iv) If, according to paragraph (f)(1)(i), (ii), or (iii) of this section, the primary product of a process unit is a thermoplastic product, then that process unit shall be designated as a TPPU. That TPPU and associated equipment, as listed in paragraph (a)(4) of this section is either an affected source or part of an affected source comprised of other TPPU and associated equipment, as listed in paragraph (a)(4) of this section, subject to this subpart with the same primary product at the same plant site that is a major source. If the primary product of a process unit is determined to be a product that is not a thermoplastic product, then that process unit is not a TPPU.

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

(i) If the owner or operator cannot determine the primary product in accordance with paragraph (f)(1)(iii) of this section, but can determine that a thermoplastic product is not the primary product, then that flexible operation unit is not a TPPU.

(ii) If the owner or operator cannot determine the primary product in accordance with paragraph (f)(1)(iii) of this section, and cannot determine that a thermoplastic product is not the primary product as specified in paragraph (f)(2)(i) of this section, applicability shall be determined in accordance with paragraph (f)(2)(ii)(A) or (f)(2)(ii)(B) of this section.

(A) If the flexible operation unit is an existing process unit, the flexible operation unit shall be designated as a TPPU if a thermoplastic product was produced for 5 percent or greater of the total operating time of the flexible operating unit since March 9, 1999. That TPPU and associated equipment, as listed in paragraph (a)(4) of this section, is either an affected source, or part of an affected source comprised of other TPPU and associated equipment, as listed in paragraph (a)(4) of this section, subject to this subpart with the same primary product at the same plant site that is a major source. For a flexible operation unit that is designated as an TPPU in accordance with this paragraph, the thermoplastic product produced for the greatest amount of time since March 9, 1999 shall be designated as the primary product of the TPPU.

(B) If the flexible operation unit is a new process unit, the flexible operation unit shall be designated as a TPPU if the owner or operator anticipates that a thermoplastic product will be manufactured in the flexible operation unit at any time in the first year after the date the unit begins production of any product. That TPPU and associated equipment, as listed in paragraph (a)(4) of this section, is either an affected source, or part of an affected source comprised of other TPPU and associated equipment, as listed in paragraph (a)(4) of this section, subject to this subpart with the same primary product at the same plant site that is a major source. For a process unit that is designated as a TPPU in accordance with this paragraph, the thermoplastic product that will be produced shall be designated as the primary product of the TPPU. If more than one thermoplastic product will be produced, the owner or operator may select which thermoplastic product is designated as the primary product.

(3) *Annual applicability determination for non-TPPUs that have produced a thermoplastic product.* Once per year beginning September 12, 2001, the owner or operator of each flexible operation unit that is not designated as a TPPU, but that has produced a thermoplastic product at any time in the preceding 5-year period or since the date that the unit began production of any product, whichever is shorter, shall perform the evaluation described in paragraphs (f)(3)(i) through (f)(3)(iii) of this section. However, an owner or operator that does not intend to produce any thermoplastic product in the future, in accordance with paragraph (f)(9) of this section, is not required to perform the evaluation described in paragraphs (f)(3)(i) through (f)(3)(iii) of this section.

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

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

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

(4) *Applicability determination for non-TPPUs that have not produced a thermoplastic product.* The owner or operator that anticipates the production of a thermoplastic product in a process unit that is not designated as a TPPU, and in which no thermoplastic products have been produced in the previous 5-year period or since the date that the process unit began production of any product, whichever is shorter, shall determine if the process unit is subject to this subpart in accordance with paragraphs (f)(4)(i) and (ii) of this section. Also, owners or operators who have notified the Administrator that a process unit is not a TPPU in accordance with paragraph (f)(9) of this section, that now anticipate the production of a thermoplastic product in the process unit, shall determine if the process unit is subject to this subpart in accordance with paragraphs (f)(4)(i) and (ii) of this section.

(i) The owner or operator shall use the procedures in paragraph (f)(1) or (f)(2) of this section to determine if the process unit is designated as a TPPU, with the following exception: For existing process units that are determining the primary product in accordance with paragraph (f)(1)(iii) of this section, production shall be projected for the five years following the date that the owner or operator anticipates initiating the production of a thermoplastic product.

(ii) If the unit is designated as a TPPU in accordance with paragraph (f)(4)(i) of this section, the owner or operator shall comply in accordance with paragraph (i)(1) of this section.

(5) *Compliance for flexible operation units.* Owners or operators of TPPUs that are flexible operation units shall comply with the standards specified for the primary product, with the exceptions provided in paragraphs (f)(5)(i) and (f)(5)(ii) of this section.

(i) Whenever a flexible operation unit manufactures a product in which no organic HAP is used or manufactured, the owner or operator is only required to comply with either paragraph (b)(1) or (b)(2) of this section to demonstrate compliance for activities associated with the manufacture of that product. This subpart does not require compliance with the provisions of subpart A of this part for activities associated with the manufacture of a product that meets the criteria of paragraph (b) of this section.

(ii) Whenever a flexible operation unit manufactures a product that makes it subject to subpart GGG of this part, the owner or operator is not required to comply with the provisions of this subpart during the production of that product.

(6) Owners or operators of TPPUs that are flexible operation units have the option of determining the group status of each emission point associated with the flexible operation unit, in accordance with either paragraph (f)(6)(i) or (f)(6)(ii) of this section, with the exception of batch process vents. For batch process vents, the owner or operator shall determine the group status in accordance with § 63.1323.

(i) The owner or operator may determine the group status of each emission point based on emission point characteristics when the primary product is being manufactured. The criteria that shall be used for this group determination are the Group 1 criteria specified for the primary product.

(ii) The owner or operator may determine the group status of each emission point separately for each product produced by the flexible operation unit. For each product, the group status shall be determined using the emission point characteristics when that product is being manufactured and using the Group 1 criteria specified for the primary product. (Note: Under this scenario, it is possible that the group status, and therefore the requirement to achieve emission reductions, for an emission point may change depending on the product being manufactured.)

(7) Owners or operators determining the group status of emission points in flexible operation units based solely on the primary product in accordance with paragraph (f)(6)(i) of this section shall establish parameter monitoring levels, as required, in accordance with either paragraph (f)(7)(i) or (f)(7)(ii) of this section. Owners or operators determining the group status of emission points in flexible operation units based on each product in accordance with paragraph (f)(6)(ii) of this section shall establish parameter monitoring levels, as required, in accordance with paragraph (f)(7)(i) of this section.

(i) Establish separate parameter monitoring levels in accordance with § 63.1334(a) for each individual product.

(ii) Establish a single parameter monitoring level (for each parameter required to be monitored at each device subject to monitoring requirements) in accordance with § 63.1334(a) that would apply for all products.

(8) *Reporting requirements.* When it is determined that a process unit is a TPPU and subject to the requirements of this subpart, the Notification of Compliance Status required by § 63.1335(e)(5) shall include the information specified in paragraphs (f)(8)(i) and (f)(8)(ii) of this

section, as applicable. If it is determined that the process unit is not subject to this subpart, the owner or operator shall either retain all information, data, and analysis used to document the basis for the determination that the primary product is not a thermoplastic product, or, when requested by the Administrator, demonstrate that the process unit is not subject to this subpart.

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

(ii) If the TPPU is designed and operated as a flexible operation unit, the information specified in paragraphs (f)(8)(ii)(A) through (f)(8)(ii)(D) of this section, as appropriate, shall be submitted.

(A) If a primary product could be determined, identification of the primary product.

(B) Identification of which compliance option, either paragraph (f)(6)(i) or (f)(6)(ii) of this section, has been selected by the owner or operator.

(C) If the option to establish separate parameter monitoring levels for each product in paragraph (f)(7)(i) of this section is selected, the identification of each product and the corresponding parameter monitoring level.

(D) If the option to establish a single parameter monitor level in paragraph (f)(7)(ii) of this section is selected, the parameter monitoring level for each parameter.

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

(10) *Redetermination of applicability to TPPUs that are flexible operation units.* Whenever changes in production occur that could reasonably be expected to change the primary product of a TPPU that is operating as a flexible operation unit from a thermoplastic product to a product that would make the process unit subject to another subpart of this part, the owner or operator shall re-evaluate the status of the process unit as a TPPU in accordance with paragraphs (f)(10)(i) through (iii) of this section.

(i) For each product produced in the flexible operation unit, the owner or operator shall calculate the percentage of total operating time in which the product was produced for the preceding five-year period, or since the date that the process unit began production of any product, whichever is shorter.

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

(iii) If the conditions in (f)(10)(iii)(A) through (C) of this section are met, the flexible operation unit shall no longer be designated as a TPPU and shall no longer be subject to the provisions of this subpart after the date that the process unit is required to be in compliance with the provisions

of the other subpart of this part to which it is subject. If the conditions in paragraphs (f)(10)(iii)(A) through (C) of this section are not met, the flexible operation unit shall continue to be considered a TPPU and subject to the requirements of this subpart.

(A) The product identified in (f)(10)(ii) of this section is not a thermoplastic product; and

(B) The production of the product identified in (f)(10)(ii) of this section is subject to another subpart of this part; and

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

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

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

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

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

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

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

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

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

located in a tank farm (including a marine tank farm), the applicability of this subpart shall be determined according to the provisions in paragraphs (g)(7)(i) through (g)(7)(iv) of this section.

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

(ii) If there is no process unit at the major source that meets the criteria of paragraph (g)(7)(i) of this section with respect to a storage vessel, this subpart does not apply to the storage vessel.

(iii) If there is only one process unit at the major source that meets the criteria of paragraph (g)(7)(i) of this section with respect to a storage vessel, the storage vessel shall be assigned to that process unit.

(iv) If there are two or more process units at the major source that meet the criteria of paragraph (g)(7)(i) of this section with respect to a storage vessel, the storage vessel shall be assigned to one of those process units according to the provisions of paragraphs (g)(3) through (g)(6) of this section. The predominant use shall be determined among only those process units that meet the criteria of paragraph (g)(7)(i) of this section.

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

(h) *Recovery operations equipment ownership determination.* The owner or operator shall follow the procedures specified in paragraphs (h)(1) through (h)(6) of this section to determine to which process unit recovery operations equipment shall be assigned. Paragraph (h)(7) of this section specifies when an owner or operator is required to redetermine to which process unit the recovery operations equipment is assigned.

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

(2) If recovery operations equipment is dedicated to a single process unit, the recovery operations equipment shall be assigned to that process unit.

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

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

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

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

(7) If a piece of recovery operations equipment begins receiving material from a process unit that was not included in the initial determination, or ceases to receive material from a process unit that was included in the initial determination, the owner or operator shall reevaluate the applicability of this subpart to that recovery operations equipment.

(i) *Changes or additions to plant sites.* The provisions of paragraphs (i)(1) through (i)(4) of this section apply to owners or operators that change or add to their plant site or affected source. Paragraph (i)(5) of this section provides examples of what are and are not considered process changes for purposes of this paragraph (i) of this section. Paragraph (i)(6) of this section discusses reporting requirements.

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

(i) If a group of one or more TPPUs that produce the same primary product is added to a plant site, the added group of one or more TPPUs and associated equipment, as listed in paragraph (a)(4) of this section, shall be a new affected source and shall comply with the requirements for a new affected source in this subpart upon initial start-up or by June 19, 2000, whichever is later, except that new affected sources whose primary product, as determined using the procedures specified in paragraph (f) of this section, is poly(ethylene terephthalate) (PET) shall be in compliance with § 63.1331 upon initial start-up or February 27, 2001, whichever is later, if the added group of one or more TPPUs meets the criteria in either paragraph (i)(1)(i)(A) or (i)(1)(i)(B) of this section, and the criteria in either paragraph (i)(1)(i)(C) or (i)(1)(i)(D) of this section are met.

(A) The construction of the group of one or more TPPUs commenced after March 29, 1995.

(B) The construction or reconstruction, for process units that have become TPPUs, commenced after March 29, 1995.

(C) The group of one or more TPPUs and associated equipment, as listed in paragraph (a)(4) of this section, has the potential to emit 10 tons per year or more of any HAP or 25 tons per year or more of any combination of HAP, and the primary product of the group of one or more TPPUs is currently produced at the plant site as the primary product of an affected source; or

(D) The primary product of the group of one or more TPPUs is not currently produced at the plant site as the primary product of an affected source and the plant site meets, or after the addition of the group of one or more TPPUs and associated equipment, as listed in paragraph (a)(4) of this section, will meet the definition of a major source.

(ii) If a group of one or more TPPUs that produce the same primary product is added to a plant site, and the group of one or more TPPUs does not meet the criteria specified in paragraph (i)(1)(i) of this section, and the plant site meets, or after the addition will meet, the definition of a major source, the group of one or more TPPUs and associated equipment, as listed in paragraph (a)(4) of this section, shall comply with the requirements for an existing affected source in this subpart upon initial start-up; by June 19, 2001; or by 6 months after notifying the Administrator that a process unit has been designated as a TPPU (in accordance with paragraph (f)(3)(iii) of this section), whichever is later.

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

(i) If any components are replaced at an existing affected source such that the criteria specified in paragraphs (i)(2)(i)(A) through (i)(2)(i)(B) of this section are met, the entire affected source shall be a new affected source and shall comply with the requirements for a new affected source upon initial start-up or by June 19, 2000, whichever is later, as provided in § 63.6(b), except that new affected sources whose primary product is poly(ethylene terephthalate) (PET) shall be in compliance with § 63.1331 upon initial start-up or by February 27, 2001, whichever is later.

(A) The replacement of components meets the definition of reconstruction in § 63.1312(b); and

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

(ii) If any components are replaced at an existing affected source such that the criteria specified in paragraphs (i)(2)(i)(A) through (i)(2)(i)(B) of this section are not met, and that replacement of components creates one or more Group 1 emission points (i.e., either newly created Group 1 emission points or emission points that change group status from Group 2 to Group 1) or causes any other emission point to be added (i.e., Group 2 emission points, equipment leak components subject to § 63.1331, continuous process vents subject to §§ 63.1316 through 63.1320, and heat exchange systems subject to § 63.1328), the resulting emission point(s) shall be subject to the applicable requirements for an existing affected source. The resulting emission points shall be in compliance by 120 days after the date of initial start-up or by the appropriate compliance date specified in § 63.1311 (i.e., February 27, 1998 for most equipment leak components subject to § 63.1331, and June 19, 2001 for most emission points other than equipment leaks), whichever is later.

(iii) If an addition or process change (not including a process change that solely replaces components) is made to an existing affected source that creates one or more Group 1 emission points (i.e., either newly created Group 1 emission points or emission points that change group status from Group 2 to Group 1) or causes any other emission point to be added (i.e., Group 2 emission points, equipment leak components subject to § 63.1331, continuous process vents subject to §§ 63.1316 through 63.1320, and heat exchange systems subject to § 63.1328), the resulting emission point(s) shall be subject to the applicable requirements for an existing affected source. The resulting emission point(s) shall be in compliance by 120 days after the date of initial start-up or by the appropriate compliance date specified in § 63.1311 (i.e., February 27, 1998 for most equipment leak components subject to § 63.1331, and June 19, 2001 for most emission points other than equipment leaks), whichever is later.

(iv) If any process change (not including a process change that solely replaces components) is made to an existing affected source that results in baseline emissions (i.e., emissions prior to applying controls for purposes of complying with this subpart) from continuous process vents in the collection of material recovery sections within the affected source at an existing affected source producing PET using a continuous dimethyl terephthalate process changing from less than or equal to 0.12 kg organic HAP per Mg of product to greater than 0.12 kg organic HAP per Mg of product, the continuous process vents shall be subject to the applicable requirements for an existing affected source. The resulting emission point(s) shall be in compliance by 120 days after the date of initial start-up or by June 19, 2001, whichever is later.

(3) *Existing affected source requirements for surge control vessels and bottoms receivers that become subject to subpart H requirements.* If a process change or addition of an emission point causes a surge control vessel or bottoms receiver to become subject to § 63.170 under this paragraph (i), the owner or operator shall be in compliance upon initial start-up or by June 19, 2001, whichever is later.

(4) *Existing affected source requirements for compressors that become subject to the requirements of subpart H of this part.* If a process change or the addition of an emission point causes a compressor to become subject to § 63.164 under this paragraph (i), the owner or operator shall be in compliance upon initial start-up or by the compliance date for that compressor as specified in § 63.1311(d)(1) through (d)(4), whichever is later.

(5) *Determining what are and are not process changes.* For purposes of paragraph (i) of this section, examples of process changes include, but are not limited to, changes in feedstock type, or process catalyst type, or the replacement, removal, or addition of recovery equipment, or equipment changes that increase production capacity. For purposes of paragraph (i) of this section, process changes do not include: Process upsets, unintentional temporary process changes, and changes that do not alter the equipment configuration and operating conditions.

(6) *Reporting requirements for owners or operators that change or add to their plant site or affected source.* Owners or operators that change or add to their plant site or affected source, as discussed in paragraphs (i)(1) and (i)(2) of this section, shall submit a report as specified in § 63.1335(e)(7)(iv).

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

(1) The emission limitations set forth in this subpart and the emission limitations referred to in this subpart shall apply at all times except during periods of non-operation of the affected source (or specific portion thereof) resulting in cessation of the emissions to which this subpart applies. The emission limitations of this subpart and the emission limitations referred to in this subpart shall not apply during periods of start-up, shutdown, or malfunction, except as provided in paragraphs (j)(3) and (j)(4) of this section. During periods of start-up, shutdown, or malfunction, the owner or operator shall follow the applicable provisions of the start-up, shutdown, and malfunction plan required by § 63.1335(b)(1). However, if a start-up, shutdown, malfunction, or period of non-operation of one portion of an affected source does not affect the ability of a particular emission point to comply with the emission limitations to which it is subject, then that emission point shall still be required to comply with the applicable emission limitations of this subpart during the start-up, shutdown, malfunction, or period of non-operation. For example, if there is an overpressure in the reactor area, a storage vessel that is part of the affected source would still be required to be controlled in accordance with the emission limitations in § 63.1314. Similarly, the degassing of a storage vessel would not affect the ability of a batch process vent to meet the emission limitations of §§ 63.1321 through 63.1327.

(2) The emission limitations set forth in subpart H of this part, as referred to in § 63.1331, shall apply at all times except during periods of non-operation of the affected source (or specific portion thereof) in which the lines are drained and depressurized resulting in cessation of the emissions to which § 63.1331 applies, or during periods of start-up, shutdown, malfunction, or process unit shutdown (as defined in § 63.161).

(3) The owner or operator shall not shut down items of equipment that are required or utilized for compliance with this subpart during periods of start-up, shutdown, or malfunction during times when emissions (or, where applicable, wastewater streams or residuals) are being routed to such items of equipment, if the shutdown would contravene requirements of this subpart applicable to such items of equipment. This paragraph (j)(3) does not apply if the item of equipment is malfunctioning. This paragraph also does not apply if the owner or operator shuts down the compliance equipment (other than monitoring systems) to avoid damage due to a contemporaneous start-up, shutdown, or malfunction of the affected source or portion thereof. If the owner or operator has reason to believe that monitoring equipment would be damaged due to a contemporaneous start-up, shutdown, or malfunction of the affected source or portion thereof, the owner or operator shall provide documentation supporting such a claim in the Precompliance Report or in a supplement to the Precompliance Report, as provided in § 63.1335(e)(3). Once approved by the Administrator in accordance with § 63.1335(e)(3)(viii), the provision for ceasing to collect, during a start-up, shutdown, or malfunction, monitoring data that would otherwise be required by the provisions of this subpart must be incorporated into the start-up, shutdown, malfunction plan for that affected source, as stated in § 63.1335(b)(1).

(4) During start-ups, shutdowns, and malfunctions when the emission limitations of this subpart do not apply pursuant to paragraphs (j)(1) through (j)(3) of this section, the owner or operator

shall implement, to the extent reasonably available, measures to prevent or minimize excess emissions to the extent practical. For purposes of this paragraph, the term "excess emissions" means emissions greater than those allowed by the emissions limitation which would apply during operational periods other than start-up, shutdown, and malfunction. The measures to be taken shall be identified in the applicable start-up, shutdown, and malfunction plan, and may include, but are not limited to, air pollution control technologies, recovery technologies, work practices, pollution prevention, monitoring, and/or changes in the manner of operation of the affected source. Back-up control devices are not required, but may be used if available.

6. **[40 CFR 63.1311]**

**Compliance dates and relationship of this subpart to existing applicable rules.**

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

(b) New affected sources that commence construction or reconstruction after March 29, 1995 shall be in compliance with this subpart upon initial start-up or by June 19, 2000, whichever is later, except that new affected sources whose primary product, as determined using the procedures specified in § 63.1310(f), is PET shall be in compliance with § 63.1331 upon initial start-up or August 6, 2002, whichever is later.

(c) Existing affected sources shall be in compliance with this subpart (except for § 63.1331 for which compliance is covered by paragraph (d) of this section) no later than June 19, 2001, as provided in § 63.6(c), unless an extension has been granted as specified in paragraph (e) of this section, except that the compliance date for the provisions contained in § 63.1329 is extended to February 27, 2001, for existing affected sources whose primary product, as determined using the procedures specified in § 63.1310(f), is PET using a continuous terephthalic acid high viscosity multiple end finisher process.

(d) Except as provided for in paragraphs (d)(1) through (d)(6) of this section, existing affected sources shall be in compliance with § 63.1331 no later than June 19, 2001, unless an extension has been granted pursuant to paragraph (e) of this section.

(1) Compliance with the compressor provisions of § 63.164 shall occur no later than February 27, 1998, for any compressor meeting one or more of the criteria in paragraphs (d)(1)(i) through (d)(1)(iv) of this section, if the work can be accomplished without a process unit shutdown:

(i) The seal system will be replaced;

(ii) A barrier fluid system will be installed;

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

(iv) The compressor will be modified to permit connecting the compressor to a fuel gas system or a closed vent system or modified so that emissions from the compressor can be routed to a process.

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

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

(ii) The work can be accomplished without a process unit shutdown ;

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

(iv) The owner or operator submits the request for a compliance extension to the appropriate Environmental Protection Agency (EPA) Regional Office at the address listed in § 63.13 no later than June 16, 1997. The request for a compliance extension shall contain the information specified in § 63.6(i)(6)(i)(A), (B), and (D). Unless the EPA Regional Office objects to the request for a compliance extension within 30 days after receipt of the request, the request shall be deemed approved.

(3) If compliance with the compressor provisions of § 63.164 cannot reasonably be achieved without a process unit shutdown, the owner or operator shall achieve compliance no later than September 12, 1998. The owner or operator who elects to use this provision shall submit a request for a compliance extension in accordance with the requirements of paragraph (d)(2)(iv) of this section.

(4) Compliance with the compressor provisions of § 63.164 shall occur not later than September 12, 1999 for any compressor meeting one or more of the criteria in paragraphs (d)(4)(i) through (d)(4)(iii) of this section. The owner or operator who elects to use these provisions shall submit a request for an extension of compliance in accordance with the requirements of paragraph (d)(2)(iv) of this section.

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

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

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

(5) Compliance with the provisions of § 63.170 shall occur no later than June 19, 2001.

(6) Notwithstanding paragraphs (d)(1) through (5) of this section, existing affected sources whose primary product, as determined using the procedures specified in § 63.1310(f), is PET shall be in compliance with § 63.1331 no later than August 6, 2002.

(e) Pursuant to Section 112(i)(3)(B) of the Act, an owner or operator may request an extension allowing the existing affected source up to 1 additional year to comply with Section 112(d) standards. For purposes of this subpart, a request for an extension shall be submitted to the permitting authority as part of the operating permit application or to the Administrator as a separate submittal or as part of the Precompliance Report. Requests for extensions shall be submitted no later than 120 days prior to the compliance dates specified in paragraphs (b) through (d) of this section, or as specified elsewhere in this subpart, except as provided in paragraph (e)(3) of this section. The dates specified in § 63.6(i) for submittal of requests for extensions shall not apply to this subpart.

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

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

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

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

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

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

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

(i)(1) Except as provided in paragraphs (i)(2) and (i)(3) of this section, after the compliance dates specified in this section, affected sources producing PET using a continuous terephthalic acid process, producing PET using a continuous dimethyl terephthalate process, or producing polystyrene resin using a continuous process subject to this subpart that are also subject to the provisions of 40 CFR part 60, subpart DDD, are required to comply only with the provisions of this subpart. After the compliance dates specified in this section, said sources shall no longer be subject to 40 CFR part 60, subpart DDD.

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

(3) Existing affected sources producing PET using a continuous terephthalic acid process, but not using a continuous terephthalic acid high viscosity multiple end finisher process, that are subject to and complying with 40 CFR 60.562-1(c)(2)(ii)(B) shall continue to comply with said section. Existing affected sources producing PET using a continuous dimethyl terephthalic process that are subject to and complying with 40 CFR 60.562-1(c)(1)(ii)(B) shall continue to comply with said section.

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

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

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

(m) *Applicability of other regulations for monitoring, recordkeeping or reporting with respect to combustion devices, recovery devices, or recapture devices.* After the compliance dates specified in this subpart, if any combustion device, recovery device or recapture device subject to this subpart is also subject to monitoring, recordkeeping, and reporting requirements in 40 CFR part 264 subpart AA or CC, or is subject to monitoring and recordkeeping requirements in 40 CFR part 265 subpart AA or CC and the owner or operator complies with the periodic reporting requirements under 40 CFR part 264 subpart AA or CC that would apply to the device if the facility had final-permitted status, the owner or operator may elect to comply either with the monitoring, recordkeeping and reporting requirements of this subpart, or with the monitoring, recordkeeping and reporting requirements in 40 CFR parts 264 and/or 265, as described in this paragraph, which shall constitute compliance with the monitoring, recordkeeping and reporting

requirements of this subpart. The owner or operator shall identify which option has been selected in the Notification of Compliance Status required by § 63.1335(e)(5).

(n) *Applicability of other requirements for heat exchange systems or waste management units.* Paragraphs (n)(1) and (n)(2) of this section address instances in which certain requirements from other regulations also apply for the same heat exchange system(s) or waste management unit(s) that are subject to this subpart.

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

(i) Subpart F of this part.

(ii) A subpart of this part which requires compliance with § 63.104 (*e.g.*, subpart U of this part).

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

(i) Subpart G of this part.

(ii) A subpart of this part which requires compliance with §§ 63.132 through 63.147.

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

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

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

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

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

(3) In all instances where a provision of this subpart requires completion of a task during each of multiple successive periods, an owner or operator may perform the required task at any time during the specified period, provided that the task is conducted at a reasonable interval after completion of the task during the previous period.

7. **[40 CFR 63.1312]**

**Definitions.**

(a) The following terms used in this subpart shall have the meaning given them in § 63.2, § 63.101, § 63.111, § 63.161, or the Act, as specified after each term:

Act (§ 63.2)

Administrator (§ 63.2)

Automated monitoring and recording system (§ 63.111)

Boiler (§ 63.111)

Bottoms receiver (§ 63.161)

By compound (§ 63.111)

By-product (§ 63.101)

Car-seal (§ 63.111)

Closed-vent system (§ 63.111)

Combustion device (§ 63.111)

Commenced (§ 63.2)

Compliance date (§ 63.2)

Connector (§ 63.161)

Continuous monitoring system (§ 63.2)

Distillation unit (§ 63.111)

Duct work (§ 63.161)

Emission limitation (Section 302(k) of the Act)

Emission standard (§ 63.2)

Emissions averaging (§ 63.2)

EPA (§ 63.2)

Equipment leak (§ 63.101)

External floating roof (§ 63.111)

Fill or filling (§ 63.111)

First attempt at repair (§ 63.161)  
Fixed capital cost (§ 63.2)  
Flame zone (§ 63.111)  
Floating roof (§ 63.111)  
Flow indicator (§ 63.111)  
Fuel gas system (§ 63.101)  
Halogens and hydrogen halides (§ 63.111)  
Hard-piping (§ 63.111)  
Hazardous air pollutant (§ 63.2)  
Impurity (§ 63.101)  
In organic hazardous air pollutant service or in organic HAP service (§ 63.161)  
Incinerator (§ 63.111)  
Instrumentation system (§ 63.161)  
Internal floating roof (§ 63.111)  
Lesser quantity (§ 63.2)  
Major source (§ 63.2)  
Malfunction (§ 63.2)  
Oil-water separator or organic-water separator (§ 63.111)  
Open-ended valve or line (§ 63.161)  
Operating permit (§ 63.101)  
Organic monitoring device (§ 63.111)  
Owner or operator (§ 63.2)  
Performance evaluation (§ 63.2)  
Performance test (§ 63.2)  
Permitting authority (§ 63.2)  
Plant site (§ 63.101)  
Potential to emit (§ 63.2)  
Pressure release (§ 63.161)  
Primary fuel (§ 63.111)  
Process heater (§ 63.111)  
Process unit shutdown (§ 63.161)  
Process wastewater (§ 63.101)  
Process wastewater stream (§ 63.111)

Reactor (§ 63.111)  
Recapture device (§ 63.101)  
Repaired (§ 63.161)  
Research and development facility (§ 63.101)  
Routed to a process or route to a process (§ 63.161)  
Run (§ 63.2)  
Secondary fuel (§ 63.111)  
Sensor (§ 63.161)  
Specific gravity monitoring device (§ 63.111)  
Start-up, shutdown, and malfunction plan (§ 63.101)  
State (§ 63.2)  
Stationary Source (§ 63.2)  
Surge control vessel (§ 63.161)  
Temperature monitoring device (§ 63.111)  
Test method (§ 63.2)  
Treatment process (§ 63.111)  
Unit operation (§ 63.101)  
Visible emission (§ 63.2)

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

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

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

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

*Aggregate batch vent stream* means a gaseous emission stream containing only the exhausts from two or more batch process vents that are ducted, hardpiped, or otherwise connected together for a continuous flow.

*Affected source* is defined in § 63.1310(a).

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

*Annual average batch vent concentration* is determined using Equation 1, as described in § 63.1323(h)(2) for halogenated compounds.

*Annual average batch vent flow rate* is determined by the procedures in § 63.1323(e)(3).

*Annual average concentration*, as used in the wastewater provisions, means the flow-weighted annual average concentration, as determined according to the procedures specified in § 63.144(b), with the exceptions noted in § 63.1330, for the purposes of this subpart.

*Annual average flow rate*, as used in the wastewater provisions, means the annual average flow rate, as determined according to the procedures specified in § 63.144(c), with the exceptions noted in § 63.1330, for the purposes of this subpart.

*Average batch vent concentration* is determined by the procedures in § 63.1323(b)(5)(iii) for HAP concentrations and is determined by the procedures in § 63.1323(h)(1)(iii) for organic compounds containing halogens and hydrogen halides.

*Average batch vent flow rate* is determined by the procedures in § 63.1323(e)(1) and (e)(2).

*Batch cycle* means the operational step or steps, from start to finish, that occur as part of a batch unit operation.

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

*Batch mass input limitation* means an enforceable restriction on the total mass of HAP or material that can be input to a batch unit operation in one year.

*Batch mode* means the discontinuous bulk movement of material through a unit operation. Mass, temperature, concentration, and other properties may vary with time. For a unit operation operated in a batch mode (*i.e.*, batch unit operation), the addition of material and withdrawal of material do not typically occur simultaneously.

*Batch process* means, for the purposes of this subpart, a process where the reactor(s) is operated in a batch mode.

*Batch process vent* means a process vent with annual organic HAP emissions greater than 225 kilograms per year from a batch unit operation within an affected source. Annual organic HAP emissions are determined as specified in § 63.1323(b) at the location specified in § 63.1323(a)(2).

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

*Combined vent stream*, as used in reference to batch process vents, continuous process vents, and aggregate batch vent streams, means the emissions from a combination of two or more of the

aforementioned types of process vents. The primary occurrence of a combined vent stream is the combined emissions from a continuous process vent and a batch process vent.

*Combustion device burner* means a device designed to mix and ignite fuel and air to provide a flame to heat and oxidize waste organic vapors in a combustion device.

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

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

*Continuous mode* means the continuous movement of material through a unit operation. Mass, temperature, concentration, and other properties typically approach steady-state conditions. For a unit operation operated in a continuous mode (*i.e.*, continuous unit operation), the simultaneous addition of raw material and withdrawal of product is typical.

*Continuous process* means, for the purposes of this subpart, a process where the reactor(s) is operated in a continuous mode.

*Continuous process vent* means a process vent containing greater than 0.005 weight percent total organic HAP from a continuous unit operation within an affected source. The total organic HAP weight percent is determined after the last recovery device, as described in § 63.115(a), and is determined as specified in § 63.115(c).

*Continuous record* means documentation, either in hard copy or computer readable form, of data values measured at least once every 15 minutes and recorded at the frequency specified in § 63.1335(d) or § 63.1335(h).

*Continuous recorder* means a data recording device that either records an instantaneous data value at least once every 15 minutes or records 1-hour or more frequent block average values.

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

*Control device* is defined in § 63.111, except that the term "continuous process vents subject to § 63.1315" shall apply instead of the term "process vents," for the purpose of this subpart.

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

*Emission point* means an individual continuous process vent, batch process vent, storage vessel, waste management unit, equipment leak, heat exchange system, or process contact cooling tower, or equipment subject to § 63.149.

*Emulsion process* means a process where the monomer(s) is dispersed in droplets throughout the water phase with the aid of an emulsifying agent such as soap or a synthetic emulsifier. The polymerization occurs either within the emulsion droplet or in the aqueous phase.

*Equipment* means, for the purposes of the provisions in § 63.1331 and the requirements in subpart H that are referred to in § 63.1331, each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, surge control vessel, bottoms receiver, and instrumentation system in organic hazardous air pollutant service; and any control devices or systems required by subpart H of this part.

*Existing affected source* is defined in § 63.1310(a)(3).

*Existing process unit* means any process unit that is not a new process unit.

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

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

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

*Group 1 batch process vent* means a batch process vent releasing annual organic HAP emissions greater than the level specified in § 63.1323(d) and with a cutoff flow rate, calculated in accordance with § 63.1323(f), greater than or equal to the annual average batch vent flow rate. Annual organic HAP emissions and annual average batch vent flow rate are determined at the exit of the batch unit operation, as described in § 63.1323(a)(2). Annual organic HAP emissions are determined as specified in § 63.1323(b), and annual average batch vent flow rate is determined as specified in § 63.1323(e).

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

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

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

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

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

*Group 1 wastewater stream* means a wastewater stream consisting of process wastewater from an existing or new affected source that meets the criteria for Group 1 status in § 63.132(c) and/or that meets the criteria for Group 1 status in § 63.132(d), with the exceptions listed in § 63.1330(b)(8) for the purposes of this subpart (i.e., for organic HAP as defined in this section).

*Group 2 wastewater stream* means any process wastewater stream that does not meet the definition of a Group 1 wastewater stream.

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

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

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

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

*Highest-HAP recipe* for a product means the recipe of the product with the highest total mass of HAP charged to the reactor during the production of a single batch of product.

*Initial start-up* means the first time a new or reconstructed affected source begins production of a thermoplastic product, or, for equipment added or changed as described in § 63.1310(i), the first time the equipment is put into operation to produce a thermoplastic product. Initial start-up does not include operation solely for testing equipment. Initial start-up does not include subsequent start-ups of an affected source or portion thereof following malfunctions or shutdowns or following changes in product for flexible operation units or following recharging of equipment in batch operation. Further, for purposes of § 63.1311 and § 63.1331, initial start-up does not include subsequent start-ups of affected sources or portions thereof following malfunctions or process unit shutdowns.

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

*Mass process* means a polymerization process carried out through the use of thermal energy. Mass processes do not utilize emulsifying or suspending agents, but may utilize catalysts or other additives.

*Material recovery section* means, for PET plants, the equipment that recovers by-product methanol from any process section for use, reuse, or sale, or the equipment that separates materials containing by-product methanol from any process section for off-site purification or treatment with the intent to recover methanol for reuse. For polystyrene plants, material recovery section means the equipment that recovers unreacted styrene from any process section for use, reuse, or sale, or the equipment that separates materials containing unreacted styrene from any process section for off-site purification or treatment with the intent to recover styrene for reuse. Equipment used to store recovered materials (*i.e.*, ethylene glycol, methanol, or styrene) is not included. Equipment designed to recover or separate materials from the polymer product is to be included in this process section, provided that at the time of initial compliance some of the unreacted or by-product material is recovered for return to the TPPU, or sale, or provided that some of the separated material is sent for off-site purification or treatment with the intent to recover the unreacted or by-product material for reuse. Otherwise, such equipment is to be assigned to one of the other process sections, as appropriate. If equipment is used to recover unreacted or by-product material and return it directly to the same piece of process equipment from which it was emitted, then that recovery equipment is considered part of the process section that contains the process equipment. On the other hand, if equipment is used to recover unreacted or by-product material and return it to a different piece of process equipment in the same process section, that recovery equipment is considered part of a material recovery section. Equipment used for the on-site recovery of ethylene glycol from PET plants, however, is not included in the material recovery section; such equipment is to be included in the polymerization reaction section. Equipment used for the on-site recovery of both ethylene glycol and any other materials from PET plants is not included in the material recovery section; this equipment is to be included in the polymerization reaction section. Such equipment includes both contact and non-contact condensers removing ethylene glycol from vapor streams coming out of polymerization vessels.

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

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

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

*Multicomponent system* means, as used in conjunction with batch process vents, a stream whose liquid and/or vapor contains more than one compound.

*New process unit* means a process unit for which the construction or reconstruction commenced after March 29, 1995.

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

*On-site* or *On site* means, with respect to records required to be maintained by this subpart or required by another subpart referenced by this subpart, that records are stored at a location within a major source which encompasses the affected source. On-site includes, but is not limited to, storage at the affected source or TPPU to which the records pertain, or storage in central files elsewhere at the major source.

*Operating day* means the period defined by the owner or operator in the Notification of Compliance Status required by § 63.1335(e)(5). The operating day is the period for which daily average monitoring values and batch cycle daily average monitoring values are determined.

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

- (1) Knowingly produced or introduced into the manufacturing process other than as an impurity; and
- (2) Listed in Table 2 of subpart F of this part.

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

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

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

*Polymerization reaction section* means the equipment designed to cause monomer(s) to react to form polymers, including equipment designed primarily to cause the formation of short polymer chains (e.g., oligomers or low molecular weight polymers), but not including equipment designed to prepare raw materials for polymerization (e.g., esterification vessels). For the purposes of these standards, the polymerization reaction section begins with the equipment used to transfer the materials from the raw materials preparation section and ends with the last vessel in which

polymerization occurs. Equipment used for the on-site recovery of ethylene glycol from PET plants is included in this process section, rather than in the material recovery process section.

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

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

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

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

*Process unit* means a collection of equipment assembled and connected by hardpiping or duct work, used to process raw materials and to manufacture a product.

*Process vent* means a gaseous emission stream from a unit operation that is discharged to the atmosphere either directly or after passing through one or more control, recovery, or recapture devices. Unit operations that may have process vents are condensers, distillation units, reactors, or other unit operations within the TPPU. Process vents exclude pressure releases, gaseous streams routed to a fuel gas system(s), and leaks from equipment regulated under § 63.1331. A gaseous emission stream is no longer considered to be a process vent after the stream has been controlled and monitored in accordance with the applicable provisions of this subpart.

*Product* means a polymer produced using the same monomers and varying in additives (*e.g.*, initiators, terminators, etc.); catalysts; or in the relative proportions of monomers, that is manufactured by a process unit. With respect to polymers, more than one recipe may be used to produce the same product. As an example, styrene acrylonitrile resin and methyl methacrylate butadiene styrene resin each represent a different product. Product also means a chemical that is not a polymer, that is manufactured by a process unit. By-products, isolated intermediates, impurities, wastes, and trace contaminants are not considered products.

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

*Recipe* means a specific composition, from among the range of possible compositions that may occur within a product, as defined in this section. A recipe is determined by the proportions of monomers and, if present, other reactants and additives that are used to make the recipe. For example, acrylonitrile butadiene styrene latex resin (ABS latex) without additives; ABS latex with an additive; and ABS latex with different proportions of acrylonitrile to butadiene are all different recipes of the same product, ABS latex.

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

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

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

*Recovery device* means:

(1) An individual unit of equipment capable of and normally used for the purpose of recovering chemicals for:

(i) Use;

(ii) Reuse;

(iii) Fuel value (*i.e.*, net heating value); or

(iv) For sale for use, reuse, or fuel value (*i.e.*, net heating value).

(2) Examples of equipment that may be recovery devices include absorbers, carbon adsorbers, condensers, oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin-film evaporation units. For the purposes of the monitoring, recordkeeping, or reporting requirements of this subpart, recapture devices are considered recovery devices.

*Recovery operations equipment* means the equipment used to separate the components of process streams. Recovery operations equipment includes distillation units, condensers, etc. Equipment used for wastewater treatment and recovery or recapture devices used as control devices shall not be considered recovery operations equipment.

*Residual* is defined in § 63.111, except that when the definition in § 63.111 uses the term "Table 9 compounds," the term "organic HAP listed in Table 6 of subpart JJJ" shall apply for purposes of this subpart.

*Shutdown* means for purposes including, but not limited to, periodic maintenance, replacement of equipment, or repair, the cessation of operation of an affected source, a TPPU(s) within an affected source, a waste management unit or unit operation within an affected source, or

equipment required or used to comply with this subpart, or the emptying or degassing of a storage vessel. For purposes of the wastewater provisions of § 63.1330, shutdown does not include the routine rinsing or washing of equipment in batch operation between batches. For purposes of the batch process vent provisions in §§ 63.1321 through 63.1327, the cessation of equipment in batch operation is not a shutdown, unless the equipment undergoes maintenance, is replaced, or is repaired.

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

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

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

*Storage vessel* means a tank or other vessel that is used to store liquids that contain one or more organic HAP. Storage vessels do not include:

- (1) Vessels permanently attached to motor vehicles such as trucks, railcars, barges, or ships;
- (2) Pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere;
- (3) Vessels with capacities smaller than 38 cubic meters;
- (4) Vessels and equipment storing and/or handling material that contains no organic HAP and/or organic HAP as impurities only;
- (5) Wastewater storage tanks; and
- (6) Surge control vessels and bottoms receivers.

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

*Supplemental combustion air* means the air that is added to a vent stream after the vent stream leaves the unit operation. Air that is part of the vent stream as a result of the nature of the unit operation is not considered supplemental combustion air. Air required to operate combustion device burner(s) is not considered supplemental combustion air. Air required to ensure the proper

operation of catalytic oxidizers, to include the intermittent addition of air upstream of the catalyst bed to maintain a minimum threshold flow rate through the catalyst bed or to avoid excessive temperatures in the catalyst bed, is not considered to be supplemental combustion air.

*Suspension process* means a polymerization process where the monomer(s) is in a state of suspension, with the help of suspending agents, in a medium other than water (typically an organic solvent). The resulting polymers are not soluble in the reactor medium.

*Thermoplastic product* means one of the following types of products:

- (1) ABS latex;
- (2) ABS using a batch emulsion process;
- (3) ABS using a batch suspension process;
- (4) ABS using a continuous emulsion process;
- (5) ABS using a continuous mass process;
- (6) ASA/AMSAN;
- (7) EPS;
- (8) MABS;
- (9) MBS;
- (10) nitrile resin;
- (11) PET using a batch dimethyl terephthalate process;
- (12) PET using a batch terephthalic acid process;
- (13) PET using a continuous dimethyl terephthalate process;
- (14) PET using a continuous terephthalic acid process;
- (15) PET using a continuous terephthalic acid high viscosity multiple end finisher process;
- (16) Polystyrene resin using a batch process;
- (17) Polystyrene resin using a continuous process;
- (18) SAN using a batch process; or
- (19) SAN using a continuous process.

*Thermoplastic product process unit (TPPU)* means a collection of equipment assembled and connected by hard-piping or ductwork, used to process raw materials and to manufacture a thermoplastic product as its primary product. This collection of equipment includes unit operations; recovery operations equipment, process vents; equipment identified in § 63.149; storage vessels, as determined in § 63.1310(g); and the equipment that is subject to the equipment leak provisions as specified in § 63.1331. Utilities, lines and equipment not containing process fluids, and other non-process lines, such as heating and cooling systems which do not combine their materials with those in the processes they serve, are not part of the thermoplastic product process unit. A thermoplastic product process unit consists of more than one unit operation.

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

*Total resource effectiveness index value or TRE index value* means a measure of the supplemental total resource requirement per unit reduction organic HAP associated with a continuous process vent stream, based on vent stream flow rate, emission rate of organic HAP, net heating value, and corrosion properties (whether or not the continuous process vent stream contains halogenated compounds), as quantified by the equations given under § 63.115.

*Vent stream*, as used in reference to batch process vents, continuous process vents, and aggregate batch vent streams, means the emissions from one or more process vents.

*Waste management unit* is defined in § 63.111, except that where the definition in § 63.111 uses the term "chemical manufacturing process unit," the term "TPPU" shall apply for purposes of this subpart.

*Wastewater* means water that:

(1) Contains either:

(i) An annual average concentration of organic HAP listed on Table 6 of this subpart, except for ethylene glycol, of at least 5 parts per million by weight and has an annual average flow rate of 0.02 liter per minute or greater; or

(ii) An annual average concentration of organic HAP listed on Table 6 of this subpart, except for ethylene glycol, of at least 10,000 parts per million by weight at any flow rate; and

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

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

8. **[40 CFR 63.1313]**

**Emission standards.**

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

(1) Section 63.1314 for storage vessels;

(2) Section 63.1315, or §§ 63.1316 through 63.1320, as appropriate, for continuous process vents;

(3) Section 63.1321 for batch process vents;

(4) Section 63.1328 for heat exchange systems;

(5) Section 63.1329 for process contact cooling towers;

(6) Section 63.1330 for wastewater;

(7) Section 63.1331 for equipment leaks;

- (8) Section 63.1333 for additional test methods and procedures;
- (9) Section 63.1334 for parameter monitoring levels and excursions; and
- (10) Section 63.1335 for general recordkeeping and reporting requirements.

(b) When emissions of different kinds (*i.e.*, emissions from continuous process vents subject to either § 63.1315 or §§ 63.1316 through 63.1320, batch process vents, aggregate batch vent streams, storage vessels, process wastewater, and/or in-process equipment subject to § 63.149) are combined, and at least one of the emission streams would be classified as Group 1 in the absence of combination with other emission streams, the owner or operator shall comply with the requirements of either paragraph (b)(1) or (b)(2) of this section, as appropriate. For purposes of this paragraph (b), combined emission streams containing one or more batch process vents and containing one or more continuous process vents subject to § 63.1315, § 63.1316(b)(1)(i)(A), § 63.1316(b)(1)(ii), § 63.1316(b)(2)(i), § 63.1316(b)(2)(ii), or § 63.1316(c)(1), excluding § 63.1316(c)(1)(ii), may comply with either paragraph (b)(1) or (b)(2) of this section, as appropriate. For purposes of this paragraph (b), the owner or operator of an affected source with combined emission streams containing one or more batch process vents but not containing one or more continuous process vents subject to § 63.1315, § 63.1316(b)(1)(i)(A), § 63.1316(b)(1)(ii), § 63.1316(b)(2)(i), § 63.1316(b)(2)(ii), or § 63.1316(c)(1), excluding § 63.1316(c)(1)(ii), shall comply with paragraph (b)(3) of this section.

(1) Comply with the applicable requirements of this subpart for each kind of emission in the stream as specified in paragraphs (a)(1) through (a)(7) of this section.

(2) Comply with the first set of requirements, identified in paragraphs (b)(2)(i) through (b)(2)(vi) of this section, which applies to any individual emission stream that is included in the combined stream, where either that emission stream would be classified as Group 1 in the absence of combination with other emission streams, or the owner or operator chooses to consider that emission stream to be Group 1 for purposes of this paragraph. Compliance with the first applicable set of requirements identified in paragraphs (b)(2)(i) through (b)(2)(vi) of this section constitutes compliance with all other requirements in paragraphs (b)(2)(i) through (b)(2)(vi) of this section applicable to other types of emissions in the combined stream.

(i) The requirements of this subpart for Group 1 continuous process vents subject to § 63.1315, including applicable monitoring, recordkeeping, and reporting;

(ii) The requirements of § 63.1316(b)(1)(i)(A), § 63.1316(b)(1)(ii), § 63.1316(b)(2)(i), § 63.1316(b)(2)(ii), or § 63.1316(c)(1), excluding § 63.1316(c)(1)(ii), as appropriate, for control of emissions from continuous process vents subject to the control requirements of § 63.1316, including applicable monitoring, recordkeeping, and reporting requirements;

(iii) The requirements of § 63.119(e), as specified in § 63.1314, for control of emissions from Group 1 storage vessels, including applicable monitoring, recordkeeping, and reporting;

(iv) The requirements of § 63.139, as specified in § 63.1330, for control devices used to control emissions from waste management units, including applicable monitoring, recordkeeping, and reporting;

(v) The requirements of § 63.139, as specified in § 63.1330, for closed vent systems for control of emissions from in-process equipment subject to § 63.149, as specified in § 63.1330, including applicable monitoring, recordkeeping, and reporting; or

(vi) The requirements of this subpart for aggregate batch vent streams subject to § 63.1321(c), including applicable monitoring, recordkeeping, and reporting.

(3) The owner or operator of an affected source with combined emission streams containing one or more batch process vents but not containing one or more continuous process vents subject to § 63.1315, § 63.1316(b)(1)(i)(A), § 63.1316(b)(1)(ii), § 63.1316(b)(2)(i), § 63.1316(b)(2)(ii), or § 63.1316(c)(1), excluding § 63.1316(c)(1)(ii), shall comply with paragraph (b)(3)(i) and (b)(3)(ii) of this section.

(i) The owner or operator of the affected source shall comply with § 63.1321 for the batch process vent(s).

(ii) The owner or operator of the affected source shall comply with either paragraph (b)(1) or (b)(2) of this section, as appropriate, for the remaining emission streams.

(c) Instead of complying with §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, and 63.1330, the owner or operator of an existing affected source may elect to control any or all of the storage vessels, batch process vents, aggregate batch vent streams, continuous process vents, and wastewater streams and associated waste management units within the affected source to different levels using an emissions averaging compliance approach that uses the procedures specified in § 63.1332. The restrictions concerning which emission points may be included in an emissions average, including how many emission points may be included, are specified in § 63.1332(a)(1). An owner or operator electing to use emissions averaging shall still comply with the provisions of §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, and 63.1330 for affected source emission points not included in the emissions average.

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

9. **[40 CFR 63.1314]**

**Storage vessel provisions.**

(a) This section applies to each storage vessel that is assigned to an affected source, as determined by § 63.1310(g). Except as provided in paragraphs (b) through (d) of this section, the owner or operator of an affected source shall comply with the requirements of §§ 63.119 through 63.123 and 63.148 for those storage vessels, with the differences noted in paragraphs (a)(1) through (a)(17) of this section for the purposes of this subpart.

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

- (2) When the term "Group 1 storage vessel" is used in §§ 63.119 through 63.123, the definition of this term in § 63.1312 shall apply for the purposes of this subpart.
- (3) When the term "Group 2 storage vessel" is used in §§ 63.119 through 63.123, the definition of this term in § 63.1312 shall apply for the purposes of this subpart.
- (4) When the emissions averaging provisions of § 63.150 are referred to in §§ 63.119 and 63.123, the emissions averaging provisions contained in § 63.1332 shall apply for the purposes of this subpart.
- (5) When December 31, 1992, is referred to in § 63.119, March 29, 1995 shall apply instead, for the purposes of this subpart.
- (6) When April 22, 1994, is referred to in § 63.119, June 19, 2000 shall apply instead, for the purposes of this subpart.
- (7) Each owner or operator of an affected source shall comply with this paragraph (a)(7) instead of § 63.120(d)(1)(ii) for the purposes of this subpart. If the control device used to comply with § 63.119(e) is also used to comply with any of the requirements found in § 63.1315, § 63.1316, § 63.1322, or § 63.1330, the performance test required in or accepted by the applicable requirements of §§ 63.1315, 63.1316, 63.1322, and 63.1330 is acceptable for demonstrating compliance with § 63.119(e) for the purposes of this subpart. The owner or operator is not required to prepare a design evaluation for the control device as described in § 63.120(d)(1)(i), if the performance test meets the criteria specified in paragraphs (a)(7)(i) and (a)(7)(ii) of this section.
- (i) The performance test demonstrates that the control device achieves greater than or equal to the required control efficiency specified in § 63.119(e)(1) or § 63.119(e)(2), as applicable; and
- (ii) The performance test is submitted as part of the Notification of Compliance Status required by § 63.1335(e)(5).
- (8) When the term "range" is used in §§ 63.120(d)(3), 63.120(d)(5), and 63.122(g)(2), the term "level" shall apply instead, for the purposes of this subpart.
- (9) For purposes of this subpart, the monitoring plan required by § 63.120(d)(2) shall specify for which control devices the owner or operator has selected to follow the procedures for continuous monitoring specified in § 63.1334. For those control devices for which the owner or operator has selected to not follow the procedures for continuous monitoring specified in § 63.1334, the monitoring plan shall include a description of the parameter or parameters to be monitored to ensure that the control device is being properly operated and maintained, an explanation of the criteria used for selection of that parameter (or parameters), and the frequency with which monitoring will be performed (*e.g.*, when the liquid level in the storage vessel is being raised), as specified in § 63.120(d)(2)(i).
- (10) For purposes of this subpart, the monitoring plan required by § 63.122(b) shall be included in the Notification of Compliance Status required by § 63.1335(e)(5).

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

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

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

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

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

(16) When § 63.119(a) requires compliance according to the schedule provisions in § 63.100, owners and operators of affected sources shall instead comply with the requirements in §§ 63.119(a)(1) through 63.119(a)(4) by the compliance date for storage vessels, which is specified in § 63.1311.

(17) In § 63.120(e)(1), instead of the reference to § 63.11(b), the requirements of § 63.1333(e) shall apply.

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

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

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

(3) For all other storage vessels designated as Group 1 storage vessels, emissions shall be controlled to the level designated in § 63.119.

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

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

10. **[40 CFR 63.1315]**

**Continuous process vents provisions.**

(a) For each continuous process vent located at an affected source, the owner or operator shall comply with the requirements of §§ 63.113 through 63.118, with the differences noted in paragraphs (a)(1) through (a)(18) of this section for the purposes of this subpart, except as provided in paragraphs (b) through (e) of this section.

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

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

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

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

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

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

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

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

(9) When § 63.114(e) or § 63.117(f) specifies that an owner or operator shall submit the information required in § 63.152(b) in order to establish the parameter monitoring range, the owner or operator of an affected source shall comply with the provisions of § 63.1335(e)(5) for purposes of reporting information related to establishment of the parameter monitoring level for

purposes of this subpart. Further, the term "level" shall apply when the term "range" is used in §§ 63.114, 63.117, and 63.118.

(10) When reports of process changes are required under § 63.118(g), (h), (i), or (j), paragraphs (a)(10)(i) through (a)(10)(iv) of this section shall apply for the purposes of this subpart. In addition, for the purposes of this subpart, paragraph (a)(10)(v) of this section applies, and § 63.118(k) does not apply to owners or operators of affected sources.

(i) For the purposes of this subpart, whenever a process change, as defined in § 63.115(e), is made that causes a Group 2 continuous process vent to become a Group 1 continuous process vent, the owner or operator shall submit a report within 180 days after the process change is made or with the next Periodic Report, whichever is later. A description of the process change shall be submitted with the report of the process change, and the owner or operator of the affected source shall comply with the Group 1 provisions in §§ 63.113 through 63.118 in accordance with § 63.1310(i)(2)(ii) or (i)(2)(iii), as applicable.

(ii) Whenever a process change, as defined in § 63.115(e), is made that causes a Group 2 continuous process vent with a TRE greater than 4.0 to become a Group 2 continuous process vent with a TRE less than 4.0, the owner or operator shall submit a report within 180 days after the process change is made or with the next Periodic Report, whichever is later. A description of the process change shall be submitted with the report of the process change, and the owner or operator shall comply with the provisions in § 63.113(d) by the dates specified in § 63.1311.

(iii) Whenever a process change, as defined in § 63.115(e), is made that causes a Group 2 continuous process vent with a flow rate less than 0.005 standard cubic meter per minute to become a Group 2 continuous process vent with a flow rate of 0.005 standard cubic meter per minute or greater and a TRE index value less than or equal to 4.0, the owner or operator shall submit a report within 180 days after the process change is made or with the next Periodic Report, whichever is later. A description of the process change shall be submitted with the report of the process change, and the owner or operator shall comply with the provisions in § 63.113(d) by the dates specified in § 63.1311.

(iv) Whenever a process change, as defined in § 63.115(e), is made that causes a Group 2 continuous process vent with an organic HAP concentration less than 50 parts per million by volume to become a Group 2 continuous process vent with an organic HAP concentration of 50 parts per million by volume or greater and a TRE index value less than or equal to 4.0, the owner or operator shall submit a report within 180 days after the process change is made or with the next Periodic Report, whichever is later. A description of the process change shall be submitted with the report of the process change, and the owner or operator shall comply with the provisions in § 63.113(d) by the dates specified in § 63.1311.

(v) The owner or operator is not required to submit a report of a process change if one of the conditions listed in paragraphs (a)(10)(v)(A), (a)(10)(v)(B), (a)(10)(v)(C), or (a)(10)(v)(D) of this section is met.

(A) The process change does not meet the definition of a process change in § 63.115(e);

(B) The vent stream flow rate is recalculated according to § 63.115(e) and the recalculated value is less than 0.005 standard cubic meter per minute;

(C) The organic HAP concentration of the vent stream is recalculated according to § 63.115(e) and the recalculated value is less than 50 parts per million by volume; or

(D) The TRE index value is recalculated according to § 63.115(e) and the recalculated value is greater than 4.0, or for the affected sources producing methyl methacrylate butadiene styrene resin the recalculated value is greater than 6.7.

(11) When the provisions of § 63.116(c)(3) and (c)(4) specify that Method 18, 40 CFR part 60, appendix A shall be used, Method 18 or Method 25A, 40 CFR part 60, appendix A may be used for the purposes of this subpart. The use of Method 25A, 40 CFR part 60, appendix A shall conform with the requirements in paragraphs (a)(11)(i) and (a)(11)(ii) of this section.

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

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

(12) When § 63.118, periodic reporting and recordkeeping requirements, refers to § 63.152(f), the recordkeeping requirements in § 63.1335(d) shall apply for purposes of this subpart.

(13) If a batch process vent or aggregate batch vent stream is combined with a continuous process vent, the owner or operator of the affected source containing the combined vent stream shall comply with paragraph (a)(13)(i); with paragraph (a)(13)(ii) and with paragraph (a)(13)(iii) or (iv); or with paragraph (a)(13)(v) of this section, as appropriate.

(i) If a batch process vent or aggregate batch vent stream is combined with a Group 1 continuous process vent prior to the combined vent stream being routed to a control device, the owner or operator of the affected source containing the combined vent stream shall comply with the requirements in paragraph (a)(13)(i)(A) or (B) of this section.

(A) All requirements for a Group 1 process vent stream in §§ 63.113 through 63.118, except as otherwise provided in this section. As specified in § 63.1333(a)(1), performance tests shall be conducted at maximum representative operating conditions. For the purpose of conducting a performance test on a combined vent stream, maximum representative operating conditions shall be when batch emission episodes are occurring that result in the highest organic HAP emission rate (for the combined vent stream) that is achievable during one of the periods listed in § 63.1333(a)(1)(i) or § 63.1333(a)(1)(ii), without causing any of the situations described in paragraphs (a)(13)(i)(A)(1) through (3) to occur.

(1) Causing damage to equipment.

(2) Necessitating that the owner or operator make product that does not meet an existing specification for sale to a customer; or

- (3) Necessitating that the owner or operator make product in excess of demand.
- (B) Comply with the provisions in § 63.1313(b)(1), as allowed under § 63.1313(b).
- (ii) If a batch process vent or aggregate batch vent stream is combined with a continuous process vent prior to the combined vent stream being routed to a recovery device, the TRE index value for the combined vent stream shall be calculated at the exit of the last recovery device. The TRE shall be calculated during periods when one or more batch emission episodes are occurring that result in the highest organic HAP emission rate (in the combined vent stream that is being routed to the recovery device) that is achievable during the 6-month period that begins 3 months before and ends 3 months after the TRE calculation, without causing any of the situations described in paragraphs (a)(13)(ii)(A) through (C) to occur.
- (A) Causing damage to equipment.
- (B) Necessitating that the owner or operator make product that does not meet an existing specification for sale to a customer; or
- (C) Necessitating that the owner or operator make product in excess of demand.
- (iii) If the combined vent stream described in paragraph (a)(10)(ii) of this section meets the requirements in paragraphs (a)(13)(iii)(A), (B), and (C) of this section, the combined vent stream shall be subject to the requirements for Group 1 process vents in §§ 63.113 through 63.118, except as otherwise provided in this section, as applicable. Performance tests for the combined vent stream shall be conducted at maximum operating conditions, as described in paragraph (a)(13)(i) of this section.
- (A) The TRE index value of the combined stream is less than or equal to 1.0;
- (B) The flow rate of the combined vent stream is greater than or equal to 0.005 standard cubic meter per minute; and
- (C) The total organic HAP concentration is greater than or equal to 50 parts per million by volume for the combined vent stream.
- (iv) If the combined vent stream described in paragraph (a)(10)(ii) of this section meets the requirements in paragraph (a)(13)(iv)(A), (B), or (C) of this section, the combined vent stream shall be subject to the requirements for Group 2 process vents in §§ 63.113 through 63.118, except as otherwise provided in this section, as applicable.
- (A) The TRE index value of the combined vent stream is greater than 1.0;
- (B) The flow rate of the combined vent stream is less than 0.005 standard cubic meter per minute; or
- (C) The total organic HAP concentration is less than 50 parts per million by volume for the combined vent stream.

(v) If a batch process vent or aggregate batch vent stream is combined with a Group 2 continuous process vent, the owner or operator shall comply with the requirements in either paragraph (a)(13)(v)(A) or (a)(13)(v)(B) of this section.

(A) The owner or operator shall comply with the requirements in §§ 63.113 through 63.118 for Group 1 process vents; or

(B) The owner or operator shall comply with § 63.1322(e)(2) for batch process vents and aggregate batch vent streams.

(14) If any gas stream that originates outside of an affected source that is subject to this subpart is normally conducted through the same final recovery device as any continuous process vent stream subject to this subpart, the owner or operator of the affected source with the combined vent stream shall comply with all requirements in §§ 63.113 through 63.118 of subpart G of this part, except as otherwise noted in this section, as applicable.

(i) Instead of measuring the vent stream flow rate at the sampling site specified in § 63.115(b)(1), the sampling site for vent stream flow rate shall be prior to the final recovery device and prior to the point at which the gas stream that is not controlled under this subpart is introduced into the combined vent stream.

(ii) Instead of measuring total organic HAP or TOC concentrations at the sampling site specified in § 63.115(c)(1), the sampling site for total organic HAP or TOC concentration shall be prior to the final recovery device and prior to the point at which the gas stream that is not controlled under this subpart is introduced into the combined vent stream.

(iii) The efficiency of the final recovery device (determined according to paragraph (a)(14)(iv) of this section) shall be applied to the total organic HAP or TOC concentration measured at the sampling site described in paragraph (a)(14)(ii) of this section to determine the exit concentration. This exit concentration of total organic HAP or TOC shall then be used to perform the calculations outlined in § 63.115(d)(2)(iii) and § 63.115(d)(2)(iv), for the combined vent stream exiting the final recovery device.

(iv) The efficiency of the final recovery device is determined by measuring the total organic HAP or TOC concentration using Method 18 or 25A, 40 CFR part 60, appendix A, at the inlet to the final recovery device after the introduction of any gas stream that is not controlled under this subpart, and at the outlet of the final recovery device.

(15) When § 63.115(c)(3)(ii)(B) and (d)(2)(iv) and § 63.116(c)(3)(ii)(B) and (c)(4)(ii)(C) refer to Table 2 of subpart F of this part, the owner or operator is only required to consider organic HAP listed on Table 6 of this subpart for purposes of this subpart.

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

(17) In § 63.116(a), instead of the reference to § 63.11(b), the requirements in § 63.1333(e) shall apply.

(18) When a combustion device is used to comply with the 20 parts per million by volume outlet concentration standard specified in § 63.113(a)(2), the correction to 3 percent oxygen is only required when supplemental combustion air is used to combust the emissions, for the purposes of this subpart. In addition, the correction to 3 percent oxygen specified in § 63.116(c)(3) and (c)(3)(iii) is only required when supplemental combustion air is used to combust the emissions, for the purposes of this subpart. Finally, when a combustion device is used to comply with the 20 parts per million by volume outlet concentration standard specified in § 63.113(a)(2), an owner or operator shall record and report the outlet concentration required in § 63.117(a)(4)(ii) and (a)(4)(iv) corrected to 3 percent oxygen when supplemental combustion air is used to combust the emissions, for the purposes of this subpart. When supplemental combustion air is not used to combust the emissions, an owner or operator may record and report the outlet concentration required in § 63.117(a)(4)(ii) and (a)(4)(iv) on an uncorrected basis or corrected to 3 percent oxygen, for the purposes of this subpart.

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

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

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

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

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

(c) Owners or operators of new affected sources producing SAN using a batch process shall comply with the applicable requirements in § 63.1321.

(d) Affected sources producing PET or polystyrene using a continuous process are subject to the emissions control provisions of § 63.1316, the monitoring provisions of § 63.1317, the testing and compliance demonstration provisions of § 63.1318, the recordkeeping provisions of § 63.1319, and the reporting provisions of § 63.1320. However, in some instances as specified in § 63.1316, select continuous process vents present at affected sources producing PET or polystyrene using a continuous process are subject to the provisions of this section.

(e) Owners or operators of affected sources producing ASA/AMSAN shall reduce organic HAP emissions from each continuous process vent, each batch process vent, and each aggregate batch vent stream by 98 weight-percent and shall comply with either paragraph (e)(1), (e)(2), or (e)(3), as appropriate. Where batch process vents or aggregate batch vent streams are combined with

continuous process vents, the provisions of paragraph (a)(13) of this section shall apply for the purposes of this paragraph (e).

(1) For each continuous process vent, comply with paragraph (a) of this section as specified in paragraphs (e)(1)(i) through (e)(1)(ii) of this section.

(i) For purpose of this section, each continuous process vent shall be considered to be a Group 1 continuous process vent and the owner or operator of that continuous process vent shall comply with the requirements for a Group 1 continuous process vent.

(ii) For purposes of this section, the group determination procedure required by § 63.115 shall not apply.

(2) For each batch process vent, comply with §§ 63.1321 through 63.1327 as specified in paragraphs (e)(2)(i) through (e)(2)(ii) of this section.

(i) For purpose of this section, each batch process vent shall be considered to be a Group 1 batch process vent and the owner or operator of that batch process vent shall comply with the requirements for a Group 1 batch process vent contained in §§ 63.1321 through 63.1327, except that each batch process vent shall be controlled to reduce organic HAP emissions by 98 weight-percent.

(ii) For purposes of this section, the group determination procedure required by § 63.1323 shall not apply.

(3) For each aggregate batch vent stream, comply with §§ 63.1321 through 63.1327 as specified in paragraphs (e)(3)(i) through (e)(3)(ii) of this section.

(i) For purpose of this section, each aggregate batch vent stream shall be considered to be a Group 1 aggregate batch vent stream and the owner or operator of that aggregate batch vent stream shall comply with the requirements for a Group 1 aggregate batch vent stream contained in §§ 63.1321 through 63.1327, except that each aggregate batch vent stream shall be controlled to reduce organic HAP emissions by 98 weight-percent.

(ii) For purposes of this section, the group determination procedure required by § 63.1323 shall not apply.

11. **[40 CFR 63.1316]**

**PET and polystyrene affected sources -- emissions control provisions.**

(a) The owner or operator of an affected source producing PET using a continuous process shall comply with paragraph (b) of this section. The owner or operator of an affected source producing polystyrene using a continuous process shall comply with paragraph (c) of this section. As specified in paragraphs (b) and (c) of this section, owners or operators shall comply with § 63.1315 for certain continuous process vents and with § 63.1321 for all batch process vents. The owner or operator of an affected source producing PET using a batch process or producing

polystyrene using a batch process shall comply with § 63.1315 for continuous process vents and with § 63.1321 for batch process vents, instead of the provisions of § 63.1316 through 63.1320.

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

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

(i) The owner or operator of an existing affected source with organic HAP emissions greater than 0.12 kg organic HAP per Mg of product from continuous process vents in the collection of material recovery sections (*i.e.*, methanol recovery) within the affected source shall comply with either paragraph (b)(1)(i)(A), (b)(1)(i)(B), or (b)(1)(i)(C) of this section. Emissions from continuous process vents in the collection of material recovery sections within the affected source shall be determined by the procedures specified in § 63.1318(b). The owner or operator of a new affected source shall comply with either paragraph (b)(1)(i)(A), (b)(1)(i)(B), or (b)(1)(i)(C) of this section.

(A) Organic HAP emissions from all continuous process vents in each individual material recovery section shall, as a whole, be no greater than 0.018 kg organic HAP per Mg of product from the associated TPPU(s); or alternatively, organic HAP emissions from all continuous process vents in the collection of material recovery sections within the affected source shall, as a whole, be no greater than 0.018 kg organic HAP per Mg product from all associated TPPU(s);

(B) As specified in § 63.1318(d), the owner or operator shall maintain the daily average outlet gas stream temperature from each final condenser in a material recovery section at a temperature of +3 °C (+37 °F) or less (*i.e.*, colder); or

(C) Comply with paragraph (b)(1)(v) of this section.

(ii) Limit organic HAP emissions from continuous process vents in the collection of polymerization reaction sections within the affected source by complying with either paragraph (b)(1)(ii)(A) or (b)(1)(ii)(B) of this section.

(A) Organic HAP emissions from all continuous process vents in each individual polymerization reaction section (including emissions from any equipment used to further recover ethylene glycol, but excluding emissions from process contact cooling towers) shall, as a whole, be no greater than 0.02 kg organic HAP per Mg of product from the associated TPPU(s); or alternatively, organic HAP emissions from all continuous process vents in the collection of polymerization reaction sections within the affected source shall, as a whole, be no greater than 0.02 kg organic HAP per Mg product from all associated TPPU(s); or

(B) Comply with paragraph (b)(1)(v) of this section.

(iii) Continuous process vents not included in a material recovery section, as specified in paragraph (b)(1)(i) of this section, and not included in a polymerization reaction section, as specified in paragraph (b)(1)(ii) of this section, shall comply with § 63.1315.

(iv) Batch process vents shall comply with § 63.1321.

(v) Comply with one of the following:

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

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

(C) Combust the emissions in a flare that complies with the requirements of § 63.1333(e).

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

(i) Limit organic HAP emissions from continuous process vents in the collection of raw material preparation sections within the affected source by complying with either paragraph (b)(2)(i)(A) or (b)(2)(i)(B) of this section.

(A) Organic HAP emissions from all continuous process vents associated with the esterification vessels in each individual raw materials preparation section shall, as a whole, be no greater than 0.04 kg organic HAP per Mg of product from the associated TPPU(s); or alternatively, organic HAP emissions from all continuous process vents associated with the esterification vessels in the collection of raw material preparation sections within the affected source shall, as a whole, be no greater than 0.04 kg organic HAP per Mg of product from all associated TPPU(s). Other continuous process vents (*i.e.*, those not associated with the esterification vessels) in the collection of raw materials preparation sections within the affected source shall comply with § 63.1315; or

(B) Comply with paragraph (b)(2)(v) of this section.

(ii) Limit organic HAP emissions from continuous process vents in the collection of polymerization reaction sections within the affected source by complying with either paragraph (b)(2)(ii)(A) or (b)(2)(ii)(B) of this section.

(A) Organic HAP emissions from all continuous process vents in each individual polymerization reaction section (including emissions from any equipment used to further recover ethylene glycol, but excluding emissions from process contact cooling towers) shall, as a whole, be no greater than 0.02 kg organic HAP per Mg of product from the associated TPPU(s); or alternatively, organic HAP emissions from all continuous process vents in the collection of

polymerization reaction sections within the affected source shall, as a whole, be no greater than 0.02 kg organic HAP per Mg of product from all associated TPPU(s); or

(B) Comply with paragraph (b)(2)(v) of this section.

(iii) Continuous process vents not included in a raw materials preparation section, as specified in paragraphs (b)(2)(i) of this section, and not included in a polymerization reaction section, as specified in paragraph (b)(2)(ii) of this section, shall comply with § 63.1315.

(iv) Batch process vents shall comply with § 63.1321.

(v) Comply with one of the following:

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

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

(C) Combust the emissions in a flare that complies with the requirements of § 63.1333(e).

(c) The owner or operator of an affected source producing polystyrene resin using a continuous process shall comply with the requirements specified in paragraphs (c)(1) through (c)(3) of this section, as appropriate, instead of the requirements specified in 40 CFR part 60, subpart DDD. Compliance can be based on either organic HAP or TOC.

(1) Limit organic HAP emissions from continuous process vents in the collection of material recovery sections within the affected source by complying with either paragraph (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this section.

(i) Organic HAP emissions from all continuous process vents in each individual material recovery section shall, as a whole, be no greater than 0.0036 kg organic HAP per Mg of product from the associated TPPU(s); or alternatively, organic HAP emissions from all continuous process vents in the collection of material recovery sections within the affected source shall, as a whole, be no greater than 0.0036 kg organic HAP per Mg of product from all associated TPPU(s);

(ii) As specified in § 63.1318(d), the owner or operator shall maintain the daily average outlet gas stream temperature from each final condenser in a material recovery section at a temperature of  $-25\text{ }^{\circ}\text{C}$  ( $-13\text{ }^{\circ}\text{F}$ ) or less (*i.e.*, colder); or

(iii) Comply with one of the following:

(A) Reduce the emissions in a combustion device to achieve 98 weight percent reduction or to achieve a concentration of 20 parts per million by volume (ppmv) on a dry basis, whichever is

less stringent. If an owner or operator elects to comply with the 20 ppmv standard, the concentration shall include a correction to 3 percent oxygen only when supplemental combustion air is used to combust the emissions;

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

(C) Combust the emissions in a flare that complies with the requirements of § 63.1333(e).

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

(3) Batch process vents shall comply with § 63.1321.

12. **[40 CFR 63.1317]**

**PET and polystyrene affected sources -- monitoring provisions.**

Continuous process vents using a control or recovery device to comply with § 63.1316 shall comply with the applicable monitoring provisions specified for continuous process vents in § 63.1315(a), except that references to group determinations (*i.e.*, total resource effectiveness) do not apply and owners or operators are not required to comply with § 63.113.

13. **[40 CFR 63.1318]**

**PET and polystyrene affected sources -- testing and compliance demonstration provisions.**

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

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

(1) Use Equation 1 of paragraphs (b)(1)(i) and (b)(2)(i) to determine the organic HAP emissions per mass product as specified in

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

where:

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

E<sub>i</sub>=Emission rate of total organic HAP or TOC in continuous process vent i, kg/hr.

P<sub>p</sub>=The rate of polymer produced, kg/hr.

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

0.001=Conversion factor, kg to Mg.

(i) The mass emission rate for each continuous process vent, E<sub>i</sub>, shall be determined according to the procedures specified in § 63.116(c)(4). The sampling site for determining whether § 63.1316(b)(1)(i) is applicable shall be at the outlet of the last recovery or control device. When the provisions of § 63.116(c)(4) specify that Method 18, 40 CFR part 60, appendix A shall be used, Method 18 or Method 25A, 40 CFR part 60, appendix A may be used for the purposes of this subpart. The use of Method 25A, 40 CFR part 60, appendix A shall comply with paragraphs (b)(1)(i)(A) and (b)(1)(i)(B) of this section.

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

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

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

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

(c) *Compliance with Mass Emissions per Mass Product Standards.* Owners or operators complying with § 63.1316(b)(1)(i)(A), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), and (c)(1)(i) shall

demonstrate compliance with the mass emissions per mass product requirements using the procedures specified in paragraph (b)(1) of this section.

(d) *Compliance with Temperature Limits for Final Condensers.* Owners or operators complying with § 63.1316(b)(1)(i)(B) or § 63.1316(c)(1)(ii) shall demonstrate continuous compliance based on an average exit temperature determined for each operating day. Calculation of the daily average exit temperature shall follow the provisions of § 63.1335(d)(3). The provisions of § 63.1334(f) and (g) shall apply for the purposes of determining whether or not an owner or operator is to be deemed out of compliance for a given operating day.

14. **[40 CFR 63.1319]**

**PET and polystyrene affected sources -- recordkeeping provisions.**

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

(b) *Records Demonstrating Compliance With the Applicability Determination Procedure for PET Affected Sources Using a Dimethyl Terephthalate Process.* Owners or operators complying with § 63.1316(b)(1)(i) by demonstrating that mass emissions per mass product are less than or equal to the level specified in § 63.1316(b)(1)(i) (*i.e.*, 0.12 kg organic HAP per Mg of product) shall keep the following records.

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

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

(c) *Records Demonstrating Compliance with Temperature Limits for Final Condensers.* Owners or operators of continuous process vents complying with § 63.1316(b)(1)(i)(B) or § 63.1316(c)(1)(ii) shall keep records of the daily averages required by § 63.1318, per the recordkeeping provisions specified in § 63.1335(d).

15. **[40 CFR 63.1320]**

**PET and polystyrene affected sources -- reporting provisions.**

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

(b) *Reporting for PET Affected Sources Using a Dimethyl Terephthalate Process.* Owners or operators complying with § 63.1316 by demonstrating that mass emissions per mass product are less than or equal to the level specified in § 63.1316(b)(1)(i) (i.e., 0.12 kg organic HAP per Mg of product) shall comply with paragraphs (b)(1) through (b)(3) of this section.

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

(2) Include the information specified in § 63.1319(b)(1) in the Notification of Compliance Status, required by § 63.1335(e)(5).

(3) Whenever a process change, as defined in § 63.115(e), is made that causes emissions from continuous process vents in the collection of material recovery sections (i.e., methanol recovery) within the affected source to be greater than 0.12 kg organic HAP per Mg of product, the owner or operator shall submit a report within 180 days after the process change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report. The report shall include the information specified in § 63.1319(b)(1) and a description of the process change.

16. **[40 CFR 63.1321]**

**Batch process vents provisions.**

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

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

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

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

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

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

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

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

(d) Owners and operators of affected sources producing ASA/AMSAN shall comply with the provisions of § 63.1315(e).

17. **[40 CFR 63.1322]**

**Batch process vents -- reference control technology.**

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

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

(i) The owner or operator shall comply with the requirements of § 63.1333(e) for the flare.

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

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

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

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

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

(i) The owner or operator shall comply with the requirements of § 63.1333(e) for the flare.

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

(2) For each aggregate batch vent stream, reduce organic HAP emissions by 90 weight percent or to a concentration of 20 parts per million by volume, whichever is less stringent, on a continuous basis using a control device. For purposes of complying with the 20 parts per million by volume outlet concentration standard, the outlet concentration shall be calculated on a dry basis. When a combustion device is used for purposes of complying with the 20 parts per million by volume outlet concentration standard, the concentration shall be corrected to 3 percent oxygen if supplemental combustion air is used to combust the emissions. If supplemental combustion air is not used, a correction to 3 percent oxygen is not required.

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

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

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

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

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

*(e) Combination of batch process vents or aggregate batch vent streams with continuous process vents.* If a batch process vent or aggregate batch vent stream is combined with a continuous process vent, the owner or operator shall determine whether the combined vent stream is subject to the provisions of §§ 63.1321 through 63.1327 according to paragraphs (e)(1) and (e)(2) of this section.

(1) A batch process vent or aggregate batch vent stream combined with a continuous process vent is not subject to the provisions of §§ 63.1321 through 63.1327, if the requirements in paragraph (e)(1)(i) and in either paragraph (e)(1)(ii) or (e)(1)(iii) are met.

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

(ii) The batch process vent or aggregate batch vent stream is combined with a Group 1 continuous process vent prior to the combined vent stream being routed to a control device. In this paragraph (e)(1)(ii), the definition of control device as it relates to continuous process vents shall be used. Furthermore, the combined vent stream discussed in this paragraph (e)(1)(ii) shall be subject to § 63.1315(a)(13)(i).

(iii) The batch process vent or aggregate batch vent stream is combined with a continuous process vent prior to being routed to a recovery device. In this paragraph (e)(1)(iii), the definition of recovery device as it relates to continuous process vents shall be used. Furthermore, the combined vent stream discussed in this paragraph (e)(1)(iii) shall be subject to § 63.1315(a)(13)(ii).

(2) If the batch process vent or aggregate batch vent stream is combined with a Group 2 continuous process vent, the group status of the batch process vent shall be determined prior to its combination with the Group 2 continuous process vent, in accordance with § 63.1323, and the combined vent stream shall be subject to the requirements for aggregate batch vent streams in §§ 63.1321 through 63.1327.

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

(1) The owner or operator of an affected source shall comply with the requirements in paragraphs (f)(1)(i) through (f)(1)(iv) of this section.

(i) The owner or operator shall establish a batch mass input limitation that ensures the Group 2 batch process vent does not become a Group 1 batch process vent.

(ii) Over the course of the affected source's "year," as reported in the Notification of Compliance Status in accordance with § 63.1335(e)(5)(viii), the owner or operator shall not charge a mass of HAP or material to the batch unit operation that is greater than the level established as the batch mass input limitation.

(iii) The owner or operator shall comply with the recordkeeping requirements in § 63.1326(d)(2), and the reporting requirements in § 63.1327(a)(3), (b), and (c).

(iv) The owner or operator shall comply with § 63.1323(i) when process changes are made.

(2) Comply with the requirements of this subpart for Group 1 batch process vents.

(g) *Group 2 batch process vents with annual emissions less than the level specified in § 63.1323(d).* The owner or operator of a Group 2 batch process vent with annual emissions less than the level specified in § 63.1323(d) shall comply with paragraphs (g)(1), (g)(2), (g)(3), or (g)(4) of this section.

(1) The owner or operator of the affected source shall comply with the requirements in paragraphs (g)(1)(i) through (g)(1)(iv) of this section.

(i) The owner or operator shall establish a batch mass input limitation that ensures emissions do not exceed the level specified in § 63.1323(d).

(ii) Over the course of the affected source's "year," as reported in the Notification of Compliance Status in accordance with § 63.1335(e)(5)(viii), the owner or operator shall not charge a mass of HAP or material to the batch unit operation that is greater than the level established as the batch mass input limitation.

(iii) The owner or operator shall comply with the recordkeeping requirements in § 63.1326(d)(1), and the reporting requirements in § 63.1327(a)(2), (b), and (c).

(iv) The owner or operator of the affected source shall comply with § 63.1323(i) when process changes are made.

(2) Comply with the requirements of paragraph (f)(1) of this section;

(3) Comply with the requirements of paragraph (f)(2) of this section; or

(4) Comply with the requirements of paragraph (h) of this section.

(h) Owners or operators of Group 2 batch process vents are not required to establish a batch mass input limitation if the batch process vent is Group 2 at the conditions specified in paragraphs (h)(1) and (h)(2) of this section and if the owner or operator complies with the recordkeeping provisions in §§ 63.1326(a)(1) through (3), 63.1326(a)(9), and 63.1326(a)(4) through (6) as applicable, and the reporting requirements in § 63.1327(a)(5), (a)(6), and (b).

(1) Emissions for the single highest-HAP recipe (considering all products that are produced in the batch unit operation) are used in the group determination; and

(2) The group determination assumes that the batch unit operation is operating at the maximum design capacity of the TPPU for 12 months.

**Batch process vents -- methods and procedures for group determination.**

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

(1) The procedures specified in paragraphs (b) through (g) of this section shall be followed to determine the group status of each batch process vent. This determination shall be made in accordance with either paragraph (a)(1)(i) or (a)(1)(ii) of this section.

(i) An owner or operator may choose to determine the group status of a batch process vent based on the expected mix of products. For each product, emission characteristics of the single highest-HAP recipe, as defined in paragraph (a)(1)(iii) of this section, for that product shall be used in the procedures in paragraphs (b) through (i) of this section.

(ii) An owner or operator may choose to determine the group status of a batch process vent based on annualized production of the single highest-HAP recipe, as defined in paragraph (a)(1)(iii) of this section, considering all products produced or processed in the batch unit operation. The annualized production of the highest-HAP recipe shall be based exclusively on the production of the single highest-HAP recipe of all products produced or processed in the batch unit operation for a 12 month period. The production level used may be the actual production rate. It is not necessary to assume a maximum production rate (*i.e.*, 8,760 hours per year at maximum design production).

(iii) The single highest-HAP recipe for a product means the recipe of the product with the highest total mass of HAP charged to the reactor during the production of a single batch of product.

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

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

(b) *Determination of annual emissions.* The owner or operator shall calculate annual uncontrolled TOC or organic HAP emissions for each batch process vent using the methods described in paragraphs (b)(1) through (b)(8) of this section. To estimate emissions from a batch emissions episode, owners or operators may use either the emissions estimation equations in

paragraphs (b)(1) through (b)(4) of this section, or direct measurement as specified in paragraph (b)(5) of this section. Engineering assessment may be used to estimate emissions from a batch emission episode only under the conditions described in paragraph (b)(6) of this section. In using the emissions estimation equations in paragraphs (b)(1) through (b)(4) of this section, individual component vapor pressure and molecular weight may be obtained from standard references. Methods to determine individual HAP partial pressures in multicomponent systems are described in paragraph (b)(9) of this section. Other variables in the emissions estimation equations may be obtained through direct measurement, as defined in paragraph (b)(5) of this section, through engineering assessment, as defined in paragraph (b)(6)(ii) of this section, by process knowledge, or by any other appropriate means. Assumptions used in determining these variables must be documented. Once emissions for the batch emission episode have been determined using either the emissions estimation equations, direct measurement, or engineering assessment, emissions from a batch cycle shall be calculated in accordance with paragraph (b)(7) of this section, and annual emissions from the batch process vent shall be calculated in accordance with paragraph (b)(8) of this section.

(1) TOC or organic HAP emissions from the purging of an empty vessel shall be calculated using Equation 2. Equation 2 shall be used to estimate emissions from a vessel that has not been purged in account evaporation of any residual liquid.

$$E_{episode} = \frac{(V_{ves})(P)(MW_{wzvg})}{RT} (1 - 0.37^m) \quad [Eq. 2]$$

Where:

Episode = Emissions, kg/episode.

Vves = Volume of vessel, m<sup>3</sup>.

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

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

R = Ideal gas constant, 8.314 m<sup>3</sup>·kPa/kmol·K.

T = Temperature of vessel vapor space, K.

m = Number of purging cycles.

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

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

Where:

Episode = Emissions, kg/episode.

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

Vdr = Volumetric gas displacement rate, m<sup>3</sup>/min.

P = Pressure in vessel vapor space, kPa.

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

R = Ideal gas constant, 8.314 m<sup>3</sup>·kPa/kmol·K.

T = Temperature of vessel vapor space, K.

P<sub>i</sub> = Vapor pressure of TOC or individual organic HAP *i*, kPa.

x<sub>i</sub> = Mole fraction of TOC or organic HAP *i* in the liquid.

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

T<sub>m</sub> = Minutes/episode.

(3) Emissions from  $E_{episode} = \frac{(y)(V)(P)(MW_{wavg})}{RT}$  [Eq. 4] into or out of a vessel shall be calculated using

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

where:

E<sub>episode</sub> = Emissions, kg/episode.

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

V = Volume of gas displaced from the vessel, m<sup>3</sup>.

P = Pressure in vessel vapor space, kPa.

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

R = Ideal gas constant, 8.314 m<sup>3</sup>·kPa/kmol·K.

T = Temperature of vessel vapor space, K.

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

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

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

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



Where:

Episode = Emissions, kg/episode.

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

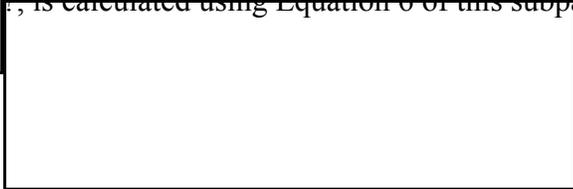
n = Number of organic HAP in stream. Note: Summation not applicable if TOC emissions are being estimated.

$\Delta\eta$  = Number of kilogram-moles (kg-moles) of gas displaced, determined in accordance with paragraph (b)(4)(i)(B) of this section.

101.325 = Constant, kPa.

(MWWAVG,T1), (MWWAVG,T2) = Weighted average molecular weight of TOC or total organic HAP in the displaced gas stream, determined in accordance with paragraph (b)(4)(i)(D)

$\Delta\eta = \frac{V_f}{R} \left[ \left( \frac{Pa_1}{T_1} \right) - \left( \frac{Pa_2}{T_2} \right) \right]$  [Eq. 6] is calculated using Equation 6 of this subpart.



Where:

$\Delta\eta$  = Number of kg-moles of gas displaced.

Vfs = Volume of free space in the vessel, m<sup>3</sup>.

R = Ideal gas constant, 8.314 m<sup>3</sup>·kPa/kmol·K.

Pa1 = Initial noncondensable gas partial pressure in the vessel, kPa.

Pa2 = Final noncondensable gas partial pressure, kPa.

T1 = Initial temperature of vessel, K.

T2 = Final temperature of vessel, K.

(C)  $P_a$  of the noncondensable gas in the vessel shall be calculated using

Equ 
$$P_a = 101.325 - \sum_{i=1}^n (P_i)_T \quad [\text{Eq. 7}]$$

Where:

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

101.325 = Constant, kPa.

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

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

(D) The we  
 MWavg,

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

the displaced gas,

where:

C=TOC or organic HAP component

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

(ii) If the vessel contents are heated to a temperature greater than 50 K below the boiling point, then emissions from the heating of a vessel shall be calculated as the sum of the emissions calculated in accordance with paragraphs (b)(4)(ii)(A) and (b)(4)(ii)(B) of this section.

(A) For the interval from the initial temperature to the temperature 50 K below the boiling point, emissions shall be calculated using Equation 5 of this subpart, where T2 is the temperature 50 K below the boiling point.

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

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

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

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

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

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

where:

Eepisode=Emissions, kg/episode.

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

Vfs=Volume of the free space in the vessel, m<sup>3</sup>.

P=Pressure in vessel vapor space, kPa.

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

R=Ideal gas constant, 8.314 m<sup>3</sup>δdkPa/kmolδdK.

T=Temperature of condenser exit stream, K.

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

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

(ii) Annual average batch vent flow rate shall be determined as specified in paragraph (e) of this section.

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

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

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

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

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

Where:

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

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

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

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

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

$T_h$  = Hours/episode

$n$  = Number of organic HAP in stream. Note: Summation not applicable if TOC emissions are being estimated using a TOC concentration measured using Method 25A, 40 CFR part 60, appendix A.

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

(s) 
$$E_{point} = K \sum_{j=1}^n C_j M_j FR \quad [Eq. 10]$$
 emission rate shall be calculated using Equation 10 of this

Where:

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

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

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

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

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

n = Number of organic HAP in stream. Note: Summation not applicable if TOC emissions are being estimated using a TOC concentration measured using Method 25A, 40 CFR part 60, appendix A.

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

episode shall be calculated using Equation 11 of this

where:

E<sub>episode</sub>=Emissions, kg/episode.

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

E<sub>i</sub>=Emissions for measurement point i, kg/hr.

n=Number of measurements.

(6) Engineering assessment may be used to estimate emissions from a batch emission episode, if the criteria in paragraph (b)(6)(i) are met. Data or other information used to demonstrate that the criteria in paragraph (b)(6)(i) of this section have been met shall be reported as specified in paragraph (b)(6)(iii) of this section. Paragraph (b)(6)(ii) of this section defines engineering assessment, for the purposes of estimating emissions from a batch emissions episode. All data, assumptions, and procedures used in an engineering assessment shall be documented.

(i) If the criteria specified in paragraph (b)(6)(i)(A), (B), or (C) are met for a specific batch emission episode, the owner or operator may use engineering assessment, as described in paragraph (b)(6)(ii) of this section, to estimate emissions from that batch emission episode, and the owner or operator is not required to use the emissions estimation equations described in paragraphs (b)(1) through (b)(4) of this section to estimate emissions from that batch emission episode.

(A) Previous test data, where the measurement of organic HAP or TOC emissions was an outcome of the test, show a greater than 20 percent discrepancy between the test value and the value estimated using the applicable equations in paragraphs (b)(1) through (b)(4) of this section. Paragraphs (b)(6)(i)(A)(1) and (2) of this section describe test data that will be acceptable under this paragraph (b)(6)(i)(A).

(1) Test data for the batch emission episode obtained during production of the product for which the demonstration is being made.

(2) Test data obtained for a batch emission episode from another process train, where the test data were obtained during production of the product for which the demonstration is being made. Test data from another process train may be used only if the owner or operator can demonstrate that the data are representative of the batch emission episode for which the demonstration is being made, taking into account the nature, size, operating conditions, production rate, and sequence of process steps (*e.g.*, reaction, distillation, etc.) of the equipment in the other process train.

(B) Previous test data obtained during the production of the product for which the demonstration is being made, for the batch emission episode with the highest organic HAP emissions on a mass basis, show a greater than 20 percent discrepancy between the test value and the value estimated using the applicable equations in paragraphs (b)(1) through (b)(4) of this section. If the criteria in this paragraph (b)(6)(i)(B) are met, then engineering assessment may be used for all batch emission episodes associated with that batch cycle for the batch unit operation.

(C) The owner or operator has requested and been granted approval to use engineering assessment to estimate emissions from a batch emissions episode. The request to use engineering assessment to estimate emissions from a batch emissions episode shall contain sufficient information and data to demonstrate to the Administrator that engineering assessment is an accurate means of estimating emissions for that particular batch emissions episode. The request to use engineering assessment to estimate emissions for a batch emissions episode shall be submitted in the Precompliance Report required under § 63.1335(e)(3).

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

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

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

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

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

(1) Use of material balances;

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

(3) Estimation of TOC or organic HAP concentrations based on saturation conditions; and

(4) Estimation of TOC or organic HAP concentrations based on grab samples of the liquid or vapor.

(iii) Data or other information used to demonstrate that the criteria in paragraph (b)(6)(i) of this section have been met shall be reported as specified in paragraphs (b)(6)(iii)(A) and (b)(6)(iii)(B) of this section.

(A) Data or other information used to demonstrate that the criteria in paragraph (b)(6)(i)(A) or (b)(6)(i)(B) of this section have been met shall be reported in the Notification of Compliance Status, as required in § 63.1327(a)(6).

(B) The request for approval to use engineering assessment to estimate emissions from a batch emissions episode as allowed under paragraph (b)(6)(i)(C) of this section, and sufficient data or other information for demonstrating to the Administrator that engineering assessment is an accurate means of estimating emissions for that particular batch emissions episode shall be submitted with the Precompliance Report, as required in § 63.1335(e)(3).

(7) For the TOC or organic HAP emissions associated with a single batch using Equation 12 of this subpart.

$$E_{\text{cycle}} = \sum_{i=1}^n E_{\text{episode}_i} \quad [Eq. 12]$$

[Redacted]

Where:

E<sub>cycle</sub>=Emissions for an individual batch cycle, kg/batch cycle

E<sub>episode i</sub>=Emissions from batch emission episode i, kg/episode

n=Number of batch emission episodes for the batch cycle

(8) HAP emissions from a batch process vent shall be calculated using

$$AE = \sum_{i=1}^n (N_i)(E_{\text{cycle}_i}) \quad [Eq. 13]$$

part.  
 [Redacted]

where:

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

N<sub>i</sub>=Number of type i batch cycles performed annually, cycles/year

E<sub>cycle i</sub>=Emissions from the batch process vent associated with a single type i batch cycle, as determined in paragraph (b)(7) of this section, kg/batch cycle

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

(9) Individual HAP partial pressures in multicomponent systems shall be determined using the appropriate method specified in paragraphs (b)(9)(i) through (b)(9)(iii) of this section.

(i) If the components are miscible, use Raoult's law to calculate the partial pressures;

(ii) If the solution is a dilute aqueous mixture, use Henry's law constants to calculate partial pressures;

(iii) If Raoult's law or Henry's law are not appropriate or available, the owner or operator may use any of the options in paragraphs (b)(9)(iii)(A), (B), or (C) of this section.

(A) Experimentally obtained activity coefficients, Henry's law constants, or solubility data;

(B) Models, such as group-contribution models, to predict activity coefficients; or

(C) Assume the components of the system behave independently and use the summation of all vapor pressures from the HAPs as the total HAP partial pressure.

(c) [Reserved]

(d) *Minimum emission level exemption.* A batch process vent with annual emissions of TOC or organic HAP less than 11,800 kg/yr is considered a Group 2 batch process vent and the owner or operator of said batch process vent shall comply with the requirements in § 63.1322(f) or (g). Annual emissions of TOC or organic HAP are determined at the exit of the batch unit operation, as described in paragraph (a)(2) of this section, and are determined as specified in paragraph (b) of this section. The owner or operator of said batch process vent is not required to comply with the provisions in paragraphs (e) through (g) of this section.

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

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

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

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

over 15 minutes

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

flow rate for a batch emission episode shall be calculated  
 rt.



Where:

AFR<sub>episode</sub> = Average batch vent flow rate for the batch emission episode, scmm.

FR<sub>i</sub> = Flow rate for individual measurement i, scmm.

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

(2) The average batch vent flow rate for a batch emission episode may be determined by the procedures specified in paragraph (b)(6)(i) of this section. All data, collected shall be documented.

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

Annual average batch vent flow rate for a batch process vent shall be calculated  
 rt.



Where:

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

DUR<sub>i</sub> = Duration of type i batch emission episodes annually, hrs/yr.

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

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

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

$CFR = (0.00437) (AE) \div 51.6$  [Eq. 16] where:

CFR = Cutoff flow rate, scmm.

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

(g) *Group 1/Group 2 status determination.* The owner or operator shall compare the cutoff flow rate, calculated in accordance with paragraph (f) of this section, with the annual average batch vent flow rate, determined in accordance with paragraph (e)(3) of this section. The group determination status for each batch process vent shall be made using the criteria specified in paragraphs (g)(1) and (g)(2) of this section.

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

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

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

(1) The concentration of each organic compound containing halogen atoms (ppmv, by compound) for each batch emission episode shall be determined after the last recovery device (if any recovery devices are present), based on any one of the following procedures:

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

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

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

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

(2) shall be calculated as follows:

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



Where:

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

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

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

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

$L_{j,i}$  = Number of atoms of halogen  $i$  in compound  $j$ .

$n$  = Number of halogenated compounds  $j$  in the batch process vent.

$$C_{\text{avg}_i} = \frac{\sum_{i=1}^n (DUR_i)(C_i)}{\sum_{i=1}^n (DUR_i)} \quad [\text{Eq. 18}]$$

$C_i$  = Average batch vent concentration of halogenated compound  $j$  in type  $i$  batch emission episode, ppmv.

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



Where:

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

$C_i$  = Average batch vent concentration of halogenated compound  $j$  in type  $i$  batch emission episode, ppmv.

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

(3) The annual mass emissions of halogen atoms for an aggregate batch vent stream shall be the sum of the annual mass emissions of halogen atoms for all batch process vents included in the aggregate batch vent stream.

(i) *Process changes affecting Group 2 batch process vents.* Whenever process changes, as described in paragraph (i)(1) of this section, are made that affect one or more Group 2 batch process vents and that could reasonably be expected to change one or more Group 2 batch process vents to Group 1 batch process vents or that could reasonably be expected to reduce the batch mass input limitation for one or more Group 2 batch process vents, the owner or operator shall comply with paragraphs (i)(2) and (3) of this section.

(1) Examples of process changes include the changes listed in paragraphs (i)(1)(i), (i)(1)(ii), and (i)(1)(iii) of this section.

(i) For all batch process vents, examples of process changes include, but are not limited to, changes in feedstock type or catalyst type; or whenever there is replacement, removal, or modification of recovery equipment considered part of the batch unit operation as specified in paragraph (a)(2) of this section; or increases in production capacity or production rate. For purposes of this paragraph (i), process changes do not include: Process upsets; unintentional, temporary process changes; and changes that are within the margin of variation on which the original group determination was based.

(ii) For Group 2 batch process vents where the group determination and batch mass input limitation are based on the expected mix of products, the situations described in paragraphs (i)(1)(ii)(A) and (B) of this section shall be considered to be process changes.

(A) The production of combinations of products not considered in establishing the batch mass input limitation.

(B) The production of a recipe of a product with a total mass of HAP charged to the reactor during the production of a single batch of product that is higher than the total mass of HAP for the recipe used as the single highest-HAP recipe for that product in the batch mass input limitation determination.

(iii) For Group 2 batch process vents where the group determination and batch mass input limitation are based on the single highest-HAP recipe (considering all products produced or processed in the batch unit operation), the production of a recipe having a total mass of HAP charged to the reactor (during the production of a single batch of product) that is higher than the total mass of HAP for the highest-HAP recipe used in the batch mass input limitation determination shall be considered to be a process change.

(2) For each batch process vent affected by a process change, the owner or operator shall redetermine the group status by repeating the procedures specified in paragraphs (b) through (g) of this section, as applicable; alternatively, engineering assessment, as described in paragraph (b)(6)(i) of this section, may be used to determine the effects of the process change.

(3) Based on the results from paragraph (i)(2) of this section, owners or operators of affected sources shall comply with either paragraph (i)(3)(i), (ii), or (iii) of this section.

(i) If the group redetermination described in paragraph (i)(2) of this section indicates that a Group 2 batch process vent has become a Group 1 batch process vent as a result of the process change, the owner or operator shall submit a report as specified in § 63.1327(b) and shall comply with the Group 1 provisions in §§ 63.1322 through 63.1327 in accordance with § 63.1310(i)(2)(ii) or (i)(2)(iii), as applicable.

(ii) If the redetermination described in paragraph (i)(2) of this section indicates that a Group 2 batch process vent with annual emissions less than the level specified in paragraph (d) of this section, that is in compliance with § 63.1322(g), now has annual emissions greater than or equal to the level specified in paragraph (d) of this section but remains a Group 2 batch process vent, the owner or operator shall comply with the provisions in paragraphs (i)(3)(ii)(A) through (C) of this section.

(A) Redetermine the batch mass input limitation;

(B) Submit a report as specified in § 63.1327(c); and

(C) Comply with § 63.1322(f), beginning with the year following the submittal of the report submitted according to paragraph (i)(3)(ii)(B) of this section.

(iii) If the group redetermination described in paragraph (i)(2) of this section indicates no change in group status or no change in the relation of annual emissions to the levels specified in paragraph (d) of this section, the owner or operator shall comply with paragraphs (i)(3)(iii)(A) and (i)(3)(iii)(B) of this section.

(A) The owner or operator shall redetermine the batch mass input limitation; and

(B) The owner or operator shall submit the new batch mass input limitation in accordance with § 63.1327(c).

(j) *Process changes to new SAN affected sources using a batch process.* Whenever process changes, as described in paragraph (j)(1) of this section, are made to a new affected source producing SAN using a batch process that could reasonably be expected to adversely impact the compliance status (*i.e.*, achievement of 84 percent emission reduction) of the affected source, the owner or operator shall comply with paragraphs (j)(2) and (3) of this section.

(1) Examples of process changes include, but are not limited to, changes in production capacity, production rate, feedstock type, or catalyst type; replacement, removal, or addition of recovery equipment considered part of a batch unit operation, as specified in paragraph (a)(1) of this section; replacement, removal, or addition of control equipment associated with a continuous or batch process vent or an aggregate batch vent stream. For purposes of this paragraph (j)(1), process changes do not include process upsets or unintentional, temporary process changes.

(2) The owner or operator shall redetermine the percent emission reduction achieved using the procedures specified in § 63.1333(c). If engineering assessment, as described in paragraph (b)(6)(i) of this section, can demonstrate that the process change did not cause the percent emission reduction to decrease, it may be used in lieu of redetermining the percent reduction using the procedures specified in § 63.1333(c).

(3) Where the redetermined percent reduction is less than 84 percent, the owner or operator of the affected source shall submit a report as specified in § 63.1327(d) and shall comply with § 63.1322(a)(3) and all associated provisions in accordance with § 63.1310(i).

19. [40 CFR 63.1324]

**Batch process vents -- monitoring equipment.**

(a) *General requirements.* Each owner or operator of a batch process vent or aggregate batch vent stream that uses a control device to comply with the requirements in § 63.1322(a) or § 63.1322(b), shall install the monitoring equipment specified in paragraph (c) of this section. All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(1) This monitoring equipment shall be in operation at all times when batch emission episodes, or portions thereof, that the owner or operator has selected to control are vented to the control device, or at all times when an aggregate batch vent stream is vented to the control device.

(2) Except as otherwise provided in this subpart, the owner or operator shall operate control devices such that the daily average of monitored parameters, established as specified in paragraph (f) of this section, remains above the minimum level or below the maximum level, as appropriate.

(b) *Continuous process vents.* Each owner or operator of a continuous process vent that uses a control device or recovery device to comply with the requirements in § 63.1322(a)(3) shall comply with the applicable requirements of § 63.1315(a) as specified in § 63.1321(b).

(c) *Batch process vent and aggregate batch vent stream monitoring equipment.* The monitoring equipment specified in paragraphs (c)(1) through (c)(8) of this section shall be installed as specified in paragraph (a) of this section. The parameters to be monitored are specified in Table 7 of this subpart.

(1) Where an incinerator is used, a temperature monitoring device equipped with a continuous recorder is required.

- (i) Where an incinerator other than a catalytic incinerator is used, the temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.
  - (ii) Where a catalytic incinerator is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.
- (2) Where a flare is used, a device (including but not limited to a thermocouple, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting the presence of a pilot flame is required.
- (3) Where a boiler or process heater of less than 44 megawatts design heat input capacity is used, a temperature monitoring device in the firebox equipped with a continuous recorder is required. Any boiler or process heater in which all batch process vents or aggregate batch vent streams are introduced with the primary fuel or are used as the primary fuel is exempt from this requirement.
- (4) Where a scrubber is used with an incinerator, boiler, or process heater in concert with the combustion of halogenated batch process vents or halogenated aggregate batch vent streams, the following monitoring equipment is required for the scrubber.
- (i) A pH monitoring device equipped with a continuous recorder to monitor the pH of the scrubber effluent.
  - (ii) A flow measurement device equipped with a continuous recorder shall be located at the scrubber influent for liquid flow. Gas stream flow shall be determined using one of the procedures specified in paragraphs (c)(4)(ii)(A) through (c)(4)(ii)(C) of this section.
    - (A) The owner or operator may determine gas stream flow using the design blower capacity, with appropriate adjustments for pressure drop.
    - (B) If the scrubber is subject to regulations in 40 CFR parts 264 through 266 that have required a determination of the liquid to gas (L/G) ratio prior to the applicable compliance date for this subpart, the owner or operator may determine gas stream flow by the method that had been utilized to comply with those regulations. A determination that was conducted prior to the compliance date for this subpart may be utilized to comply with this subpart if it is still representative.
    - (C) The owner or operator may prepare and implement a gas stream flow determination plan that documents an appropriate method which will be used to determine the gas stream flow. The plan shall require determination of gas stream flow by a method which will at least provide a value for either a representative or the highest gas stream flow anticipated in the scrubber during representative operating conditions other than start-ups, shutdowns, or malfunctions. The plan shall include a description of the methodology to be followed and an explanation of how the selected methodology will reliably determine the gas stream flow, and a description of the records that will be maintained to document the

determination of gas stream flow. The owner or operator shall maintain the plan as specified in § 63.1335(a).

(5) Where an absorber is used, a scrubbing liquid temperature monitoring device and a specific gravity monitoring device are required, each equipped with a continuous recorder.

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

(7) Where a carbon adsorber is used, an integrating regeneration steam flow or nitrogen flow, or pressure monitoring device having an accuracy of  $\pm 10$  percent of the flow rate, level, or pressure, or better, capable of recording the total regeneration steam flow or nitrogen flow, or pressure (gauge or absolute) for each regeneration cycle; and a carbon bed temperature monitoring device, capable of recording the carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle are required.

(8) As an alternate to paragraphs (c)(5) through (c)(7) of this section, the owner or operator may install an organic monitoring device equipped with a continuous recorder.

(d) *Alternative monitoring parameters.* An owner or operator of a batch process vent or aggregate batch vent stream may request approval to monitor parameters other than those required by paragraph (c) of this section. The request shall be submitted according to the procedures specified in § 63.1327(f) and § 63.1335(f). Approval shall be requested if the owner or operator:

(1) Uses a control device other than those included in paragraph (c) of this section; or

(2) Uses one of the control devices included in paragraph (c) of this section, but seeks to monitor a parameter other than those specified in Table 7 of this subpart and paragraph (c) of this section.

(e) *Monitoring of bypass lines.* Owners or operators of a batch process vent or aggregate batch vent stream using a vent system that contains bypass lines that could divert emissions away from a control device used to comply with § 63.1322(a) or § 63.1322(b) shall comply with either paragraph (e)(1) or (e)(2) of this section. Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to this paragraph (e).

(1) Properly install, maintain, and operate a flow indicator that takes a reading at least once every 15 minutes. Records shall be generated as specified in § 63.1326(e)(3). The flow indicator shall be installed at the entrance to any bypass line that could divert emissions away from the control device and to the atmosphere; or

(2) Secure the bypass line damper or valve in the non-diverting position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the damper or valve is maintained in the non-diverting position and emissions are not diverted through the bypass line. Records shall be generated as specified in § 63.1326(e)(4).

(f) *Establishment of parameter monitoring levels.* Parameter monitoring levels for batch process vents and aggregate batch vent streams shall be established as specified in paragraphs (f)(1) through (f)(3) of this section. For continuous process vents complying with § 63.1322(a)(3), parameter monitoring levels shall be established as specified in § 63.1315(a), except as specified in paragraph (f)(4) of this section.

(1) For each parameter monitored under paragraph (c) or (d) of this section, the owner or operator shall establish a level, defined as either a maximum or minimum operating parameter as denoted in Table 8 of this subpart, that indicates proper operation of the control device. The level shall be established in accordance with the procedures specified in § 63.1334. The level may be based upon a prior performance test conducted for determining compliance with a regulation promulgated by EPA, and the owner or operator is not required to conduct a performance test under § 63.1325, provided that the prior performance test meets the conditions of § 63.1325(b)(3).

(i) For batch process vents using a control device to comply with § 63.1322(a)(2), the established level shall reflect the control efficiency established as part of the initial compliance demonstration specified in § 63.1325(c)(2).

(ii) For aggregate batch vent streams using a control device to comply with § 63.1322(b)(2), the established level shall reflect the emission reduction requirement of either 90 percent or 20 ppmv specified in § 63.1322(b)(2).

(iii) For batch process vents and aggregate batch vent streams using a control device to comply with § 63.1322(a)(3), the established level shall reflect the control efficiency established as part of the initial compliance demonstration specified in § 63.1325(f)(4).

(2) The established level, along with supporting documentation, shall be submitted in the Notification of Compliance Status or the operating permit application as required in § 63.1335(e)(5) or § 63.1335(e)(8), respectively.

(3) The operating day shall be defined as part of establishing the parameter monitoring level and shall be submitted with the information in paragraph (f)(2) of this section. The definition of operating day shall specify the time(s) at which an operating day begins and ends. The operating day shall not exceed 24 hours.

(4) For continuous process vents using a control or recovery device to comply with § 63.1322(a)(3), the established level shall reflect the control efficiency established as part of the initial compliance demonstration specified in § 63.1325(f)(4).

20. **[40 CFR 63.1325]**

**Batch process vents -- performance test methods and procedures to determine compliance.**

(a) *Use of a flare.* When a flare is used to comply with § 63.1322(a)(1), § 63.1322(a)(3), § 63.1322(b)(1), or § 63.1322(b)(3), the owner or operator of an affected source shall comply with § 63.1333(e).

(b) *Exceptions to performance tests.* An owner or operator is not required to conduct a performance test when a control device specified in paragraphs (b)(1) through (b)(5) of this section is used to comply with § 63.1322(a)(2) or (a)(3).

(1) A boiler or process heater with a design heat input capacity of 44 megawatts or greater.

(2) A boiler or process heater where the vent stream is introduced with the primary fuel or is used as the primary fuel.

(3) A control device for which a performance test was conducted for determining compliance with a regulation promulgated by the EPA and the test was conducted using the same Methods specified in this section and either no deliberate process changes have been made since the test, or the owner or operator can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes. Recovery devices used for controlling emissions from continuous process vents complying with § 63.1322(a)(3) are also eligible for the exemption described in this paragraph (b)(3).

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

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

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

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

(c) *Batch process vent testing and procedures for compliance with § 63.1322(a)(2).* Except as provided in paragraph (a) or (b) of this section, an owner or operator using a control device to comply with § 63.1322(a)(2) shall conduct a performance test using the procedures specified in paragraph (c)(1) of this section in order to determine the control efficiency of the control device. An owner or operator shall determine the percent reduction for the batch cycle using the control efficiency of the control device as specified in paragraphs (c)(2)(i) through (c)(2)(iii) of this section and the procedures specified in paragraph (c)(2) of this section. Compliance may be based on either total organic HAP or TOC. For purposes of this paragraph (c), the term "batch emission episode" shall have the meaning "period of the batch emission episode selected for control," which may be the entire batch emission episode or may only be a portion of the batch emission episode.

(1) Performance tests shall be conducted as specified in paragraphs (c)(1)(i) through (c)(1)(v) of this section.

(i) Except as specified in paragraph (c)(1)(i)(A) of this section, a test shall be performed for the entire period of each batch emission episode in the batch cycle that the owner or operator selects to control as part of achieving the required 90 percent emission reduction for the batch cycle specified in § 63.1322(a)(2). Only one test is required for each batch emission episode selected by the owner or operator for control. The owner or operator shall follow the procedures listed in paragraphs (c)(1)(i)(B) through (c)(1)(i)(D) of this section.

(A) Alternatively, an owner or operator may choose to test only those periods of the batch emission episode during which the emission rate for the entire episode can be determined or during which the emissions are greater than the average emission rate of the batch emission episode. The owner or operator choosing either of these options shall develop an emission profile for the entire batch emission episode, based on either process knowledge or test data collected, to demonstrate that test periods are representative. Examples of information that could constitute process knowledge include calculations based on material balances and process stoichiometry. Previous test results may be used provided the results are still relevant to the current batch process vent conditions.

(B) Method 1 or 1A, 40 CFR part 60, appendix A, as appropriate, shall be used for selection of the sampling sites if the flow measuring device is a pitot tube, except that references to particulate matter in Method 1A do not apply for the purposes of this subpart. No traverse is necessary when Method 2A or 2D, 40 CFR part 60, appendix A is used to determine gas stream volumetric flow rate. Inlet sampling sites shall be located as specified in paragraphs (c)(1)(i)(B)(1) and (c)(1)(i)(B)(2) of this section. Outlet sampling sites shall be located at the outlet of the control device prior to release to the atmosphere.

(1) The control device inlet sampling site shall be located at the exit from the batch unit operation before any control device. § 63.1323(a)(2) describes those recovery devices considered part of the unit operation. Inlet sampling sites would be after these specified recovery devices.

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

(C) Gas stream volumetric flow rate and/or average batch vent flow rate shall be determined as specified in § 63.1323(e).

(D) Method 18 or Method 25A, 40 CFR part 60, appendix A shall be used to determine the concentration of organic HAP or TOC, as appropriate. Alternatively, any other method or data that has been validated according to the applicable procedures in Method 301 of

appendix A of this part may be used. The use of Method 25A, 40 CFR part 60, appendix A shall conform with the requirements in paragraphs (c)(1)(i)(D)(1) and (c)(1)(i)(D)(2) of this section.

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

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

(ii) If an integrated sample is taken over the entire test period to determine average batch vent emission episode shall

$$E_{episode,inlet} = K \left[ \sum_{j=1}^n (C_{j,inlet}) (M_j) \right] (AFR_{outlet}) (T_h) \quad [Eq. 19]$$

$$E_{episode,outlet} = K \left[ \sum_{j=1}^n (C_{j,outlet}) (M_j) \right] (AFR_{outlet}) (T_h) \quad [Eq. 20]$$

Where:

Eepisode=Inlet or outlet emissions, kg/episode.

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

Cj=Average inlet or outlet concentration of TOC or sample organic HAP component j of the gas stream for the batch emission episode, dry basis, ppmv.

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

AFR = Average inlet or outlet flow rate of gas stream for the batch emission episode, dry basis, scmm.

Th=Hours/episode.

n=Number of organic HAP in stream. Note: Summation is not applicable if TOC emissions are being estimated using a TOC concentration measured using Method 25A, 40 CFR part 60, appendix A.

(iii) If grab samples are taken to determine average batch vent concentration of TOC or total organic HAP, emissions shall be calculated according to paragraphs (c)(1)(iii)(A) and (B) of this section.

$E_{\text{point, inlet}} = K \left  \sum_{j=1}^n C_j M_j \right  FR_{\text{inlet}} \quad [\text{Eq. 21}]$	sion rates shall be calculated using Equations 21
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$E_{\text{point, outlet}} = K \left  \sum_{j=1}^n C_j M_j \right  FR_{\text{outlet}} \quad [\text{Eq. 22}]$	
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Where:

E<sub>point</sub>=Inlet or outlet emission rate for the measurement point, kg/hr.

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

C<sub>j</sub>=Inlet or outlet concentration of TOC or sample organic HAP component j of the gas stream, dry basis, ppmv.

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

FR=Inlet or outlet flow rate of gas stream for the measurement point, dry basis, scmm.

n=Number of organic HAP in stream. Note: Summation is not applicable if TOC emissions are being estimated using a TOC concentration measured using Method 25A, 40 CFR part 60, appendix A.

(B) The emission rate of this substance during an episode is calculated using Equations 23 and 24 of this subpart.

$$E_{episode,inlet} = (DUR) \left[ \sum_{i=1}^n \frac{E_{point,inlet,i}}{n} \right] \quad [Eq. 23]$$

$$E_{episode,outlet} = (DUR) \left[ \sum_{i=1}^n \frac{E_{point,outlet,i}}{n} \right] \quad [Eq. 24]$$

where:

Eepisode = Inlet or outlet emissions, kg/episode.

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

Epoint,i = Inlet or outlet emissions for measurement point i, kg/hr.

n = Number

(iv) The control efficiency of this subpart is calculated using Equation 25 of this subpart.

$$R = \frac{\sum_{i=1}^n E_{inlet,i} - \sum_{i=1}^n E_{outlet,i}}{\sum_{i=1}^n E_{inlet,i}} (100) \quad [Eq. 25]$$

where:

R = Control efficiency of control device, percent.

$E_{inlet}$  = Mass rate of TOC or total organic HAP for batch emission episode  $i$  at the inlet to the control device as calculated under paragraph (c)(1)(ii) or (c)(1)(iii) of this section, kg/hr.

$E_{outlet}$  = Mass rate of TOC or total organic HAP for batch emission episode  $i$  at the outlet of the control device, as calculated under paragraph (c)(1)(ii) or (c)(1)(iii) of this section, kg/hr.

$n$  = Number of batch emission episodes in the batch cycle selected to be controlled.

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

(2) The percent reduction for the batch cycle shall be determined using Equation 26 of this

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 (c)(2)  
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 shall  
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$PR = \frac{\sum_{i=1}^n E_{unc} + \sum_{i=1}^n E_{inlet,con} - \sum_{i=1}^n (1-R) E_{inlet,con}}{\sum_{i=1}^n E_{unc} + \sum_{i=1}^n E_{inlet,con}} \quad (100) \quad [Eq. 26]$	) (i) through le percent emission episodes, include cted for control.
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Where:

PR = Percent reduction

$E_{unc}$  = Mass rate of TOC or total organic HAP for uncontrolled batch emission episode  $i$ , kg/hr.

$E_{inlet,con}$  = Mass rate of TOC or total organic HAP for controlled batch emission episode  $i$  at the inlet to the control device, kg/hr.

$R$  = Control efficiency of control device as specified in paragraphs (c)(2)(i) through (c)(2)(iii) of this section.

$n$  = Number of uncontrolled batch emission episodes, controlled batch emission episodes, and control devices. The value of  $n$  is not necessarily the same for these three items.

- (i) If a performance test is required by paragraph (c) of this section, the control efficiency of the control device shall be as determined in paragraph (c)(1)(iv) of this section.
- (ii) If a performance test is not required by paragraph (c) of this section for a combustion control device, as specified in paragraph (b) of this section, the control efficiency shall be 98 percent. The control efficiency for a flare shall be 98 percent.
- (iii) If a performance test is not required by paragraph (c) of this section for a noncombustion control device, the control efficiency shall be determined by the owner or operator based on engineering assessment.
- (d) *Batch process vent and aggregate batch vent stream testing for compliance with § 63.1322(c) [halogenated emission streams].* An owner or operator controlling halogenated emissions in compliance with § 63.1322(c) shall conduct a performance test to determine compliance with the control efficiency specified in § 63.1322(c)(1) or the emission limit specified in § 63.1322(c)(2) for hydrogen halides and halogens.
- (1) Sampling sites shall be located at the inlet and outlet of the scrubber or other halogen reduction device used to reduce halogen emissions in complying with § 63.1322(c)(1) or at the outlet of the halogen reduction device used to reduce halogen emissions in complying with § 63.1322(c)(2).
- (2) The mass emissions of each hydrogen halide and halogen compound for the batch cycle or aggregate batch vent stream shall be calculated from the measured concentrations and the gas stream flow rate(s) determined by the procedures specified in paragraphs (d)(2)(i) and (d)(2)(ii) of this section except as specified in paragraph (d)(5) of this section.
- (i) Method 26 or Method 26A, 40 CFR part 60, appendix A, shall be used to determine the concentration, in Mg per dry scm, of total hydrogen halides and halogens present in the emissions stream.
- (ii) Gas stream volumetric flow rate and/or average batch vent flow rate shall be determined as specified in § 63.1323(e).
- (3) To determine compliance with the percent reduction specified in § 63.1322(c)(1), the mass emissions for any hydrogen halides and halogens present at the inlet of the scrubber or other halogen reduction device shall be summed together. The mass emissions of any hydrogen halides or halogens present at the outlet of the scrubber or other halogen reduction device shall be summed together. Percent reduction shall be determined by subtracting the outlet mass emissions from the inlet mass emissions and then dividing the result by the inlet mass emissions and multiplying by 100.
- (4) To determine compliance with the emission limit specified in § 63.1322(c)(2), the annual mass emissions for any hydrogen halides and halogens present at the outlet of the halogen reduction device and prior to any combustion device shall be summed together and compared to the emission limit specified in § 63.1322(c)(2).

(5) The owner or operator may use any other method to demonstrate compliance if the method or data has been validated according to the applicable procedures of Method 301 of appendix A of this part.

(e) *Aggregate batch vent stream testing for compliance with § 63.1322(b)(2) or (b)(3).* Except as specified in paragraphs (e)(1) through (e)(3) of this section, owners or operators of aggregate batch vent streams complying with § 63.1322(b)(2) or (b)(3) shall conduct a performance test using the performance testing procedures for continuous process vents in § 63.116(c).

(1) For purposes of this subpart, when the provisions of § 63.116(c) specify that Method 18, 40 CFR part 60, appendix A, shall be used, Method 18 or Method 25A, 40 CFR part 60, appendix A, may be used. The use of Method 25A, 40 CFR part 60, appendix A, shall conform with the requirements in paragraphs (e)(1)(i) and (e)(1)(ii) of this section.

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

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

(2) When § 63.116(c)(4) refers to complying with an emission reduction of 98 percent, for purposes of this subpart, the 90 percent reduction requirement specified in § 63.1322(b)(2) shall apply.

(3) When a combustion device is used to comply with the 20 parts per million by volume outlet concentration standard specified in § 63.1322(b)(2), the correction to 3 percent oxygen specified in the performance testing procedures of § 63.116(c)(3) and § 63.116(c)(3)(iii) is only required when supplemental combustion air is used to combust the emissions, for the purposes of this subpart.

(f) *Compliance with § 63.1322(a)(3) [new SAN batch affected sources].* Except as provided in paragraph (b) of this section, an owner or operator using a control or recovery device to comply with the percent reduction requirement in § 63.1322(a)(3) shall conduct performance tests as specified in either paragraph (f)(1), (f)(2), or (f)(3) of this section, as applicable. Compliance with § 63.1322(a)(3) shall be determined as specified in paragraph (f)(4) of this section.

(1) For batch process vents, performance tests shall be conducted using the procedures specified in paragraph (c) of this section, except that the owner or operator is not required to determine the percent reduction for the batch cycle as specified in paragraph (c)(2) of this section.

(2) For continuous process vents, performance tests shall be conducted as required by the applicable requirements of § 63.1315(a) as specified in § 63.1321(b).

(3) For aggregate batch vent streams, performance tests shall be conducted as specified in paragraph (e) of this section.

(4) Compliance with the percent reduction requirement of § 63.1322(a)(3) shall be demonstrated using the procedures specified in § 63.1333(c) and the control device efficiencies specified in either paragraph (f)(4)(i) or (f)(4)(ii) of this section. Emissions for uncontrolled continuous process vents and aggregate batch vent streams shall be determined based on the direct measurement procedures specified in paragraph (f)(2) and (f)(3) of this section, respectively, or based on engineering assessment, as specified in § 63.1323(b)(6)(i). At the discretion of the owner or operator, emissions for uncontrolled batch process vents shall be determined based on any of the procedures in § 63.1323(b).

(i) For noncombustion devices, the control efficiency shall be as determined by the performance test required by paragraph (f)(1), (f)(2), or (f)(3) of this section. Alternatively, if a performance test is not required by paragraph (c) of this section, the control efficiency shall be determined by the owner or operator based on engineering assessment.

(ii) For combustion devices, the control efficiency shall be as determined by the performance test required by paragraph (f)(1), (f)(2), or (f)(3) of this section. Alternatively, if a performance test is not required, the control efficiency shall be 98 percent. The control efficiency for a flare shall be 98 percent.

(g) *Batch mass input limitation.* The batch mass input limitation required by § 63.1322(g)(1) shall be determined by the owner or operator such that annual emissions for the batch process vent remain less than the level specified in § 63.1323(d). The batch mass input limitation required by § 63.1322(f)(1) shall be determined by the owner or operator such that annual emissions remain at a level that ensures that said batch process vent remains a Group 2 batch process vent, given the actual annual flow rate for said batch process vent determined according to the procedures specified in § 63.1323(e)(3). The batch mass input limitation shall be determined using the same basis, as described in § 63.1323(a)(1), used to make the group determination (*i.e.*, expected mix of products or highest-HAP recipe.) The establishment of the batch mass input limitation is not dependent upon any past production or activity level.

(1) If the expected mix of products serves as the basis for the batch mass input limitation, the batch mass input limitation shall be determined based on any foreseeable combination of products that the owner or operator expects to manufacture.

(2) If the single highest-HAP recipe serves as the basis for the batch mass input limitation, the batch mass input limitation shall be determined based solely on the production of the single highest-HAP recipe, considering all products produced or processed in the batch unit operation.

21. [40 CFR 63.1326]

**Batch process vents -- recordkeeping provisions.**

(a) *Group determination records for batch process vents.* Except as provided in paragraphs (a)(7) and (a)(8) of this section, each owner or operator of an affected source shall maintain the records specified in paragraphs (a)(1) through (a)(6) of this section for each batch process vent subject to the group determination procedures of § 63.1323. Except for paragraph (a)(1) of this section, the records required by this paragraph (a) are restricted to the information developed and used to make the group determination under §§ 63.1323(b) through 63.1323(g), as appropriate. If an owner or operator did not need to develop certain information (*e.g.*, annual average batch vent flow rate) to determine the group status, this paragraph (a) does not require that additional information be developed. Paragraph (a)(9) of this section specifies the recordkeeping requirements for Group 2 batch process vents that are exempt from the batch mass input limitation provisions, as allowed under § 63.1322(h).

(1) An identification of each unique product that has emissions from one or more batch emission episodes venting from the batch process vent, along with an identification of the single highest-HAP recipe for each product and the mass of HAP fed to the reactor for that recipe.

(2) A description of, and an emission estimate for, each batch emission episode, and the total emissions associated with one batch cycle, as described in either paragraph (a)(2)(i) or (a)(2)(ii) of this section, as appropriate.

(i) If the group determination is based on the expected mix of products, records shall include the emission estimates for the single highest-HAP recipe of each unique product identified in paragraph (a)(1) of this section that was considered in making the group determination under § 63.1323.

(ii) If the group determination is based on the single highest-HAP recipe (considering all products produced or processed in the batch unit operation), records shall include the emission estimates for the single highest-HAP recipe.

(3) Total annual uncontrolled TOC or organic HAP emissions, determined at the exit from the batch unit operation before any control device, determined in accordance with § 63.1323(b).

(i) For Group 2 batch process vents, said emissions shall be determined at the batch mass input limitation.

(ii) For Group 1 batch process vents, said emissions shall be those used to determine the group status of the batch process vent.

(4) The annual average batch vent flow rate for the batch process vent, determined in accordance with § 63.1323(e).

- (5) The cutoff flow rate, determined in accordance with § 63.1323(f).
- (6) The results of the batch process vent group determination, conducted in accordance with § 63.1323(g).
- (7) If a batch process vent is subject to § 63.1322(a) or (b), none of the records in paragraphs (a)(1) through (a)(6) of this section are required.
- (8) If the total annual emissions from the batch process vent during the group determination are less than the appropriate level specified in § 63.1323(d), only the records in paragraphs (a)(1) through (a)(3) of this section are required.
- (9) For each Group 2 batch process vent that is exempt from the batch mass input limitation provisions because it meets the criteria of § 63.1322(h), the records specified in paragraphs (a)(9)(i) and (ii) shall be maintained.
  - (i) Documentation of the maximum design capacity of the TPPU; and
  - (ii) The mass of HAP or material that can be charged annually to the batch unit operation at the maximum design capacity.
- (b) *Compliance demonstration records.* Each owner or operator of a batch process vent or aggregate batch vent stream complying with § 63.1322(a) or (b), shall keep the following records, as applicable, readily accessible:
  - (1) The annual mass emissions of halogen atoms in the batch process vent or aggregate batch vent stream determined according to the procedures specified in § 63.1323(h);
  - (2) If the owner or operator of a batch process vent has chosen to comply with § 63.1322(a)(2), records documenting the batch cycle percent reduction as specified in § 63.1325(c)(2); and
  - (3) When using a flare to comply with § 63.1322 (a)(1), (a)(3), (b)(1), or (b)(3):
    - (i) The flare design (i.e., steam-assisted, air-assisted or non-assisted);
    - (ii) All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the compliance determination required by § 63.1333(e); and
    - (iii) Periods when all pilot flames were absent.
  - (4) The following information when using a control device to meet the percent reduction requirement specified in § 63.1322(a)(2), (a)(3), (b)(2), or (b)(3):
    - (i) For an incinerator or non-combustion control device, the percent reduction of organic HAP or TOC achieved, as determined using the procedures specified in § 63.1325(c) for batch process vents and § 63.1325(e) for aggregate batch vent streams;

(ii) For a boiler or process heater, a description of the location at which the vent stream is introduced into the boiler or process heater;

(iii) For a boiler or process heater with a design heat input capacity of less than 44 megawatts and where the vent stream is introduced with combustion air or used as a secondary fuel and is not mixed with the primary fuel, the percent reduction of organic HAP or TOC achieved, as determined using the procedures specified in § 63.1325(c) for batch process vents and § 63.1325(e) for aggregate batch vent streams; and

(iv) For a scrubber or other halogen reduction device following a combustion device to control halogenated batch process vents or halogenated aggregate batch vent streams, the percent reduction of total hydrogen halides and halogens as determined under § 63.1325(d)(3) or the emission limit determined under § 63.1325(d)(4).

(5) When complying with the 20 parts per million by volume outlet concentration standard specified in § 63.1322(b)(2), records of the outlet concentration of organic HAP or TOC on a dry basis. If supplemental combustion air is used to combust the emissions, the outlet concentration shall be corrected to 3 percent oxygen. If supplemental combustion air is not used, a correction to 3 percent oxygen is not required.

(c) *Establishment of parameter monitoring level records.* For each parameter monitored according to § 63.1324(c) and Table 7 of this subpart, or for alternate parameters and/or parameters for alternate control devices monitored according to § 63.1327(f) as allowed under § 63.1324(d), maintain documentation showing the establishment of the level that indicates proper operation of the control device as required by § 63.1324(f) for parameters specified in § 63.1324(c) and as required by § 63.1335(e) for alternate parameters. Said documentation shall include the parameter monitoring data used to establish the level.

(d) *Group 2 batch process vent continuous compliance records.* The owner or operator of a Group 2 batch process vent shall comply with either paragraph (d)(1) or (d)(2) of this section, as appropriate.

(1) The owner or operator of a Group 2 batch process vent that has chosen to comply with § 63.1322(g) shall keep the following records readily accessible:

(i) Records designating the established batch mass input limitation required by § 63.1322(g)(1) and specified in § 63.1325(g).

(ii) Records specifying the mass of HAP or material charged to the batch unit operation.

(2) The owner or operator of a Group 2 batch process vent that has chosen to comply with § 63.1322(f) shall keep the following records readily accessible:

(i) Records designating the established batch mass input limitation required by § 63.1322(f)(1) and specified in § 63.1325(g).

(ii) Records specifying the mass of HAP or material charged to the batch unit operation.

(e) *Controlled batch process vent continuous compliance records.* Each owner or operator of a batch process vent that has chosen to use a control device to comply with § 63.1322(a) shall keep the following records, as applicable, readily accessible:

(1) Continuous records of the equipment operating parameters specified to be monitored under § 63.1324(c) as applicable, and listed in Table 7 of this subpart, or specified by the Administrator in accordance with § 63.1327(f) as allowed under § 63.1324(d). Said records shall be kept as specified under § 63.1335(d), except as specified in paragraphs (e)(1)(i) and (e)(1)(ii) of this section.

(i) For flares, the records specified in Table 7 of this subpart shall be maintained in place of continuous records.

(ii) For carbon adsorbers, the records specified in Table 7 of this subpart shall be maintained in place of batch cycle daily averages.

(2) Records of the batch cycle daily average value of each continuously monitored parameter, except as provided in paragraph (e)(2)(iii) of this section, as calculated using the procedures specified in paragraphs (e)(2)(i) and (e)(2)(ii) of this section.

(i) The batch cycle daily average shall be calculated as the average of all parameter values measured for an operating day during those batch emission episodes, or portions thereof, in the batch cycle that the owner or operator has selected to control.

(ii) Monitoring data recorded during periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments shall not be included in computing the batch cycle daily averages. In addition, monitoring data recorded during periods of non-operation of the TPPU (or specific portion thereof) resulting in cessation of organic HAP emissions, or periods of start-up, shutdown, or malfunction shall not be included in computing the batch cycle daily averages.

(iii) If all recorded values for a monitored parameter during an operating day are above the minimum or below the maximum level established in accordance with § 63.1324(f), the owner or operator may record that all values were above the minimum or below the maximum level established rather than calculating and recording a batch cycle daily average for that operating day.

(3) Hourly records of whether the flow indicator for bypass lines specified in § 63.1324(e)(1) was operating and whether a diversion was detected at any time during the hour. Also, records of the times of all periods when the vent is diverted from the control device or the flow indicator specified in § 63.1324(e)(1) is not operating.

(4) Where a seal or closure mechanism is used to comply with § 63.1324(e)(2), hourly records of whether a diversion was detected at any time are not required. The owner or operator shall record whether the monthly visual inspection of the seals or closure mechanisms has been done, and shall record the occurrence of all periods when the seal mechanism is broken, the bypass line damper or valve position has changed, or the key for

a lock-and-key type configuration has been checked out, and records of any car-seal that has broken.

(5) Records specifying the times and duration of periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments. In addition, records specifying any other periods of process or control device operation when monitors are not operating.

(f) *Aggregate batch vent stream continuous compliance records.* In addition to the records specified in paragraphs (b) and (c) of this section, each owner or operator of an aggregate batch vent stream using a control device to comply with § 63.1322(b)(1) or (b)(2) shall keep the following records readily accessible:

(1) Continuous records of the equipment operating parameters specified to be monitored under § 63.1324(c) and listed in Table 7 of this subpart, as applicable, or specified by the Administrator in accordance with § 63.1327(f), as allowed under § 63.1324(d), with the exceptions listed in (f)(1)(i) and (f)(1)(ii) of this section.

(i) For flares, the records specified in Table 7 of this subpart shall be maintained in place of continuous records.

(ii) For carbon adsorbers, the records specified in Table 7 of this subpart shall be maintained in place of daily averages.

(2) Records of the daily average value of each continuously monitored parameter for each operating day determined according to the procedures specified in § 63.1335(d).

(3) For demonstrating compliance with the monitoring of bypass lines as specified in § 63.1324(e), records as specified in paragraphs (e)(3) or (e)(4) of this section, as appropriate.

(g) Documentation supporting the establishment of the batch mass input limitation shall include the information specified in paragraphs (g)(1) through (g)(5) of this section, as appropriate.

(1) Identification of whether the purpose of the batch mass input limitation is to comply with § 63.1322(f)(1) or (g)(1).

(2) Identification of whether the batch mass input limitation is based on the single highest-HAP recipe (considering all products) or on the expected mix of products for the batch process vent as allowed under § 63.1323(a)(1).

(3) Definition of the operating year, for the purposes of determining compliance with the batch mass input limitation.

(4) If the batch mass input limitation is based on the expected mix of products, the owner or operator shall provide documentation that describes as many scenarios for differing mixes of products (*i.e.*, how many of each type of product) as the owner or operator

desires the flexibility to accomplish. Alternatively, the owner or operator shall provide a description of the relationship among the mix of products that will allow a determination of compliance with the batch mass input limitation under any number of scenarios.

(5) The mass of HAP or material allowed to be charged to the batch unit operation per year under the batch mass input limitation.

22. [40 CFR 63.1327]

**Batch process vents -- reporting requirements.**

(a) The owner or operator of a batch process vent or aggregate batch vent stream at an affected source shall submit the information specified in paragraphs (a)(1) through (a)(6) of this section, as appropriate, as part of the Notification of Compliance Status specified in § 63.1335(e)(5).

(1) For each batch process vent complying § 63.1322(a) and each aggregate batch vent stream complying § 63.1322(b), the information specified in § 63.1326 (b) and (c), as applicable.

(2) For each Group 2 batch process vent with annual emissions less than the level specified in § 63.1323(d), the information specified in § 63.1326(d)(1)(i).

(3) For each Group 2 batch process vent with annual emissions greater than or equal to the level specified in § 63.1323(d), the information specified in § 63.1326(d)(2)(i).

(4) For each batch process vent subject to the group determination procedures, the information specified in § 63.1326(a), as appropriate.

(5) For each Group 2 batch process vent that is exempt from the batch mass input limitation provisions because it meets the criteria of § 63.1322(h), the information specified in § 63.1326(a)(1) through (3), and the information specified in § 63.1326(a)(4) through (6) as applicable, calculated at the conditions specified in § 63.1322(h).

(6) When engineering assessment has been used to estimate emissions from a batch emissions episode and the criteria specified in § 63.1323(b)(6)(i)(A) or (B) have been met, the owner or operator shall submit the information demonstrating that the criteria specified in § 63.1323(b)(6)(i)(A) or (B) have been met as part of the Notification of Compliance Status required by § 63.1335(e)(5).

(b) Whenever a process change, as defined in § 63.1323(i)(1), is made that causes a Group 2 batch process vent to become a Group 1 batch process vent, the owner or operator shall notify the Administrator and submit a description of the process change within 180 days after the process change is made or with the next Periodic Report, whichever is later. The owner or operator of an affected source shall comply with the Group 1 batch process vent provisions in §§ 63.1321 through 63.1327 in accordance with § 63.1310(i)(2)(ii).

(c) Whenever a process change, as defined in § 63.1323(i)(1), is made that causes a Group 2 batch process vent with annual emissions less than the level specified in § 63.1323(d) for which the owner or operator has chosen to comply with § 63.1322(g) to have annual emissions greater than or equal to the level specified in § 63.1323(d) but remains a Group 2 batch process vent, or if a process change is made that requires the owner or operator to redetermine the batch mass input limitation as specified in § 63.1323(i)(3), the owner or operator shall submit a report within 180 days after the process change is made or with the next Periodic Report, whichever is later. The following information shall be submitted:

- (1) A description of the process change;
- (2) The batch mass input limitation determined in accordance with § 63.1322(f)(1).

(d) Whenever a process change, as defined in § 63.1323(j)(1), is made that could potentially cause the percent reduction for all process vents at a new SAN affected source using a batch process to be less than 84 percent, the owner or operator shall notify the Administrator and submit a description of the process change within 180 days after the process change is made or with the next Periodic Report, whichever is later. The owner or operator shall comply with § 63.1322(a)(3) and all associated provisions in accordance with § 63.1310(i).

(e) The owner or operator is not required to submit a report of a process change if one of the conditions specified in paragraphs (e)(1) or (e)(2) of this section is met.

- (1) The change does not meet the description of a process change in § 63.1323(i) or (j).
- (2) The redetermined group status remains Group 2 for an individual batch process vent with annual emissions greater than or equal to the level specified in § 63.1323(d) and the batch mass input limitation does not decrease, a Group 2 batch process vent with annual emissions less than the level specified in § 63.1323(d) complying with § 63.1322(g) continues to have emissions less than the level specified in § 63.1323(d) and the batch mass input limitation does not decrease, or the achieved emission reduction remains at 84 percent or greater for new SAN affected sources using a batch process.

(f) If an owner or operator uses a control device other than those specified in § 63.1324(c) and listed in Table 7 of this subpart or requests approval to monitor a parameter other than those specified § 63.1324(c) and listed in Table 7 of this subpart, the owner or operator shall submit a description of planned reporting and recordkeeping procedures, as specified in § 63.1335(f), as part of the Precompliance Report required under § 63.1335(e)(3). The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the Precompliance Report.

(g) Owners or operators of affected sources complying with § 63.1324(e), shall comply with paragraph (g)(1) or (g)(2) of this section, as appropriate.

(1) Submit reports of the times of all periods recorded under § 63.1326(e)(3) when the batch process vent is diverted from the control device through a bypass line, with the next Periodic Report.

(2) Submit reports of all occurrences recorded under § 63.1326(e)(4) in which the seal mechanism is broken, the bypass line damper or valve position has changed, or the key to unlock the bypass line damper or valve was checked out, with the next Periodic Report.

23. **[40 CFR 63.1328]**

**Heat exchange systems provisions.**

(a) Except as specified in paragraph (b) of this section, each owner or operator of an affected source shall comply with § 63.104, with the differences noted in paragraphs (c) through (h) of this section, for the purposes of this subpart.

(b) The provisions of paragraph (a) of this section do not apply to each process contact cooling tower that is associated with an existing affected source manufacturing PET.

(c) When the term "chemical manufacturing process unit" is used in § 63.104, the term "thermoplastic product process unit" shall apply for purposes of this subpart, with the exception noted in paragraph (d) of this section.

(d) When the phrase "a chemical manufacturing process unit meeting the conditions of § 63.100(b)(1) through (b)(3) of this subpart, except for chemical manufacturing process units meeting the condition specified in § 63.100(c) of this subpart" is used in § 63.104(a), the term "a TPPU, except for TPPUs meeting the condition specified in § 63.1310(b)" shall apply for purposes of this subpart.

(e) When § 63.104 refers to Table 4 of subpart F of this part or Table 9 of subpart G of this part, the owner or operator is only required to consider organic HAP listed on Table 6 of this subpart, except for ethylene glycol which need not be considered under this section, for purposes of this subpart.

(f) When § 63.104(c)(3) specifies the monitoring plan retention requirements, and when § 63.104(f)(1) refers to the record retention requirements in § 63.103(c)(1), the requirements in §§ 63.1335(a) and 63.1335(h) shall apply, for purposes of this subpart.

(g) When § 63.104(f)(2) requires information to be reported in the Periodic Reports required by § 63.152(c), the owner or operator shall instead report the information specified in § 63.104(f)(2) in the Periodic Reports required by § 63.1335(e)(6), for the purposes of this subpart.

(h) The compliance date for heat exchange systems subject to the provisions of this section is specified in § 63.1311

24. [40 CFR 63.1329]

**Process contact cooling towers provisions.**

(a) The owner or operator of each new affected source that manufactures PET is required to comply with paragraph (b) of this section. The owner or operator of each existing affected source that manufactures PET using a continuous terephthalic acid high viscosity multiple end finisher process that utilizes a process contact cooling tower shall comply with paragraph (c) of this section, and is not required to comply with paragraph (b) of this section. The compliance date for process contact cooling towers subject to the provisions of this section is specified in § 63.1311.

(b) *New affected source requirements.* The owner or operator of a new affected source subject to this section shall comply with paragraphs (b)(1) through (b)(2) of this section.

(1) The owner or operator of a new affected source subject to this section shall not send contact condenser effluent associated with a vacuum system to a process contact cooling tower.

(2) The owner or operator of a new affected source subject to this section shall indicate in the Notification of Compliance Status, as required in § 63.1335(e)(5), that contact condenser effluent associated with vacuum systems is not sent to process contact cooling towers.

(c) *Existing affected source requirements.* The owner or operator of an existing affected source subject to this section who manufactures PET using a continuous terephthalic acid high viscosity multiple end finisher process, and who is subject or becomes subject to 40 CFR part 60, subpart DDD, shall maintain an ethylene glycol concentration in the process contact cooling tower at or below 4.0 percent by weight averaged on a daily basis over a rolling 14-day period of operating days. Compliance with this paragraph (c) shall be determined as specified in paragraphs (c)(1) through (c)(4) of this section. It should be noted that compliance with this paragraph (c) does not exempt owners or operators from complying with the provisions of § 63.1330 for those process wastewater streams that are sent to the process contact cooling tower.

(1) To determine the ethylene glycol concentration, owners or operators shall follow the procedures specified in 40 CFR 60.564(j)(1), except as provided in paragraph (c)(2) of this section.

(i) At least one sample per operating day shall be collected using the procedures specified in 40 CFR 60.564(j)(1)(i). An average ethylene glycol concentration by weight shall be calculated on a daily basis over a rolling 14-day period of operating days. Each daily average ethylene glycol concentration so calculated constitutes a performance test.

(ii) The owner or operator may elect to reduce the sampling program to any 14 consecutive operating day period once every two calendar months, if at least seventeen consecutive 14-day rolling average concentrations immediately preceding the reduced sampling program are each less than 1.2 weight percent ethylene glycol. If the average concentration obtained

over the 14 operating day sampling during the reduced test period exceeds the upper 95 percent confidence interval calculated from the most recent test results in which no one 14-day average exceeded 1.2 weight percent ethylene glycol, then the owner or operator shall reinstitute a daily sampling program. The 95 percent confidence interval shall be

$$CI_{95} = \frac{\sum_{i=1}^n X_i}{n} + 2 \sqrt{\frac{\sum_{i=1}^n X_i^2 - \left(\frac{\sum_{i=1}^n X_i}{n}\right)^2}{n(n-1)}} \quad [Eq. 27]$$

graph (c)(1)(iii) of this section. A reduced program may be specified in this paragraph (c)(1)(ii) are met.

confidence interval shall be calculated using the Equation 27 of

Where:

CI95 = 95 percent confidence interval

Xi = daily ethylene glycol concentration for each operating day used to calculate each 14-day rolling average used in test results to justify implementing the reduced testing program.

n = number of ethylene glycol concentrations.

(2) Measuring an alternative parameter, such as carbon oxygen demand or biological oxygen demand, that is demonstrated to be directly proportional to the ethylene glycol concentration shall be allowed. Such parameter shall be measured during the initial 14-day performance test during which the facility is shown to be in compliance with the ethylene glycol concentration standard whereby the ethylene glycol concentration is determined using the procedures described in paragraph (c)(1) of this section. The alternative parameter shall be measured on a daily basis and the average value of the alternative parameter shall be calculated on a daily basis over a rolling 14-day period of operating days. Each daily average value of the alternative parameter constitutes a performance test.

(3) During each performance test, daily measurement and daily average 14-day rolling averages of the ethylene glycol concentration in the cooling tower water shall be recorded. For the initial performance test, these records shall be submitted in the Notification of Compliance Status report.

(4) All periods when the 14-day rolling average exceeds the standard shall be reported in the Periodic Report.

25. [40 CFR 63.1330]

**Wastewater provisions.**

- (a) Except as specified in paragraphs (d) and (e) of this section, the owner or operator of each affected source shall comply with paragraphs (b) and (c) of this section.
- (b) The owner or operator of each affected source shall comply with the requirements of §§ 63.132 through 63.149, with the differences noted in paragraphs (b)(1) through (b)(22) of this section for the purposes of this subpart.
- (1) When the determination of equivalence criteria in § 63.102(b) is referred to in §§ 63.132, 63.133, and 63.137, the provisions in § 63.6(g) shall apply for the purposes of this subpart.
- (2) When the storage vessel requirements contained in §§ 63.119 through 63.123 are referred to in §§ 63.132 through 63.149, §§ 63.119 through 63.123 are applicable, with the exception of the differences referred to in § 63.1314, for the purposes of this subpart.
- (3) When § 63.146(a) requires the submission of a request for approval to monitor alternative parameters according to the procedures specified in § 63.151(f) or (g), owners or operators requesting to monitor alternative parameters shall follow the procedures specified in § 63.1335(f) for the purposes of this subpart.
- (4) When § 63.147(d) requires owners or operators to keep records of the daily average value of each continuously monitored parameter for each operating day as specified in § 63.152(f), owners and operators shall instead keep records of the daily average value of each continuously monitored parameter as specified in § 63.1335(d) for the purposes of this subpart.
- (5) When §§ 63.132 through 63.149 refer to an "existing source," the term "existing affected source," as defined in § 63.1310(a), shall apply for the purposes of this subpart.
- (6) When §§ 63.132 through 63.149 refer to a "new source," the term "new affected source," as defined in § 63.1310(a), shall apply for the purposes of this subpart.
- (7) When § 63.132(a) and (b) refer to the "applicable dates specified in § 63.100 of subpart F of this part," the compliance dates specified in § 63.1311 shall apply for the purposes of this subpart.
- (8) The provisions of paragraphs (b)(8)(i), (b)(8)(ii), and (b)(8)(iii) of this section clarify the organic HAP that an owner or operator shall consider when complying with the requirements in §§ 63.132 through 63.149.
- (i) When §§ 63.132 through 63.149 refer to table 8 compounds, the owner or operator is only required to consider 1,3-butadiene for purposes of this subpart.
- (ii) When §§ 63.132 through 63.149 refer to table 9 compounds, the owner or operator is only required to consider compounds that meet the definition of organic HAP in § 63.1312 and that are listed on table 9 of 40 CFR part 63, subpart G, for the purposes of this subpart, except for ethylene glycol which need not be considered.

(iii) When §§ 63.132 through 63.149 refer to compounds in table 36 of 40 CFR part 63, subpart G, or compounds on List 1 and/or List 2, as listed on table 36 of 40 CFR part 63, subpart G, the owner or operator is only required to consider compounds that meet the definition of organic HAP in § 63.1312 and that are listed in table 36 of 40 CFR part 63, subpart G, for the purposes of this subpart.

(9) Whenever §§ 63.132 through 63.149 refer to a "chemical manufacturing process unit," the term "thermoplastic product process unit," (or TPPU) as defined in § 63.1312, shall apply for the purposes of this subpart. In addition, when § 63.149 refers to "a chemical manufacturing process unit that meets the criteria of § 63.100(b) of subpart F of this part," the term "a TPPU as defined in § 63.1312(b)" shall apply for the purposes of this subpart.

(10) Whenever §§ 63.132 through 63.149 refer to a Group 1 wastewater stream or a Group 2 wastewater stream, the definitions of these terms contained in § 63.1312 shall apply for the purposes of this subpart.

(11) When § 63.149(d) refers to "§ 63.100(f) of subpart F", the phrase "§ 63.1310(c)" shall apply for the purposes of this subpart. In addition, where § 63.149(d) states "and the item of equipment is not otherwise exempt from controls by the provisions of subpart A, F, G, or H of this part", the phrase "and the item of equipment is not otherwise exempt from controls by the provisions of subparts A, F, G, H, or JJJ of this part" shall apply for the purposes of this subpart.

(12) When § 63.149(e)(1) and (e)(2) refer to "a chemical manufacturing process unit subject to the new source requirements of 40 CFR § 63.100(l)(1) or 40 CFR § 63.100(l)(2)," the phrase "a TPPU that is part of a new affected source or that is a new affected source," shall apply for the purposes of this subpart.

(13) When the Notification of Compliance Status requirements contained in § 63.152(b) are referred to in §§ 63.138 and 63.146, the Notification of Compliance Status requirements contained in § 63.1335(e)(5) shall apply for the purposes of this subpart. In addition, when §§ 63.132 through 63.149 require that information be reported according to § 63.152(b) in the Notification of Compliance Status, the owner or operator of an affected source shall report the specified information in the Notification of Compliance Status required by § 63.1335(e)(5) for the purposes of this subpart.

(14) When the Periodic Report requirements contained in § 63.152(c) are referred to in § 63.146, the Periodic Report requirements contained in § 63.1335(e)(6) shall apply for the purposes of this subpart. In addition, when §§ 63.132 through 63.149 require that information be reported in the Periodic Reports required in § 63.152(c), the owner or operator of an affected source shall report the specified information in the Periodic Reports required in § 63.1335(e)(6) for the purposes of this subpart.

(15) When § 63.143(f) specifies that owners or operators shall establish the range that indicates proper operation of the treatment process or control device, the owner or operator

shall instead comply with the requirements of § 63.1334(c) or (d) for establishing parameter level maximums/minimums for the purposes of this subpart.

(16) When § 63.146(b)(7) and § 63.146(b)(8) require that "the information on parameter ranges specified in § 63.152(b)(2)" be reported in the Notification of Compliance Status, owners and operators of affected sources are instead required to report the information on parameter levels as specified in § 63.1335(e)(5)(ii) for the purposes of this subpart.

(17) When the term "range" is used in §§ 63.132 through 63.149, the term "level" apply instead for the purposes of this subpart. This level shall be determined using the procedures specified in § 63.1334.

(18) For the purposes of this subpart, the owner or operator of an affected source is not required to include process wastewater streams that contain styrene when conducting performance tests for the purposes of calculating the required mass removal (RMR) or the actual mass removal (AMR) under the provisions described in § 63.145(f) or § 63.145(g). For purposes of this paragraph, a process wastewater stream is considered to contain styrene if the wastewater stream meets the requirements in paragraph (b)(18)(i), (ii), (iii), (iv), or (v) of this section.

(i) The wastewater stream originates at equipment that produces ABS or ABS latex;

(ii) The wastewater stream originates at equipment that produces EPS;

(iii) The wastewater stream originates at equipment that produces MABS;

(iv) The wastewater stream originates at equipment that produces MBS; or

(v) The wastewater stream originates at equipment that produces SAN.

(19) When the provisions of § 63.139(c)(1)(ii), § 63.145(d)(4), or § 63.145(i)(2) specify that Method 18, 40 CFR part 60, appendix A, shall be used, Method 18 or Method 25A, 40 CFR part 60, appendix A, may be used for the purposes of this subpart. The use of Method 25A, 40 CFR part 60, appendix A, shall conform with the requirements in paragraphs (b)(19)(i) and (b)(19)(ii) of this section.

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

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

(20) In § 63.145(j), instead of the reference to § 63.11(b), and instead of § 63.145(j)(1) and § 63.145(j)(2), the requirements in § 63.1333(e) shall apply.

(21) The owner or operator of a facility which receives a Group 1 wastewater stream, or a residual removed from a Group 1 wastewater stream, for treatment pursuant to § 63.132(g) is subject to the requirements of § 63.132(g) with the differences identified in this section, and is not subject to subpart DD of this part with respect to that material.

(22) When § 63.132(g) refers to "§§ 63.133 through 63.137" or "§§ 63.133 through 63.147", the provisions in this section 63.1330 shall apply, for the purposes of this subpart.

(c) For each affected source, the owner or operator shall comply with the requirements for maintenance wastewater in § 63.105, except that when § 63.105(a) refers to "organic HAPs listed in table 9 of subpart G of this part," the owner or operator is only required to consider compounds that meet the definition of organic HAP in § 63.1312 and that are listed in table 9 of 40 CFR part 63, subpart G, except for ethylene glycol which need not be considered, for the purposes of this subpart.

(d) The provisions of paragraph (b) of this section do not apply to each affected source producing ASA/AMSAN.

(e) The provisions of paragraphs (b) and (c) of this section do not apply to each affected source producing polystyrene using either a continuous or batch process.

26. **[40 CFR 63.1331]**

**Equipment leak provisions.**

(a) Except as provided for in paragraphs (b) and (c) of this section, the owner or operator of each affected source shall comply with the requirements of subpart H of this part, with the differences noted in paragraphs (a)(1) through (a)(13) of this section.

(1) For an affected source producing polystyrene resin, the indications of liquids dripping, as defined in subpart H of this part, from bleed ports in pumps and agitator seals in light liquid service shall not be considered to be a leak. For purposes of this subpart, a "bleed port" is a technologically-required feature of the pump or seal whereby polymer fluid used to provide lubrication and/or cooling of the pump or agitator shaft exits the pump, thereby resulting in a visible dripping of fluid.

(2) The compliance date for the equipment leak provisions contained in this section is provided in § 63.1311. Whenever subpart H of this part refers to the compliance dates specified in any paragraph contained in § 63.100, the compliance dates listed in § 63.1311(d) shall instead apply, for the purposes of this subpart. When § 63.182(c)(4) refers to "sources subject to subpart F," the phrase "sources subject to this subpart" shall apply, for the purposes of this subpart. In addition, extensions of compliance dates are addressed by § 63.1311(e) instead of § 63.182(a)(6), for the purposes of this subpart.

(3) Owners and operators of an affected source subject to this subpart are not required to submit the Initial Notification required by § 63.182(a)(1) and § 63.182(b).

(4) As specified in § 63.1335(e)(5), the Notification of Compliance Status required by paragraphs § 63.182(a)(2) and § 63.182(c) shall be submitted within 150 days (rather than 90 days) of the applicable compliance date specified in § 63.1311 for the equipment leak provisions.

(5) The information specified by § 63.182(a)(3) and § 63.182(d) (*i.e.*, Periodic Reports) shall be submitted as part of the Periodic Reports required by § 63.1335(e)(6).

(i) A leak is determined to be detected if there is evidence of a potential leak found by visual, audible, or olfactory means. Method 21, 40 CFR part 60, appendix A may not be used to determine the presence or absence of a leak.

(ii)(A) When a leak is detected, it shall be repaired as soon as practical, but not later than 15 days after it is detected, except as provided in § 63.171.

(B) The first attempt at repair shall be made no later than 5 days after each leak is detected.

(C) Repaired shall mean that the visual, audible, olfactory, or other indications of a leak have been eliminated; that no bubbles are observed at potential leak sites during a leak check using soap solution; or that the system will hold a test pressure.

(iii) An owner or operator is not required to develop an initial list of identification numbers as would otherwise be required under § 63.181(b)(1)(i) or § 63.181(b)(4).

(iv) When recording the detection of a leak under § 63.182(d)(1), the owner or operator of an affected source shall comply with paragraphs (a)(6)(iv)(A) through (a)(6)(iv)(B) of this section.

(A) When complying with § 63.181(d)(1), provide an identification number for the leaking equipment at the time of recordkeeping. Further, the owner or operator is not required to record the identification number of the instrument (*i.e.*, Method 21 instrument) because the use of Method 21 is not an acceptable method for determining a leak under this paragraph (a)(6).

(B) An owner or operator is not required to comply with § 63.181(d)(4) which requires a record of the maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A.

(v) Indications of liquids dripping, as defined in subpart H of this part, from packing glands for pumps in ethylene glycol service where the pump seal is designed to weep fluid shall not be considered to be a leak. Ethylene glycol dripping from pump seals must be captured in a catchpan and returned to the process.

(7) When § 63.166(b)(4)(i) refers to Table 9 of subpart G of this part, the owner or operator is only required to consider organic HAP listed on Table 6 of this subpart for purposes of this subpart, except for ethylene glycol which need not be considered.

(8) When the provisions of subpart H of this part specify that Method 18, 40 CFR part 60, appendix A, shall be used, Method 18 or Method 25A, 40 CFR part 60, appendix A, may be used for the purposes of this subpart. The use of Method 25A, 40 CFR part 60, appendix A, shall conform with the requirements in paragraphs (a)(8)(i) and (a)(8)(ii) of this section.

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

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

(9) [Reserved]

(10) If specific items of equipment, comprising part of a process unit subject to this subpart, are managed by different administrative organizations (*e.g.*, different companies, affiliates, departments, divisions, *etc.*), those items of equipment may be aggregated with any TPPU within the affected source for all purposes under subpart H of this part, providing there is no delay in achieving the applicable compliance date.

(11) When the terms "equipment" and "equipment leak" are used in subpart H of this part, the definitions of these terms in § 63.1312 shall apply for the purposes of this subpart.

(12) The phrase "the provisions of subparts F, I, or JJJ of this part" shall apply instead of the phrase "the provisions of subpart F or I of this part" throughout §§ 63.163 and 63.168, for the purposes of this subpart. In addition, the phrase "subparts F, I, and JJJ" shall apply instead of the phrase "subparts F and I" in § 63.174(c)(2)(iii), for the purposes of this subpart.

(13) An owner or operator using a flare to comply with the requirements of this section shall conduct a compliance demonstration as specified in § 63.1333(e).

(b) The provisions of this section do not apply to each TPPU producing PET using a process other than a continuous terephthalic acid (TPA) high viscosity multiple end finisher process that is part of an affected source if all of the equipment leak components subject to this section § 63.1331 in the TPPU are either in vacuum service or in heavy liquid service.

(1) Owners and operators of a TPPU exempted under paragraph (b) of this section shall comply with paragraph (b)(1)(i) or (b)(1)(ii) of this section.

(i) Retain information, data, and analyses used to demonstrate that all of the components in the exempted TPPU are either in vacuum service or in heavy liquid service. For components in vacuum service, examples of information that could document this include,

but are not limited to, analyses of process stream composition and process conditions, engineering calculations, or process knowledge. For components in heavy liquid service, such documentation shall include an analysis or demonstration that the process fluids do not meet the criteria of "in light liquid service" or "in gas or vapor service."

(ii) When requested by the Administrator, demonstrate that all of the components in the TPPU are either in vacuum service or in heavy liquid service.

(2) If changes occur at a TPPU exempted under paragraph (b) of this section such that all of the components in the TPPU are no longer either in vacuum service or in heavy liquid service (*e.g.*, by either process changes or the addition of new components), the owner or operator of the affected source shall comply with the provisions of this section for all of the components at the TPPU. The owner or operator shall submit a report within 180 days after the process change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report, as specified in paragraph (a)(5) of this section. A description of the process change shall be submitted with this report.

(c) The provisions of this section do not apply to each affected source producing PET using a continuous TPA high viscosity multiple end finisher process.

27. [40 CFR 63.1332]

**Emissions averaging provisions.**

(a) This section applies to owners or operators of existing affected sources who seek to comply with § 63.1313(b) by using emissions averaging rather than following the provisions of §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, and 63.1330.

(1) The following emission point limitations apply to the use of these provisions:

(i) All emission points included in an emissions average shall be from the same affected source. There may be an emissions average for each affected source located at a plant site.

(ii)(A) If a plant site has only one affected source for which emissions averaging is being used to demonstrate compliance, the number of emission points allowed in the emissions average for said affected source is limited to twenty. This number may be increased by up to five additional emission points if pollution prevention measures are used to control five or more of the emission points included in the emissions average.

(B) If a plant site has two or more affected sources for which emissions averaging is being used to demonstrate compliance, the number of emission points allowed in the emissions averages for said affected sources is limited to twenty. This number may be increased by up to five additional emission points if pollution prevention measures are used to control five or more of the emission points included in the emissions averages.

(2) Compliance with the provisions of this section may be based on either organic HAP or TOC.

(3) For the purposes of these provisions, whenever Method 18, 40 CFR part 60, appendix A, is specified within the paragraphs of this section or is specified by reference through provisions outside this section, Method 18 or Method 25A, 40 CFR part 60, appendix A, may be used. The use of Method 25A, 40 CFR part 60, appendix A, shall conform with the requirements in paragraphs (a)(3)(i) and (a)(3)(ii) of this section.

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

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

(b) Unless an operating permit application has been submitted, the owner or operator shall develop and submit for approval an Emissions Averaging Plan containing all of the information required in § 63.1335(e)(4) for all emission points to be included in an emissions average.

(c) Paragraphs (c)(1) through (c)(5) of this section describe the emission points that may be used to generate emissions averaging credits if control was applied after November 15, 1990, and if sufficient information is available to determine the appropriate value of credits for the emission point. Paragraph (c)(6) of this section discusses the use of pollution prevention in generating emissions averaging credits.

(1) Storage vessels, batch process vents, aggregate batch vent streams, continuous process vents subject to § 63.1315, and process wastewater streams that are determined to be Group 2 emission points. The term "continuous process vents subject to § 63.1315" includes continuous process vents subject to § 63.1316 (b)(1)(iii), (b)(2)(iii), and (c)(2), which reference § 63.1315.

(2) Continuous process vents located in the collection of material recovery sections within the affected source at an existing affected source producing PET using a continuous dimethyl terephthalate process subject to § 63.1316(b)(1)(i) where the uncontrolled organic HAP emissions from said continuous process vents are equal to or less than 0.12 kg organic HAP per Mg of product. These continuous process vents shall be considered Group 2 emission points for the purposes of this section.

(3) Storage vessels, continuous process vents subject to § 63.1315, and process wastewater streams that are determined to be Group 1 emission points and that are controlled by a technology that the Administrator or permitting authority agrees has a higher nominal efficiency than the reference control technology. Information on the nominal efficiencies for such technologies shall be submitted and approved as provided in paragraph (i) of this section.

(4) Batch process vents and aggregate batch vent streams that are determined to be Group 1 emission points and that are controlled to a level more stringent than the applicable standard.

(5) Continuous process vents subject to § 63.1316 (b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) located in the collection of process sections within the affected source, as specified in paragraphs (c)(5)(i) through (c)(5)(ii) of this section. The continuous process vents identified in paragraphs (c)(5)(i) through (c)(5)(ii) of this section shall be considered to be Group 1 emission points for the purposes of this section.

(i) Continuous process vents subject to § 63.1316(b)(1)(i) located in the collection of material recovery sections within the affected source where the uncontrolled organic HAP emissions for said continuous process vents are greater than 0.12 kg organic HAP per Mg of product and said continuous process vents are controlled to a level more stringent than the applicable standard.

(ii) Continuous process vents subject to § 63.1316(b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) located in the collection of process sections within the affected source where the uncontrolled organic HAP emissions from said continuous process vents are controlled to a level more stringent than the applicable standard.

(6) The percent reduction for any storage vessel, batch process vent, aggregate batch vent stream, continuous process vent, and process wastewater stream from which emissions are reduced by pollution prevention measures shall be determined using the procedures specified in paragraph (j) of this section.

(i) For a Group 1 storage vessel, batch process vent, aggregate batch vent stream, continuous process vent, or process wastewater stream, the pollution prevention measure must reduce emissions more than if the applicable reference control technology or standard had been applied to the emission point instead of the pollution prevention measure, except as provided in paragraph (c)(6)(ii) of this section.

(ii) If a pollution prevention measure is used in conjunction with other controls for a Group 1 storage vessel, batch process vent, aggregate batch vent stream, continuous process vent, or process wastewater stream, the pollution prevention measure alone does not have to reduce emissions more than the applicable reference control technology or standard, but the combination of the pollution prevention measure and other controls must reduce emissions more than if the applicable reference control technology or standard had been applied instead of the pollution prevention measure.

(d) The following emission points cannot be used to generate emissions averaging credits:

(1) Emission points already controlled on or before November 15, 1990, cannot be used to generate credits unless the level of control is increased after November 15, 1990. In this case, credit will be allowed only for the increase in control after November 15, 1990.

(2) Group 1 emission points, identified in paragraph (c)(3) of this section, that are controlled by a reference control technology cannot be used to generate credits unless the reference control technology has been approved for use in a different manner and a higher nominal efficiency has been assigned according to the procedures in paragraph (i) of this section.

(3) Emission points for nonoperating TPPU cannot be used to generate credits. TPPU that are shutdown cannot be used to generate credits or debits.

(4) Maintenance wastewater cannot be used to generate credits. Wastewater streams treated in biological treatment units cannot be used to generate credits. These two types of wastewater cannot be used to generate credits or debits. For the purposes of this section, the terms wastewater and wastewater stream are used to mean process wastewater.

(5) Emission points controlled to comply with a State or Federal rule other than this subpart cannot be used to generate credits, unless the level of control has been increased after November 15, 1990, to a level above what is required by the other State or Federal rule. Only the control above what is required by the other State or Federal rule will be credited. However, if an emission point has been used to generate emissions averaging credit in an approved emissions average, and the emission point is subsequently made subject to a State or Federal rule other than this subpart, the emission point may continue to generate emissions averaging credit for the purpose of complying with the previously approved emissions average.

(e) For all emission points included in an emissions average, the owner or operator shall perform the following tasks:

(1) Calculate and record monthly debits for all Group 1 emission points that are controlled to a level less stringent than the reference control technology or standard for those emission points. Said Group 1 emission points are identified in paragraphs (c)(3) through (c)(5) of this section. Equations in paragraph (g) of this section shall be used to calculate debits.

(2) Calculate and record monthly credits for all Group 1 and Group 2 emission points that are over-controlled to compensate for the debits. Equations in paragraph (h) of this section shall be used to calculate credits. Emission points and controls that meet the criteria of paragraph (c) of this section may be included in the credit calculation, whereas those described in paragraph (d) of this section shall not be included.

(3) Demonstrate that annual credits calculated according to paragraph (h) of this section are greater than or equal to debits calculated for the same annual compliance period according to paragraph (g) of this section.

(i) The owner or operator may choose to include more than the required number of credit-generating emission points in an emissions average in order to increase the likelihood of being in compliance.

(ii) The initial demonstration in the Emissions Averaging Plan or operating permit application that credit-generating emission points will be capable of generating sufficient credits to offset the debits from the debit-generating emission points shall be made under representative operating conditions. After the compliance date, actual operating data will be used for all debit and credit calculations.

(4) Demonstrate that debits calculated for a quarterly (3-month) period according to paragraph (g) of this section are not more than 1.30 times the credits for the same period calculated according to paragraph (h) of this section. Compliance for the quarter shall be determined based on the ratio of credits and debits from that quarter, with 30 percent more debits than credits allowed on a quarterly basis.

(5) Record and report quarterly and annual credits and debits in the Periodic Reports as specified in § 63.1335(e)(6). Every fourth Periodic Report shall include a certification of compliance with the emissions averaging provisions as required by § 63.1335(e)(6)(x)(C)(2).

(f) Debits and credits shall be calculated in accordance with the methods and procedures specified in paragraphs (g) and (h) of this section, respectively, and shall not include emissions during the following periods:

(1) Emissions during periods of start-up, shutdown, and malfunction, as described in the Start-up, Shutdown, and Malfunction Plan.

(2) Emissions during periods of monitoring excursions, as defined in § 63.1334(d). For these periods, the calculation of monthly credits and debits shall be adjusted as specified in paragraphs (f)(2)(i) through (f)(2)(iii) of this section.

(i) No credits would be assigned to the credit-generating emission point.

(ii) Maximum debits would be assigned to the debit-generating emission point.

(iii) The owner or operator may demonstrate to the Administrator that full or partial credits or debits should be assigned using the procedures in paragraph (l) of this section.

(g) Debits are generated by the difference between the actual emissions from a Group 1 emission point that is uncontrolled or is controlled to a level less stringent than the applicable reference control technology or standard and the emissions allowed for the Group 1 emission point. Said Group 1 emission points are identified in paragraphs (c)(3) through (c)(5) of this section. Debits shall be calculated as follows:

(1) Source-wide debits shall be calculated using Equation 28 of this subpart. Debits and all terms of Equation 28 of this subpart are in units of megagrams per month:

$$\begin{aligned}
 \text{Debits} = & \sum_{i=1}^n (ECPV_{iACTUAL} - (0.02) ECPV_{iu}) + \sum_{j=1}^n (ECPVS_{jACTUAL} - ECPVS_{jSTD}) \\
 & + \sum_{i=1}^n (ES_{iACTUAL} - (b) ES_{iu}) + \sum_{i=1}^n (EWW_{iACTUAL} - EWW_{ic}) \\
 & + \sum_{i=1}^n (EBPV_{iACTUAL} - (0.10) EBPV_{iu}) + \sum_{i=1}^n (EABV_{iACTUAL} - (0.10) EABV_{iu}) \quad [Eq. 28]
 \end{aligned}$$

Where:

$ECPViACTUAL$  = Emissions from each Group 1 continuous process vent  $i$  subject to § 63.1315 that is uncontrolled or is controlled to a level less stringent than the applicable reference control technology.  $ECPViACTUAL$  is calculated according to paragraph (g)(2) of this section.

$(0.02)ECPViu$  = Emissions from each Group 1 continuous process vent  $i$  subject to § 63.1315 if the applicable reference control technology had been applied to the uncontrolled emissions.  $ECPViu$  is calculated according to paragraph (g)(2) of this section.

$ECPVSjACTUAL$  = Emissions from Group 1 continuous process vents subject to § 63.1316(b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) located in the collection of process sections  $j$  within the affected source that are uncontrolled or controlled to a level less stringent than the applicable standard.  $ECPVSjACTUAL$  is calculated according to paragraph (g)(3) of this section.

$ECPVSjSTD$  = Emissions from Group 1 continuous process vents subject to § 63.1316(b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) located in the collection of process sections  $j$  within the affected source if the applicable standard had been applied to the uncontrolled emissions.  $ECPVSjSTD$  is calculated according to paragraph (g)(3) of this section.

$ESiACTUAL$  = Emissions from each Group 1 storage vessel  $i$  that is uncontrolled or is controlled to a level less stringent than the applicable reference control technology or standard.  $ESiACTUAL$  is calculated according to paragraph (g)(4) of this section.

$(BL)ESiu$  = Emissions from each Group 1 storage vessel  $i$  if the applicable reference control technology or standard had been applied to the uncontrolled emissions.  $ESiu$  is calculated according to paragraph (g)(4) of this section. For calculating emissions,  $BL = 0.05$  for each Group 1 storage vessel  $i$  subject to § 63.1314(a); and  $BL = 0.02$  for each storage vessel  $i$  subject to § 63.1314(c).

$EWWiACTUAL$  = Emissions from each Group 1 wastewater stream  $i$  that is uncontrolled or is controlled to a level less stringent than the applicable reference control technology.  $EWWiACTUAL$  is calculated according to paragraph (g)(5) of this section.

EWVic = Emissions from each Group 1 wastewater stream i if the reference control technology had been applied to the uncontrolled emissions. EWWic is calculated according to paragraph (g)(5) of this section.

EBPViACTUAL = Emissions from each Group 1 batch process vent i that is uncontrolled or is controlled to a level less stringent than the applicable standard. EBPVACTUAL is calculated according to paragraph (g)(6) of this section.

(0.10)EBPViu = Emissions from each Group 1 batch process vent i if the applicable standard had been applied to the uncontrolled emissions. EBPViu is calculated according to paragraph (g)(6) of this section.

EABViACTUAL = Emissions from each Group 1 aggregate batch vent stream i that is uncontrolled or is controlled to a level less stringent than the applicable standard. EABPViACTUAL is calculated according to paragraph (g)(7) of this section.

(0.10)EABViu = Emissions from each Group 1 aggregate batch vent stream i if the applicable standard had been applied to the uncontrolled emissions. EABViu is calculated according to paragraph (g)(7) of this section.

n = The number of emission points being included in the emissions average.

(2) Emissions from continuous process vents subject to § 63.1315 shall be calculated as follows:

(i) For purposes of determining continuous process vent stream flow rate, organic HAP concentrations, and temperature, the sampling site shall be after the final product recovery device, if any recovery devices are present; before any control device (for continuous process vents, recovery devices shall not be considered control devices); and before discharge to the atmosphere. Method 1 or 1A, 40 CFR part 60, appendix A, shall be used for selection of the sampling site.

(ii) ECPViu = Uncontrolled continuous process vent emission rate from continuous process vent i, megagrams per month. using Equation 29 of this subpart:

$$ECPV_{iu} = (2.494 \times 10^{-9}) Q_n \left( \sum_{j=1}^n C_j M_j \right) \quad [Eq. 29]$$

Where:

ECPViu=Uncontrolled continuous process vent emission rate from continuous process vent i, megagrams per month.

Q=Vent stream flow rate, dry standard cubic meters per minute, measured using Method 2, 2A, 2C, or 2D, 40 CFR part 60, appendix A, as appropriate.

h=Monthly hours of operation during which positive flow is present in the continuous process vent, hours per month.

C<sub>j</sub>=Concentration, parts per million by volume, dry basis, of organic HAP j as measured by Method 18, 40 CFR part 60, appendix A.

M<sub>j</sub>=Molecular weight of organic HAP j, gram per gram-mole.

n=Number of organic HAP in stream.

(A) The values of Q and C<sub>j</sub> shall be determined during a performance test conducted under representative operating conditions. The values of Q and C<sub>j</sub> shall be established in the Notification of Compliance Status and shall be updated as provided in paragraph (g)(2)(ii)(B) of this section.

(B) If there is a change in capacity utilization other than a change in monthly operating hours, or if any other change is made to the process or product recovery equipment or operation such that the previously measured values of Q and C<sub>j</sub> are no longer representative, a new performance test shall be conducted to determine new representative values of Q and C<sub>j</sub>. These new values shall be used to calculate debits and credits from the time of the change forward, and the new values shall be reported in the next Periodic Report.

(iii) The following procedures and equations shall be used to calculate ECPViACTUAL:

(A) If the continuous process vent is not controlled by a control device or pollution prevention measure, ECPViACTUAL=ECPViu, where ECPViu is calculated according to the procedures in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(B) If the continuous process vent is controlled using a control device or a pollution prevention measure, ECPViACTUAL shall be calculated using Eq. 30:

$$ECPV_{iACTUAL} = ECPV_{iu} \left( 1 - \frac{\text{Percent reduction}}{100\%} \right) \quad [Eq. 30]$$

(1) The percent reduction shall be measured according to the procedures in § 63.116 if a combustion control device is used. For a flare meeting the criteria in § 63.116(a), or a boiler or process heater meeting the criteria in § 63.116(b), the percent reduction shall be 98 percent. If a noncombustion control device is used, percent reduction shall be demonstrated by a performance test at the inlet and outlet of the device, or, if testing is not feasible, by control design evaluation and documented engineering calculations.

(2) For determining debits from Group 1 continuous process vents, product recovery devices shall not be considered control devices and cannot be assigned a percent reduction

in calculating ECPViACTUAL. The sampling site for measurement of uncontrolled emissions is after the final product recovery device. However, as provided in § 63.113(a)(3), a Group 1 continuous process vent may add sufficient product recovery to raise the TRE index value above 1.0 or, for Group 1 continuous process vents at an existing affected source producing MBS, above 3.7, thereby becoming a Group 2 continuous process vent. Such a continuous process vent would not be a Group 1 continuous process vent and would, therefore, not be included in determining debits under this paragraph (g)(2)(iii)(B)(2).

(3) Procedures for calculating the percent reduction of pollution prevention measures are specified in paragraph (j) of this section.

(3) Emissions from continuous process vents located in the collection of process sections within the affected source subject to § 63.1316 (b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) shall be calculated as follows:

(i) The total organic HAP emissions from continuous process vents located in the collection of process sections j within the affected source, ECPVSjACTUAL, shall be calculated as follows. The procedures in paragraph (g)(2)(iii) of this section shall be used to determine the organic HAP emissions for each individual continuous process vent, except that paragraph (g)(2)(iii)(B)(2) of this section shall not apply and the sampling site shall be after those recovery devices installed as part of normal operation; before any add-on control devices (i.e., those required by regulation); and prior to discharge to the atmosphere. Then, individual continuous process vent emissions shall be summed to determine ECPVSjACTUAL.

(ii)  $ECPVS_{jstd}$  shall be calculated using Equation 31 of this subpart.

$$ECPVS_{jstd} = (EF_{std})(PP_j) \quad [Eq. 31]$$

Where:

ECPVSjstd=Emissions if the applicable standard had been applied to the uncontrolled emissions, megagrams per month.

EFstd=0.000018 Mg organic HAP/Mg of product, if the collection of process sections within the affected source is subject to § 63.1316(b)(1)(i).

=0.00002 Mg organic HAP/Mg of product, if the collection of process sections within the affected source is subject to § 63.1316 (b)(1)(ii) or (b)(2)(ii).

=0.00004 Mg organic HAP/Mg of product, if the collection of process sections within the affected source is subject to § 63.1316(b)(2)(i).

=0.0000036 Mg organic HAP/Mg of product, if the collection of process sections within the affected source is subject to § 63.1316(c)(1).

PP<sub>j</sub>=Polymer produced, Mg/month, for the collection of process sections j within the affected source, as calculated according to paragraph (g)(3)(ii)(B) of this section.

(B) The amount of polymer produced, Mg per month, for the collection of process sections j within the affected source shall be determined by determining the weight of polymer pulled from the process line(s) during a 30-day period. The polymer produced shall be determined by direct measurement or by an alternate methodology, such as materials balance. If an alternate methodology is used, a description of the methodology, including all procedures, data, and assumptions shall be submitted as part of the Emissions Averaging Plan required by § 63.1335(e)(4).

(C) Alternatively, ECPVS<sub>jstd</sub> for continuous process vents located in the collection of process sections within the affected source subject to § 63.1316(c)(1) may be calculated using the procedures in paragraph (g)(2)(i) and (g)(2)(ii) of this section to determine the organic HAP emissions for each individual continuous process vent, except that the sampling site shall be after recovery devices installed as part of normal operation; before any add-on control devices (i.e., those required by regulation); and prior to discharge to the atmosphere. Then, individual continuous process vent emissions shall be summed and multiplied by 0.02 to determine ECPVS<sub>jstd</sub>.

(4) Emissions from storage vessels shall be calculated using the procedures specified in § 63.150(g)(3).

(5) Emissions from wastewater streams shall be calculated using the procedures in § 63.150(g)(5).

(6) Emissions from batch process vents shall be calculated as follows:

(i) EBPV<sub>iu</sub> for each batch process vent i shall be calculated using the procedures specified in § 63.1323(b).

(ii) The following procedures and equations shall be used to determine EBPV<sub>iACTUAL</sub>:

(A) If the batch process vent is not controlled by a control device or pollution prevention measure, EBPV<sub>iACTUAL</sub>=EBPV<sub>iu</sub>, where EBPV<sub>iu</sub> is calculated using the procedures in § 63.1323(b).

(B) If the batch process vent is controlled using a control device or a pollution prevention measure achieving less than 90 percent reduction for the batch cycle, calculate EBPV<sub>iACTUAL</sub> using Equation 32 of this subpart, where percent reduction is for the batch cycle.

$$EBPV_{iACTUAL} = EBPV_{iw} \left( 1 - \frac{\text{Percent reduction}}{100\%} \right) \quad [Eq. 32]$$

(1) The percent reduction for the batch cycle shall be calculated according to the procedures in § 63.1325(c)(2).

(2) The percent reduction for control devices shall be calculated according to the procedures in § 63.1325 (c)(2)(i) through (c)(2)(iii).

(3) The percent reduction of pollution prevention measures shall be calculated using the procedures specified in paragraph (j) of this section.

(7) Emissions from aggregate batch vent streams shall be calculated as follows:

(i) For purposes of determining aggregate batch vent stream flow rate, organic HAP concentrations, and temperature, the sampling site shall be before any control device and before discharge to the atmosphere. Method 1 or 1A, 40 CFR part 60, appendix A, shall be used for selection of the sampling site.

(ii) Emission rate of this stream shall be calculated using Equation 33

$$EABV_{iu} = (2.494 \times 10^{-9}) Qh \left( \sum_{j=1}^n C_j M_j \right) \quad [Eq. 33]$$

Where:

EABV<sub>iu</sub>=Uncontrolled aggregate batch vent stream emission rate from aggregate batch vent stream i, megagrams per month.

Q=Vent stream flow rate, dry standard cubic meters per minute, measured using Method 2, 2A, 2C, or 2D, 40 CFR part 60, appendix A, as appropriate.

h=Monthly hours of operation during which positive flow is present from the aggregate batch vent stream, hours per month.

C<sub>j</sub>=Concentration, parts per million by volume, dry basis, of organic HAP j as measured by Method 18, 40 CFR part 60, appendix A.

M<sub>j</sub>=Molecular weight of organic HAP j, gram per gram-mole.

n=Number of organic HAP in the stream.

(A) The values of Q and C<sub>j</sub> shall be determined during a performance test conducted under representative operating conditions. The values of Q and C<sub>j</sub> shall be established in the Notification of Compliance Status and shall be updated as provided in paragraph (g)(7)(ii)(B) of this section.

(B) If there is a change in capacity utilization other than a change in monthly operating hours, or if any other change is made to the process or product recovery equipment or operation such that the previously measured values of Q and C<sub>j</sub> are no longer representative, a new performance test shall be conducted to determine new representative values of Q and C<sub>j</sub>. These new values shall be used to calculate debits and credits from the time of the change forward, and the new values shall be reported in the next Periodic Report.

(iii) The following procedures and equations shall be used to calculate EABViACTUAL:

(A) If the aggregate batch vent stream is not controlled by a control device or pollution prevention measure, EABViACTUAL = EABViu, where EABViu is calculated according to the procedures in paragraphs (g)(7)(i) and (g)(7)(ii) of this section.

(B) If the aggregate batch vent stream is controlled using a control device or a pollution prevention measure, EABViACTUAL is calculated using the following equation:

$$EABV_{iACTUAL} = EABV_{iu} \left( 1 - \frac{\text{Percent reduction}}{100\%} \right) \quad [Eq. 34]$$

(1) The percent reduction for control devices shall be determined according to the procedures in § 63.1325(e).

(2) The percent reduction for pollution prevention measures shall be calculated according to the procedures specified in paragraph (j) of this section.

(h) Credits are generated by the difference between emissions that are allowed for each Group 1 and Group 2 emission point and the actual emissions from that Group 1 or Group 2 emission point that has been controlled after November 15, 1990 to a level more stringent than what is required by this subpart or any other State or Federal rule or statute. Said Group 1 and Group 2 emission points are identified in paragraphs (c)(1) through (c)(5) of this section. Credits shall be calculated using Equation 35 of this subpart.

(1) Sourcewide credits shall be calculated using Equation 35 of this subpart. Credits and all terms of Equation 35 of this subpart are in units of megagrams per month, and the baseline date is November 15, 1990:

$$\begin{aligned}
 \text{Credits} = & D \sum_{i=1}^n ((0.02) \text{ECPV1}_{i1} - \text{ECPV1}_{iACTUAL}) + D \sum_{j=1}^n (\text{ECPVS1}_{jSTD} - \text{ECPVS1}_{jACTUAL}) \\
 & + D \sum_{i=1}^n (\text{ECPV2}_{iBASE} - \text{ECPV2}_{iACTUAL}) + D \sum_{j=1}^n (\text{ECPVS2}_{jBASE} - \text{ECPVS2}_{jACTUAL}) \\
 & + D \sum_{i=1}^n ((BL) \text{ES1}_{i1} - \text{ES1}_{iACTUAL}) + D \sum_{i=1}^n (\text{ES2}_{iBASE} - \text{ES2}_{iACTUAL}) \\
 & + D \sum_{i=1}^n (\text{EWW1}_{i1} - \text{EWW1}_{iACTUAL}) + D \sum_{i=1}^n (\text{EWW2}_{iBASE} - \text{EWW2}_{iACTUAL}) \\
 & + D \sum_{i=1}^n ((0.10) \text{EBPV1}_{i1} - \text{EBPV1}_{iACTUAL}) + D \sum_{i=1}^n ((0.10) \text{EABV1}_{i1} - \text{EABV1}_{iACTUAL}) \\
 & + D \sum_{i=1}^n (\text{EBPV2}_{iBASE} - \text{EBPV2}_{iACTUAL}) + D \sum_{i=1}^n (\text{EABV2}_{iBASE} - \text{EABV2}_{iACTUAL}) \quad [\text{Eq. 35}]
 \end{aligned}$$

Where:

D = Discount factor = 0.9 for all credit generating emission points except those controlled by a pollution prevention measure; discount factor = 1.0 for each credit generating emission point controlled by a pollution prevention measure (i.e., no discount provided).

ECPV1iACTUAL = Emissions for each Group 1 continuous process vent i subject to § 63.1315 that is controlled to a level more stringent than the reference control technology. ECPV1iACTUAL is calculated according to paragraph (h)(2) of this section.

(0.02)ECPV1iu = Emissions from each Group 1 continuous process vent i subject to § 63.1315 if the applicable reference control technology had been applied to the uncontrolled emissions. ECPV1iu is calculated according to paragraph (h)(2) of this section.

ECPVS1jSTD = Emissions from Group 1 continuous process vents subject to § 63.1316(b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) located in the collection of process sections j within the affected source if the applicable standard had been applied to the uncontrolled emissions. ECPVS1jSTD is calculated according to paragraph (h)(3) of this section.

ECPVS1jACTUAL = Emissions from Group 1 continuous process vents subject to § 63.1316(b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) located in the collection of process sections j within the affected source that are controlled to a level more stringent than the applicable standard. ECPVS1jACTUAL is calculated according to paragraph (h)(3) of this section.

ECPV2iACTUAL = Emissions from each Group 2 continuous process vent i subject to § 63.1315 that is controlled. ECPV2iACTUAL is calculated according to paragraph (h)(2) of this section.

ECPV2iBASE = Emissions from each Group 2 continuous process vent i subject to § 63.1315 at the baseline date. ECPV2iBASE is calculated according to paragraph (h)(2) of this section.

ECPVS2jBASE = Emissions from Group 2 continuous process vents subject to § 63.1316(b)(1)(i) located in the collection of material recovery sections j within the affected

source at the baseline date. ECPVS2jBASE is calculated according to paragraph (h)(3) of this section.

ECPVS2jACTUAL = Emissions from Group 2 continuous process vents subject to § 63.1316(b)(1)(i) located in the collection of material recovery sections j within the affected source that are controlled. ECPVS2jACTUAL is calculated according to paragraph (h)(3) of this section.

ES1iACTUAL = Emissions from each Group 1 storage vessel i that is controlled to a level more stringent than the applicable reference control technology or standard. ES1iACTUAL is calculated according to paragraph (h)(4) of this section.

(BL)ES1iu = Emissions from each Group 1 storage vessel i if the applicable reference control technology or standard had been applied to the uncontrolled emissions. ES1iu is calculated according to paragraph (h)(4) of this section. For calculating these emissions, BL = 0.05 for each Group 1 storage vessel i subject to § 63.1314(a); and BL = 0.02 for each storage vessel i subject to § 63.1314(c).

ES2iACTUAL = Emissions from each Group 2 storage vessel i that is controlled. ES2iACTUAL is calculated according to paragraph (h)(4) of this section.

ES2iBASE = Emissions from each Group 2 storage vessel i at the baseline date. ES2iBASE is calculated according to paragraph (h)(4) of this section.

EWV1iACTUAL = Emissions from each Group 1 wastewater stream i that is controlled to a level more stringent than the reference control technology. EWV1iACTUAL is calculated according to paragraph (h)(5) of this section.

EWV1ic = Emissions from each Group 1 wastewater stream i if the reference control technology had been applied to the uncontrolled emissions. EWV1ic is calculated according to paragraph (h)(5) of this section.

EWV2iACTUAL = Emissions from each Group 2 wastewater stream i that is controlled. EWV2iACTUAL is calculated according to paragraph (h)(5) of this section.

EWV2iBASE = Emissions from each Group 2 wastewater stream i at the baseline date. EWV2iBASE is calculated according to paragraph (h)(5) of this section.

(0.10)EBPV1iu = Emissions from each Group 1 batch process vent i if the applicable standard had been applied to the uncontrolled emissions. EBPV1iu is calculated according to paragraph (h)(6) of this section.

EBPV1iACTUAL = Emissions from each Group 1 batch process vent i that is controlled to a level more stringent than the applicable standard. EBPV1iACTUAL is calculated according to paragraph (h)(6) of this section.

(0.10)EABV1iu = Emissions from each Group 1 aggregate batch vent stream i if the applicable standard had been applied to the uncontrolled emissions. EABV1iu is calculated according to paragraph (h)(7) of this section.

EABV1iACTUAL = Emissions from each Group 1 aggregate batch vent stream i that is controlled to a level more stringent than the applicable standard. EABV1iACTUAL is calculated according to paragraph (h)(7) of this section.

EBPV2iBASE = Emissions from each Group 2 batch process vent i at the baseline date. EBPV2iBASE is calculated according to paragraph (h)(6) of this section.

EBPV2iACTUAL = Emissions from each Group 2 batch process vent i that is controlled. EBPV2iACTUAL is calculated according to paragraph (h)(6) of this section.

EABV2iBASE = Emissions from each Group 2 aggregate batch vent stream i at the baseline date. EABV2iBASE is calculated according to paragraph (h)(7) of this section.

EABV2iACTUAL = Emissions from each Group 2 aggregate batch vent stream i that is controlled. EABV2iACTUAL is calculated according to paragraph (h)(7) of this section.

n = Number of Group 1 emission points included in the emissions average. The value of n is not necessarily the same for continuous process vents, batch process vents, aggregate batch vent streams, storage vessels, wastewater streams, or the collection of process sections within the affected source.

m = Number of Group 2 emission points included in the emissions average. The value of m is not necessarily the same for continuous process vents, batch process vents, aggregate batch vent streams, storage vessels, wastewater streams, or the collection of process sections within the affected source.

(i) Except as specified in paragraph (h)(1)(iv) of this section, for an emission point controlled using a reference control technology, the percent reduction for calculating credits shall be no greater than the nominal efficiency associated with the reference control technology, unless a higher nominal efficiency is assigned as specified in paragraph (h)(1)(ii) of this section.

(ii) For an emission point controlled to a level more stringent than the reference control technology, the nominal efficiency for calculating credits shall be assigned as described in paragraph (i) of this section. A reference control technology may be approved for use in a different manner and assigned a higher nominal efficiency according to the procedures in paragraph (i) of this section.

(iii) For an emission point controlled using a pollution prevention measure, the nominal efficiency for calculating credits shall be as determined as described in paragraph (j) of this section.

(iv) For Group 1 and Group 2 batch process vents and Group 1 and Group 2 aggregate batch vent streams, the percent reduction for calculating credits shall be the percent

reduction determined according to the procedures in paragraphs (h)(6)(ii) and (h)(6)(iii) of this section for batch process vents and paragraphs (h)(7)(ii) and (h)(7)(iii) of this section for aggregate batch vent streams.

(2) Emissions from continuous process vents subject to § 63.1315 shall be determined as follows:

(i) Uncontrolled emissions from Group 1 continuous process vents (ECPV1<sub>iu</sub>) shall be calculated according to the procedures and equation for ECPV<sub>iu</sub> in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(ii) Actual emissions from Group 1 continuous process vents controlled using a technology with an approved nominal efficiency greater than 98 percent or a pollution prevention measure achieving greater than 98 percent emission reduction (ECPV1<sub>iACTUAL</sub>) shall be calculated using Equation 36 of this subpart.

$$ECPV1_{iACTUAL} = ECPV1_{iu} \left( 1 - \frac{\text{Nominal efficiency \%}}{100\%} \right) \quad [Eq. 36]$$

(iii) The following procedures shall be used to calculate actual emissions from Group 2 continuous process vents (ECPV2<sub>iACTUAL</sub>):

(A) For a Group 2 continuous process vent controlled by a control device, a recovery device applied as a pollution prevention project, or a pollution prevention measure, where the control device achieves a certain percent reduction, use

Equation

$$ECPV2_{iACTUAL} = ECPV2_{iu} \left( 1 - \frac{\text{Percent reduction}}{100\%} \right) \quad [Eq. 37]$$

(1) ECPV2<sub>iu</sub> shall be calculated according to the equations and procedures for ECPV<sub>iu</sub> in paragraphs (g)(2)(i) and (g)(2)(ii) of this section, except as provided in paragraph (h)(2)(iii)(A)(3) of this section.

(2) The percent reduction shall be calculated according to the procedures in paragraphs (g)(2)(iii)(B)(1) through (g)(2)(iii)(B)(3) of this section, except as provided in paragraph (h)(2)(iii)(A)(4) of this section.

(3) If a recovery device was added as part of a pollution prevention project, ECPV2<sub>iu</sub> shall be calculated prior to that recovery device. The equation for ECPV<sub>iu</sub> in paragraph (g)(2)(ii) of this section shall be used to calculate ECPV2<sub>iu</sub>; however, the sampling site for

measurement of vent stream flow rate and organic HAP concentration shall be at the inlet of the recovery device.

(4) If a recovery device was added as part of a pollution prevention project, the percent reduction shall be demonstrated by conducting a performance test at the inlet and outlet of that recovery device.

(B) For a Group 2 continuous process vent controlled using a technology with an approved non-gre

$$ECPV2_{iACTUAL} = ECPV2_w \left( 1 - \frac{\text{Nominal efficiency \%}}{100\%} \right) \quad [Eq. 38]$$

(iv) Emissions from Group 2 continuous process vents at baseline shall be calculated as follows:

(A) If the continuous process vent was uncontrolled on November 15, 1990,  $ECPV2_{iBASE} = ECPV2_{iu}$  and shall be calculated according to the procedures and equation for  $ECPV_{iu}$  in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(B) If the continuous process vent was controlled on November 15, 1990, use Equation 39 of this subpart.

$$ECPV2_{iBASE} = ECPV2_w \left( 1 - \frac{\text{Percent reduction}}{100\%} \right) \quad [Eq. 39]$$

(1)  $ECPV2_{iu}$  is calculated according to the procedures and equation for  $ECPV_{iu}$  in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(2) The percent reduction shall be calculated according to the procedures specified in paragraphs (g)(2)(iii)(B)(1) through (g)(2)(iii)(B)(3) of this section.

(C) If a recovery device was added as part of a pollution prevention project initiated after November 15, 1990,  $ECPV2_{iBASE} = ECPV2_{iu}$ , where  $ECPV2_{iu}$  is calculated according to paragraph (h)(2)(iii)(A)(3) of this section.

(3) Emissions from continuous process vents subject to § 63.1316(b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) shall be determined as follows:

(i) Emissions from Group 1 continuous process vents located in the collection of process sections j within the affected source if the applicable standard had been applied to the

uncontrolled emissions (ECPVS1jstd) shall be calculated according to paragraph (g)(3)(ii) of this section.

(ii) Actual emissions from Group 1 continuous process vents located in the collection of process sections j within the affected source controlled to a level more stringent than the applicable standard (ECPVS1jACTUAL) shall be calculated using the procedures in paragraphs (g)(3)(ii)(A) and (g)(3)(ii)(B) of this section, except that the actual emission level, Mg organic HAP/Mg of product, shall be used as EFstd in Equation 31 of this subpart. Further, ECPVS1jACTUAL for continuous process vents subject to § 63.1316(c)(1) controlled in accordance with § 63.1316(c)(1)(iii) shall be calculated using the procedures in paragraph (h)(2)(ii) of this section for individual continuous process vents and then summing said emissions to get ECPVS1jACTUAL, except that the sampling site shall be after recovery devices installed as part of normal operation; before any add-on control devices (i.e., those required by regulation); and prior to discharge to the atmosphere.

(iii) Actual emissions from Group 2 continuous process vents subject to § 63.1316(b)(1)(i) located in the collection of material recovery sections j within the affected source (ECPVS2jACTUAL) shall be calculated using the procedures in paragraphs (g)(3)(ii)(A) and (g)(3)(ii)(B) of this section, except that the actual emission level, Mg organic HAP/Mg of product, shall be used as EFstd in Equation 31 of this subpart.

(iv) Emissions from Group 2 continuous process vents subject to § 63.1316(b)(1)(i) located in the collection of material recovery sections j within the affected source at baseline (ECPVS2jBASE) shall be calculated using the procedures in paragraphs (g)(3)(ii)(A) and (g)(3)(ii)(B) of this section, except that the actual emission level, Mg organic HAP/Mg of product, at baseline shall be used as EFstd in Equation 31 of this subpart.

(4)(i) Emissions from storage vessels shall be calculated using the procedures specified in § 63.150(h)(3).

(ii) Actual emissions from Group 1 storage vessels at an existing affected source producing ASA/AMSAN subject to § 63.1314(c) using a technology with an approved nominal efficiency greater than 98 percent or a pollution prevention measure achieving greater than 98 percent emission reduction shall be calculated using the procedures specified in § 63.150(h)(3)(ii).

(5) Emissions from wastewater streams shall be calculated using the procedures specified in § 63.150(h)(5).

(6) Emissions from batch process vents shall be determined as follows:

(i) Uncontrolled emissions from Group 1 batch process vents (EBPV1iu) shall be calculated using the procedures § 63.1323(b).

(ii) Actual emissions from Group 1 batch process vents controlled to a level more stringent than the level specified in Equation 40 of this subpart, where

$$EBPV1_{iACTUAL} = EBPV1_{iu} \left( 1 - \frac{\text{Percent reduction}}{100\%} \right) \quad [Eq.S 40]$$



(A) The percent reduction for the batch cycle shall be calculated according to the procedures in § 63.1325(c)(2).

(B) The percent reduction for control devices shall be determined according to the procedures in § 63.1325(c)(2)(i) through (c)(2)(iii).

(C) The percent reduction of pollution prevention measures shall be calculated using the procedures specified in paragraph (j) of this section.

(iii) Actual emissions from Group 2 batch process vents ( $EBPV2iACTUAL$ ) shall be calculated using Equation 41 of this subpart and the procedures in paragraphs (h)(6)(ii)(A) through (h)(6)(ii)(C) of this section.

$$EBPV2_{iACTUAL} = EBPV2_{iu} \left( 1 - \frac{\text{Percent reduction}}{100\%} \right) \quad [Eq. 41]$$

(iv) Emissions from Group 2 batch process vents at baseline ( $EBPV2iBASE$ ) shall be calculated as follows:

(A) If the batch process vent was uncontrolled on November 15, 1990,  $EBPV2iBASE = EBPV2iu$  and shall be calculated using the procedures specified in § 63.1323(b).

(B) If the batch process vent was controlled on November 15, 1990, use Equation 42 of this subpart and the procedures in paragraphs (h)(6)(ii)(A) through (h)(6)(ii)(C) of this section.  $EBPV2iu$  shall be calculated using the procedures specified in § 63.1323(b).

$$EBPV2_{iBASE} = EBPV2_{iu} \left( 1 - \frac{\text{Percent reduction}}{100\%} \right) \quad [Eq. 42]$$

(7) Emissions from aggregate batch vent streams shall be determined as follows:

(i) Uncontrolled emissions from Group 1 aggregate batch vent streams (EABV1iu) shall be calculated according to the procedures and equation for EABViu in paragraphs (g)(7)(i) and (g)(7)(ii) of this section.

(ii) Actual emissions from Group 1 aggregate batch vent streams controlled to a level more stringent than that specified in Equation 43 of this section shall be calculated according to the following equation:

$$EABV1_{iACTUAL} = EABV1_{iu} \left( 1 - \frac{\text{Percent reduction}}{100\%} \right) \quad [Eq. 43]$$

(A) The percent reduction for control devices shall be determined according to the procedures in § 63.1325(e).

(B) The percent reduction of pollution prevention measures shall be calculated using the procedures specified in paragraph (j) of this section.

(iii) Actual emissions from Group 2 aggregate batch vent streams (EABV2iACTUAL) shall be calculated using Equation 44 of this subpart and the procedures in paragraphs (h)(7)(ii)(A) through (h)(7)(ii)(B) of this section. EABV2iu shall be calculated according to the procedures in paragraphs (h)(7)(ii)(A) through (h)(7)(ii)(B) of this section.

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$$EABV2_{iACTUAL} = EABV2_{iu} \left( 1 - \frac{\text{Percent reduction}}{100\%} \right) \quad [Eq. 44]$$

(iv) Emissions from Group 2 aggregate batch vent streams at baseline shall be calculated as follows:

(A) If the aggregate batch vent stream was uncontrolled on November 15, 1990,  $EABV_{iBASE} = EABV_{2iu}$  and shall be calculated according to the procedures and equation for  $EABV_{iu}$  in paragraphs (g)(7)(i) and (g)(7)(ii) of this section.

(B) If the aggregate batch vent stream was controlled on November 15, 1990, use Equation 45 of this subpart and the procedures in paragraphs (h)(7)(ii)(A) through (h)(7)(ii)(B) of this section.  $EABV_{2iu}$  shall be calculated according to the equations and procedures for  $EABV_{iu}$  in paragraphs (g)(7)(i) and (g)(7)(ii) of this section.

$$EABV_{2iBASE} = EABV_{2iu} \left( 1 - \frac{\text{Percent reduction}}{100\%} \right) \quad [Eq. 45]$$

(i) The following procedures shall be followed to establish nominal efficiencies for emission controls for storage vessels, continuous process vents, and process streams. The procedures in paragraphs (i)(1) through (i)(6) of this section shall be followed for control technologies that are different in use or design from the reference control technologies and achieve greater percent reductions than the percent efficiencies assigned to the reference control technologies in § 63.111.

(1) In those cases where the owner or operator is seeking permission to take credit for use of a control technology that is different in use or design from the reference control technology, and the different control technology will be used in more than three applications at a single plant-site, the owner or operator shall submit the information specified in paragraphs (i)(1)(i) through (i)(1)(iv) of this section, as specified in § 63.1335(e)(7)(ii), to the Director of the EPA Office of Air Quality Planning and Standards in writing:

(i) Emission stream characteristics of each emission point to which the control technology is or will be applied including the kind of emission point, flow, organic HAP concentration, and all other stream characteristics necessary to design the control technology or determine its performance.

(ii) Description of the control technology including design specifications.

(iii) Documentation demonstrating to the Administrator's satisfaction the control efficiency of the control technology. This may include performance test data collected using an appropriate EPA Method or any other method validated according to Method 301, 40 CFR part 63, appendix A, of this part. If it is infeasible to obtain test data, documentation may include a design evaluation and calculations. The engineering basis of the calculation procedures and all inputs and assumptions made in the calculations shall be documented.

(iv) A description of the parameter or parameters to be monitored to ensure that the control technology will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

(2) The Administrator shall determine within 120 days whether an application presents sufficient information to determine nominal efficiency. The Administrator reserves the right to request specific data in addition to the items listed in paragraph (i)(1) of this section.

(3) The Administrator shall determine within 120 days of the submittal of sufficient data whether a control technology shall have a nominal efficiency and the level of that nominal efficiency. If, in the Administrator's judgment, the control technology achieves a level of emission reduction greater than the reference control technology for a particular kind of emission point, the Administrator will publish a Federal Register notice establishing a nominal efficiency for the control technology.

(4) The Administrator may grant permission to take emission credits for use of the control technology. The Administrator may also impose requirements that may be necessary to ensure operation and maintenance to achieve the specified nominal efficiency.

(5) In those cases where the owner or operator is seeking permission to take credit for use of a control technology that is different in use or design from the reference control technology and the different control technology will be used in no more than three applications at a single plant site, the owner or operator shall submit the information listed in paragraphs (i)(1)(i) through (i)(1)(iv) of this section, as specified in § 63.1335(e)(7)(ii), to the Administrator.

(i) In these instances, use and conditions for use of the control technology may be approved by the permitting authority as part of an operating permit application or modification. The permitting authority shall follow the procedures specified in paragraphs (i)(2) through (i)(4) of this section except that, in these instances, a Federal Register notice is not required to establish the nominal efficiency for the different technology.

(ii) If, in reviewing the application, the permitting authority believes the control technology has broad applicability for use by other affected sources, the permitting authority shall submit the information provided in the application to the Director of the EPA Office of Air Quality Planning and Standards. The Administrator shall review the technology for broad applicability and may publish a Federal Register notice; however, this review shall not affect the permitting authority's approval of the nominal efficiency of the control technology for the specific application.

(6) If, in reviewing an application for a control technology for an emission point, the Administrator or permitting authority determines the control technology is not different in use or design from the reference control technology, the Administrator or permitting authority shall deny the application.

(j) The following procedures shall be used for calculating the efficiency (percent reduction) of pollution prevention measures for storage vessels, continuous process vents, batch process vents, aggregate batch vent streams, and wastewater streams:

(1) A pollution prevention measure is any practice that meets the criteria of paragraphs (j)(1)(i) and (j)(1)(ii) of this section.

(i) A pollution prevention measure is any practice that results in a lesser quantity of organic HAP emissions per unit of product released to the atmosphere prior to out-of-process recycling, treatment, or control of emissions, while the same product is produced.

(ii) Pollution prevention measures may include: substitution of feedstocks that reduce organic HAP emissions; alterations to the production process to reduce the volume of materials released to the environment; equipment modifications; housekeeping measures; and in-process recycling that returns waste materials directly to production as raw materials. Production cutbacks do not qualify as pollution prevention.

(2) The emission reduction efficiency of pollution prevention measures implemented after November 15, 1990, may be used in calculating the actual emissions from an emission point in the debit and credit equations in paragraphs (g) and (h) of this section.

(i) For pollution prevention measures, the percent reduction used in the equations in paragraphs (g)(2) through (g)(7) of this section and paragraphs (h)(2) through (h)(7) of this section is the percent difference between the monthly organic HAP emissions for each emission point after the pollution prevention measure for the most recent month versus monthly emissions from the same emission point before the pollution prevention measure, adjusted

(ii) Equa  
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$$Percent\ reduction = \frac{E_B - \frac{(E_{PP})(P_B)}{P_{PP}}}{E_B} 100\% \quad [Eq. 46]$$

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Where:

Percent reduction=Efficiency of pollution prevention measure (percent organic HAP reduction).

EB=Monthly emissions before the pollution prevention measure, megagrams per month, determined as specified in paragraphs (j)(2)(ii)(A), (j)(2)(ii)(B), and (j)(2)(ii)(C) of this section.

E<sub>pp</sub>=Monthly emissions after the pollution prevention measure, megagrams per month, as determined for the most recent month, determined as specified in either paragraphs (j)(2)(ii)(D) or (j)(2)(ii)(E) of this section.

P<sub>B</sub>=Monthly production before the pollution prevention measure, megagrams per month, during the same period over which E<sub>B</sub> is calculated.

P<sub>pp</sub>=Monthly production after the pollution prevention measure, megagrams per month, as determined for the most recent month.

(A) The monthly emissions before the pollution prevention measure, E<sub>B</sub>, shall be determined in a manner consistent with the equations and procedures in paragraphs (g)(2) and (g)(3) of this section for continuous process vents, paragraph (g)(4) of this section for storage vessels, paragraph (g)(6) of this section for batch process vents, and paragraph (g)(7) of this section for aggregate batch vent streams.

(B) For 
$$E_B = \sum_{i=1}^n \left[ (6.0 \times 10^{-8}) Q_{Bi} H_{Bi} \sum_{m=1}^s F_{em} HAP_{Bim} \right] \quad [\text{Eq. 47}]$$
 subpart:

Where:

n = Number of wastewater streams.

Q<sub>Bi</sub> = Annual average flow rate for wastewater stream i before the pollution prevention measure, defined and determined according to § 63.144(c)(3), liters per minute, before implementation of the pollution prevention measure.

H<sub>Bi</sub> = Number of hours per month that wastewater stream i was discharged before the pollution prevention measure, hours per month.

s = Total number of organic HAP in wastewater stream i.

F<sub>em</sub> = Fraction emitted of organic HAP m in wastewater from Table 34 of subpart G of this part, dimensionless.

HAP<sub>Bim</sub> = Annual average concentration of organic HAP m in wastewater stream i, defined and determined according to paragraph § 63.150(g)(5)(i) of this section, before the pollution prevention measure, parts per million by weight, as measured before the implementation of the pollution measure.

(C) If the pollution prevention measure was implemented prior to September 12, 1996 records may be used to determine E<sub>B</sub>.

(D) The monthly emissions after the pollution prevention measure,  $E_{pp}$ , may be determined during a performance test or by a design evaluation and documented engineering calculations. Once an emissions-to-production ratio has been established, the ratio can be used to estimate monthly emissions from monthly production records.

(E) For wastewater,  $E_{pp}$  shall be calculated using Equation 48 of this subpart and  $n$ ,  $Q_{ppi}$ ,  $H_{ppi}$ ,  $s$ ,  $F_{em}$ , and  $HAP_{ppim}$  are defined and determined as described in paragraph (j)(2)(ii)(B) of this section, except that  $Q_{ppi}$ ,  $H_{ppi}$ , and  $HAP_{ppim}$  shall be determined after the pollution prevention measure has been implemented.

$$E_{pp} = \sum_{i=1}^n \left[ (6.0 * 10^{-8}) Q_{ppi} H_{ppi} \sum_{m=1}^3 F_{em} HAP_{ppim} \right] \quad [Eq. 48]$$

(iii) All equations, calculations, test procedures, test results, and other information used to determine the percent reduction achieved by a pollution prevention measure for each emission point shall be fully documented.

(iv) The same pollution prevention measure may reduce emissions from multiple emission points. In such cases, the percent reduction in emissions for each emission point shall be calculated.

(v) For the purposes of the equations in paragraphs (h)(2) through (h)(7) of this section used to calculate credits for emission points controlled more stringently than the reference control technology or standard, the nominal efficiency of a pollution prevention measure is equivalent to the percent reduction of the pollution prevention measure. When a pollution prevention measure is used, the owner or operator of an affected source is not required to apply to the Administrator for a nominal efficiency and is not subject to paragraph (i) of this section.

(k) The owner or operator shall demonstrate that the emissions from the emission points proposed to be included in the emissions average will not result in greater hazard or, at the option of the Administrator, greater risk to human health or the environment than if the emission points were controlled according to the provisions in §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, and 63.1330.

(1) This demonstration of hazard or risk equivalency shall be made to the satisfaction of the Administrator.

(i) The Administrator may require owners and operators to use specific methodologies and procedures for making a hazard or risk determination.

(ii) The demonstration and approval of hazard or risk equivalency shall be made according to any guidance that the Administrator makes available for use.

(2) Owners and operators shall provide documentation demonstrating the hazard or risk equivalency of their proposed emissions average in their operating permit application or in their Emissions Averaging Plan if an operating permit application has not yet been submitted.

(3) An Emissions Averaging Plan that does not demonstrate hazard or risk equivalency to the satisfaction of the Administrator shall not be approved. The Administrator may require such adjustments to the Emissions Averaging Plan as are necessary in order to ensure that the emissions average will not result in greater hazard or risk to human health or the environment than would result if the emission points were controlled according to §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, and 63.1330.

(4) A hazard or risk equivalency demonstration shall:

(i) Be a quantitative, bona fide chemical hazard or risk assessment;

(ii) Account for differences in chemical hazard or risk to human health or the environment; and

(iii) Meet any requirements set by the Administrator for such demonstrations.

(l) For periods of parameter monitoring excursions, an owner or operator may request that the provisions of paragraphs (1)(1) through (1)(4) of this section be followed instead of the procedures in paragraphs (f)(2)(i) and (f)(2)(ii) of this section.

(1) The owner or operator shall notify the Administrator of monitoring excursions in the Periodic Reports as required in § 63.1335(e)(6).

(2) The owner or operator shall demonstrate that other types of monitoring data or engineering calculations are appropriate to establish that the control device for the emission point was operating in such a fashion to warrant assigning full or partial credits and debits. This demonstration shall be made to the Administrator's satisfaction, and the Administrator may establish procedures of demonstrating compliance that are acceptable.

(3) The owner or operator shall provide documentation of the excursion and the other type of monitoring data or engineering calculations to be used to demonstrate that the control device for the emission point was operating in such a fashion to warrant assigning full or partial credits and debits.

(4) The Administrator may assign full or partial credit and debits upon review of the information provided.

(m) For each emission point included in an emissions average, the owner or operator shall perform testing, monitoring, recordkeeping, and reporting equivalent to that required for Group 1 emission points complying with §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, and 63.1330, as applicable. The specific requirements for continuous process vents, batch process vents, aggregate batch vent streams, storage vessels, and wastewater

operations that are included in an emissions average for an affected source are identified in paragraphs (m)(1) through (m)(7) of this section.

(1) For each continuous process vent subject to § 63.1315 equipped with a flare, incinerator, boiler, or process heater, as appropriate to the control technique:

(i) Determine whether the continuous process vent is Group 1 or Group 2 according to the procedures specified in § 63.1315;

(ii) Conduct initial performance tests to determine percent reduction according to the procedures specified in § 63.1315; and

(iii) Monitor the operating parameters, keep records, and submit reports according to the procedures specified in § 63.1315.

(2) For each continuous process vent subject to § 63.1315 equipped with a carbon adsorber, absorber, or condenser but not equipped with a control device, as appropriate to the control technique:

(i) Determine the flow rate, organic HAP concentration, and TRE index value according to the procedures specified in § 63.1315; and

(ii) Monitor the operating parameters, keep records, and submit reports according to the procedures specified in § 63.1315.

(3) For continuous process vents subject to § 63.1316(b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1):

(i) Determine whether the emissions from the continuous process vents subject to § 63.1316(b)(1)(i) located in the collection of material recovery sections within the affected source are greater than, equal to, or less than 0.12 kg organic HAP per Mg of product according to the procedures specified in § 63.1318(b);

(ii) Determine the emission rate, ERHAP, for each collection of process sections within the affected source according to the procedures specified in § 63.1318(b); and

(iii) [Reserved]

(iv) Monitor the operating parameters, keep records, and submit reports according to the procedures specified in § 63.1317, § 63.1319, § 63.1320.

(4) For each storage vessel controlled with an internal floating roof, external roof, or a closed vent system with a control device, as appropriate to the control technique:

(i) Perform the monitoring or inspection procedures according to the procedures specified in § 63.1314;

(ii) Perform the reporting and recordkeeping procedures according to the procedures specified in § 63.1314; and

- (iii) For closed vent systems with control devices, conduct an initial design evaluation and submit an operating plan according to the procedures specified in § 63.1314.
- (5) For wastewater emission points, as appropriate to the control technique:
  - (i) For wastewater treatment processes, conduct tests according to the procedures specified in § 63.1330;
  - (ii) Conduct inspections and monitoring according to the procedures specified in § 63.1330;
  - (iii) Implement a recordkeeping program according to the procedures specified in § 63.1330; and
  - (iv) Implement a reporting program according to the procedures specified in § 63.1330.
- (6) For each batch process vent and aggregate batch vent stream equipped with a control device, as appropriate to the control technique:
  - (i) Determine whether the batch process vent or aggregate batch vent stream is Group 1 or Group 2 according to the procedures in § 63.1323;
  - (ii) Conduct performance tests according to the procedures specified in § 63.1325;
  - (iii) Conduct monitoring according to the procedures specified in § 63.1324; and
  - (iv) Perform the recordkeeping and reporting procedures according to the procedures specified in §§ 63.1326 and 63.1327.
- (7) If an emission point in an emissions average is controlled using a pollution prevention measure or a device or technique for which no monitoring parameters or inspection procedures are required by §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, or 63.1330, the owner or operator shall submit the information specified in § 63.1335(f) for alternate monitoring parameters or inspection procedures in the Emissions Averaging Plan or operating permit application.
- (n) Records of all information required to calculate emission debits and credits shall be retained for 5 years.
- (o) Precompliance Reports, Emission Averaging Plans, Notifications of Compliance Status, Periodic Reports, and other reports shall be submitted as required by § 63.1335.

28. **[40 CFR 63.1333 ]**

**Additional requirements for performance testing.**

- (a) Performance testing shall be conducted in accordance with § 63.7(a)(1), (a)(3), (d), (e)(1), (e)(2), (e)(4), (g), and (h), with the exceptions specified in paragraphs (a)(1) through

(a)(5) of this section and the additions specified in paragraphs (b) through (d) of this section. Sections 63.1314 through 63.1330 also contain specific testing requirements.

(1) Performance tests shall be conducted according to the provisions of § 63.7(e)(1) and (e)(2), except that performance tests shall be conducted at maximum representative operating conditions achievable during one of the time periods described in paragraph (a)(1)(i) of this section, without causing any of the situations described in paragraph (a)(1)(ii) of this section to occur.

(i) The 6-month period that ends 2 months before the Notification of Compliance Status is due, according to § 63.1335(e)(5); or the 6-month period that begins 3 months before the performance test and ends 3 months after the performance test.

(ii) Causing damage to equipment; necessitating that the owner or operator make product that does not meet an existing specification for sale to a customer; or necessitating that the owner or operator make product in excess of demand.

(2) The requirements in § 63.1335(e)(5) shall apply instead of the references in § 63.7(g) to the Notification of Compliance Status requirements in § 63.9(h).

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

(4) The owner or operator shall notify the Administrator of the intention to conduct a performance test at least 30 days before the performance test is scheduled to allow the Administrator the opportunity to have an observer present during the test. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the owner or operator of an affected facility shall notify the Administrator as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Administrator by mutual agreement.

(5) Performance tests shall be performed no later than 150 days after the compliance dates specified in this subpart (*i.e.*, in time for the results to be included in the Notification of Compliance Status), rather than according to the time periods in § 63.7(a)(2) of subpart A of this part.

(b) Each owner or operator of an existing affected source producing MBS complying with § 63.1315(b)(2) shall determine compliance with the mass emission per mass product standard by using Equation 49 of this subpart. When determining  $E_i$ , when the provisions of § 63.116(c)(4) specify that Method 18, 40 CFR part 60, appendix A, shall be used, Method 18 or Method 25A, 40 CFR part 60, appendix A, may be used for the purposes of this subpart. The use of Method 25A, 40 CFR part 60, appendix A, shall conform with the requirements in paragraphs (b)(1) and (b)(2) of this section.

$$ER_{MBS} = \frac{\sum_{i=1}^n E_i}{PP_M} \quad [Eq. 49]$$

Where:

ERMBS = Emission rate of organic HAP or TOC from continuous process vents, kg/Mg product.

E<sub>i</sub> = Emission rate of organic HAP or TOC from continuous process vent i as calculated using the procedures specified in § 63.116(c)(4), kg/month.

PPM = Amount of polymer produced in one month as determined by the procedures specified in § 63.1318(b)(1)(ii), Mg/month.

n = Number of continuous process vents.

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

(2) The use of Method 25A, 40 CFR part 60, appendix A, is acceptable if the response from the response sensitive scale.

(c) 2(a)(3) shall determine the response sensitive scale. PR = Percent reduction. Equation 50 of this

$$PR = \frac{\left[ H_j \sum_{j=1}^n (E_i - E_o)_j \right] + \sum_{k=1}^n H_k E_{kw} + \sum_{l=1}^n A E_{unc}}{\left( H_j \sum_{j=1}^n E_i \right) + \sum_{k=1}^n H_k E_{kw} + \sum_{l=1}^n A E_{unc}} \quad (100) \quad [Eq. 50]$$



Where:

PR=Percent reduction

H<sub>j</sub>=Number of operating hours in a year for control device j.

E<sub>i</sub>=Mass rate of TOC or total organic HAP at the inlet of control device j, calculated as specified in § 63.1325(f), kg/hr. This value includes all continuous process vents, batch process vents, and aggregate batch vent streams routed to control device j.

E<sub>o</sub>=Mass rate of TOC or total organic HAP at the outlet of control device j, calculated as specified in § 63.1325(f), kg/hr.

H<sub>k</sub>=Number of hours of operation during which positive flow is present in uncontrolled continuous process vent or aggregate batch vent stream k, hr/yr.

E<sub>k</sub>=Mass rate of TOC or total organic HAP of uncontrolled continuous process vent or aggregate batch vent stream k, calculated as specified in § 63.1325(f)(4), kg/hr.

A<sub>Eunc</sub>=Mass rate of TOC or total organic HAP of uncontrolled batch process vent l, calculated as specified in § 63.1325(f)(4), kg/yr.

n=Number of control devices, uncontrolled continuous process vents and aggregate batch vent streams, and uncontrolled batch process vents. The value of n is not necessarily the same for these three items.

(d) Data shall be reduced in accordance with the EPA approved methods specified in the applicable subpart or, if other test methods are used, the data and methods shall be validated according to the protocol in Method 301 of appendix A of this part.

(e) Notwithstanding any other provision of this subpart, if an owner or operator of an affected source uses a flare to comply with any of the requirements of this subpart, the owner or operator shall comply with paragraphs (e)(1) through (e)(3) of this section. The owner or operator is not required to conduct a performance test to determine percent emission reduction or outlet organic HAP or TOC concentration. If a compliance demonstration has been conducted previously for a flare, using the techniques specified in paragraphs (e)(1) through (e)(3) of this section, that compliance demonstration may be used to satisfy the requirements of this paragraph if either no deliberate process changes have been made since the compliance demonstration, or the results of the compliance demonstration reliably demonstrate compliance despite process changes.

(1) Conduct a visible emission test using the techniques specified in § 63.11(b)(4);

(2) Determine the net heating value of the gas being combusted, using the techniques specified in § 63.11(b)(6); and

(3) Determine the exit velocity using the techniques specified in either § 63.11(b)(7)(i) (and § 63.11(b)(7)(iii), where applicable) or § 63.11(b)(8), as appropriate.

**Parameter monitoring levels and excursions.**

(a) *Establishment of parameter monitoring levels.* The owner or operator of a control or recovery device that has one or more parameter monitoring level requirements specified under this subpart shall establish a maximum or minimum level for each measured parameter. If a performance test is required by this subpart for a control device, the owner or operator shall use the procedures in either paragraph (b) or (c) of this section to establish the parameter monitoring level(s). If a performance test is not required by this subpart for a control device, the owner or operator may use the procedures in paragraph (b), (c) or (d) of this section to establish the parameter monitoring level(s). When using the procedures specified in paragraph (c) or (d) of this section, the owner or operator shall submit the information specified in § 63.1335(e)(3)(vii) for review and approval as part of the Precompliance Report.

(1) The owner or operator shall operate control and recovery devices such that the daily average of monitored parameters remains above the minimum established level or below the maximum established level, except as otherwise stated in this subpart.

(2) As specified in § 63.1335(e)(5), all established levels, along with their supporting documentation and the definition of an operating day, shall be submitted as part of the Notification of Compliance Status.

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

(b) *Establishment of parameter monitoring levels based exclusively on performance tests.* In cases where a performance test is required by this subpart, or the owner or operator of the affected source elects to do a performance test in accordance with the provisions of this subpart, and an owner or operator elects to establish a parameter monitoring level for a control, recovery, or recapture device based exclusively on parameter values measured during the performance test, the owner or operator of the affected source shall comply with the procedures in paragraphs (b)(1) through (b)(4) of this section, as applicable.

(1) [Reserved]

(2) *Continuous process vents.* During initial compliance testing, the appropriate parameter shall be continuously monitored during the required 1-hour runs. The monitoring level(s) shall then be established as the average of the maximum (or minimum) point values from the three test runs. The average of the maximum values shall be used when establishing a maximum level, and the average of the minimum values shall be used when establishing a minimum level.

(3) *Batch process vents.* The monitoring level(s) shall be established using the procedures specified in either paragraph (b)(3)(i) or (b)(3)(ii) of this section. The procedures specified in this paragraph (b)(3) may only be used if the batch emission episodes, or portions thereof, selected to be controlled were tested, and monitoring data were collected, during

the entire period in which emissions were vented to the control device, as specified in § 63.1325(c)(1)(i). If the owner or operator chose to test only a portion of the batch emission episode, or portion thereof, selected to be controlled, the procedures in paragraph (c) of this section shall be used.

(i) If more than one batch emission episode or more than one portion of a batch emission episode has been selected to be controlled, a single level for the batch cycle shall be calculated as follows:

(A) The average monitored parameter value shall be calculated for each batch emission episode, or portion thereof, in the batch cycle selected to be controlled. The average shall be based on all values measured during the required performance test.

(B) If the level to be established is a maximum operating parameter, the level shall be defined as the minimum of the average parameter values of the batch emission episodes, or portions thereof, in the batch cycle selected to be controlled (*i.e.*, identify the emission episode, or portion thereof, which requires the lowest parameter value in order to assure compliance. The average parameter value that is necessary to assure compliance for that emission episode, or portion thereof, shall be the level for all emission episodes, or portions thereof, in the batch cycle, that are selected to be controlled).

(C) If the level to be established is a minimum operating parameter, the level shall be defined as the maximum of the average parameter values of the batch emission episodes, or portions thereof, in the batch cycle selected to be controlled (*i.e.*, identify the emission episode, or portion thereof, which requires the highest parameter value in order to assure compliance. The average parameter value that is necessary to assure compliance for that emission episode, or portion thereof, shall be the level for all emission episodes, or portions thereof, in the batch cycle, that are selected to be controlled).

(D) Alternatively, an average monitored parameter value shall be calculated for the entire batch cycle based on all values measured during each batch emission episode, or portion thereof, selected to be controlled.

(ii) Instead of establishing a single level for the batch cycle, as described in paragraph (b)(3)(i) of this section, an owner or operator may establish separate levels for each batch emission episode, or portion thereof, selected to be controlled. Each level shall be determined as specified in paragraph (b)(3)(i)(A) of this section.

(iii) The batch cycle shall be defined in the Notification of Compliance Status, as specified in § 63.1335(e)(5). Said definition shall include an identification of each batch emission episode and the information required to determine parameter monitoring compliance for partial batch cycles (*i.e.*, when part of a batch cycle is accomplished during two different operating days).

(4) *Aggregate batch vent streams.* For aggregate batch vent streams, the monitoring level shall be established in accordance with paragraph (b)(2) of this section.

(c) *Establishment of parameter monitoring levels based on performance tests, supplemented by engineering assessments and/or manufacturer's recommendations.* In cases where a performance test is required by this subpart, or the owner or operator elects to do a performance test in accordance with the provisions of this subpart, and an owner or operator elects to establish a parameter monitoring level for a control, recovery, or recapture device under this paragraph (c), the owner or operator shall supplement the parameter values measured during the performance test with engineering assessments and/or manufacturer's recommendations. Performance testing is not required to be conducted over the entire range of expected parameter values.

(d) *Establishment of parameter monitoring based on engineering assessments and/or manufacturer's recommendations.* In cases where a performance test is not required by this subpart and an owner or operator elects to establish a parameter monitoring level for a control, recovery, or recapture device under this paragraph (d), the determination of the parameter monitoring level shall be based exclusively on engineering assessments and/or manufacturer's recommendations.

(e) [Reserved]

(f) *Parameter monitoring excursion definitions.* (1) With respect to storage vessels (where the applicable monitoring plan specifies continuous monitoring), continuous process vents, aggregate batch vent streams, and process wastewater streams, an excursion means any of the three cases listed in paragraphs (f)(1)(i) through (f)(1)(iii) of this section. For a control or recovery device where multiple parameters are monitored, if one or more of the parameters meets the excursion criteria in paragraphs (f)(1)(i) through (f)(1)(iii) of this section, this is considered a single excursion for the control or recovery device. For each excursion, the owner or operator shall be deemed out of compliance with the provisions of this subpart, except as provided in paragraph (g) of this section.

(i) When the daily average value of one or more monitored parameters is above the maximum level or below the minimum level established for the given parameters.

(ii) When the period of control or recovery device operation, with the exception noted in paragraph (f)(1)(v) of this section, is 4 hours or greater in an operating day, and monitoring data are insufficient, as defined in paragraph (f)(1)(iv) of this section, to constitute a valid hour of data for at least 75 percent of the operating hours.

(iii) When the period of control or recovery device operation, with the exception noted in paragraph (f)(1)(v) of this section, is less than 4 hours in an operating day and more than two of the hours during the period of operation do not constitute a valid hour of data due to insufficient monitoring data, as defined in paragraph (f)(1)(iv) of this section.

(iv) Monitoring data are insufficient to constitute a valid hour of data, as used in paragraphs (f)(1)(ii) and (f)(1)(iii) of this section, if measured values are unavailable for any of the 15-minute periods within the hour. For data compression systems approved under §

63.1335(g)(3), monitoring data are insufficient to calculate a valid hour of data if there are less than four data measurements made during the hour.

(v) The periods listed in paragraphs (f)(1)(v)(A) through (f)(1)(v)(E) of this section are not considered to be part of the period of control or recovery device operation, for the purposes of paragraphs (f)(1)(ii) and (f)(1)(iii) of this section.

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

(B) Start-ups;

(C) Shutdowns;

(D) Malfunctions; or

(E) Periods of non-operation of the affected source (or portion thereof), resulting in cessation of the emissions to which the monitoring applies.

(2) With respect to batch process vents, an excursion means one of the two cases listed in paragraphs (f)(2)(i) and (f)(2)(ii) of this section. For a control device where multiple parameters are monitored, if one or more of the parameters meets the excursion criteria in either paragraph (f)(2)(i) or (f)(2)(ii) of this section, this is considered a single excursion for the control device. For each excursion, the owner or operator shall be deemed out of compliance with the provisions of this subpart, except as provided in paragraph (g) of this section.

(i) When the batch cycle daily average value of one or more monitored parameters is above the maximum or below the minimum established level for the given parameters.

(ii) When monitoring data are insufficient for an operating day. Monitoring data shall be considered insufficient when measured values are not available for at least 75 percent of the 15-minute periods when batch emission episodes selected to be controlled are being vented to the control device during the operating day, using the procedures specified in paragraphs (f)(2)(ii)(A) through (f)(2)(ii)(D) of this section.

(A) Determine the total amount of time during the operating day when batch emission episodes selected to be controlled are being vented to the control device.

(B) Subtract the time during the periods listed in paragraphs (f)(2)(ii)(B)(1) through (f)(2)(ii)(B)(4) of this section from the total amount of time determined in paragraph (f)(2)(ii)(A) of this section, to obtain the operating time used to determine if monitoring data are insufficient.

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

(2) Start-ups;

(3) Shutdowns; or

(4) Malfunctions.

(C) Determine the total number of 15-minute periods in the operating time used to determine if monitoring data are insufficient, as was determined in accordance with paragraph (f)(2)(ii)(B) of this section.

(D) If measured values are not available for at least 75 percent of the total number of 15-minute periods determined in paragraph (f)(2)(ii)(C) of this section, the monitoring data are insufficient for the operating day.

(3) For storage vessels where the applicable monitoring plan does not specify continuous monitoring, an excursion is defined in paragraph (f)(3)(i) or (ii) of this section, as applicable. For a control or recovery device where multiple parameters are monitored, if one or more of the parameters meets the excursion criteria, this is considered a single excursion for the control or recovery device. For each excursion, the owner or operator shall be deemed out of compliance with the provisions of this subpart, except as provided in paragraph (g) of this section.

(i) If the monitoring plan specifies monitoring a parameter and recording its value at specific intervals (such as every 15 minutes or every hour), either of the cases listed in paragraph (f)(3)(i)(A) or (f)(3)(i)(B) of this section is considered a single excursion for the control device. For each excursion, the owner or operator shall be deemed out of compliance with the provisions of this subpart, except as provided in paragraph (g) of this section.

(A) When the average value of one or more parameters, averaged over the duration of the filling period for the storage vessel, is above the maximum level or below the minimum level established for the given parameters.

(B) When monitoring data are insufficient. Monitoring data shall be considered insufficient when measured values are not available for at least 75 percent of the specific intervals at which parameters are to be monitored and recorded, according to the storage vessel's monitoring plan, during the filling period for the storage vessel.

(ii) If the monitoring plan does not specify monitoring a parameter and recording its value at specific intervals (for example, if the relevant operating requirement is to exchange a disposable carbon canister before expiration of its rated service life), the monitoring plan shall define an excursion in terms of the relevant operating requirement.

(4) With respect to continuous process vents complying with the mass emissions per mass product requirements specified in § 63.1316(b)(1)(i)(A), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1)(i), an excursion has occurred when the mass emission rate calculated as specified in § 63.1318(c) exceeds the appropriate mass emissions per mass product requirement. For each excursion, the owner or operator shall be deemed out of compliance with the provisions of this subpart, except as provided in paragraph (g) of this section.

(5) With respect to continuous process vents complying with the temperature limits for final condensers specified in § 63.1316(b)(1)(i)(B) or (c)(1)(ii), an excursion has occurred when the daily average exit temperature exceeds the appropriate condenser temperature limit. For each excursion, the owner or operator shall be deemed out of compliance with the provisions of this subpart, except as provided in paragraph (g) of this section. The periods listed in paragraphs (f)(5)(i) through (f)(5)(v) of this section are not considered to be part of the period of operation for the condenser for purposes of determining the daily average exit temperature.

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

(ii) Start-ups;

(iii) Shutdowns;

(iv) Malfunctions; or

(v) Periods of non-operation of the affected source (or portion thereof), resulting in cessation of the emissions to which the monitoring applies.

(6) With respect to new affected sources producing SAN using a batch process, an excursion has occurred when the percent reduction calculated using the procedures specified in § 63.1333(c) is less than 84 percent. For each excursion, the owner or operator shall be deemed out of compliance with the provisions of this subpart, except as provided in paragraph (g) of this section. The periods listed in paragraphs (f)(6)(i) through (f)(6)(v) of this section are not considered to be part of the period of control or recovery device operation for purposes of determining the percent reduction.

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

(ii) Start-ups;

(iii) Shutdowns;

(iv) Malfunctions; or

(v) Periods of non-operation of the affected source (or portion thereof), resulting in cessation of the emissions to which the monitoring applies.

(7) With respect to continuous process vents complying with the mass emissions per mass product requirement specified in § 63.1315(b)(2), an excursion has occurred when the mass emission rate calculated as specified in § 63.1333(b) exceeds the mass emissions per mass product requirement specified in § 63.1315(b)(2). For each excursion, the owner or operator shall be deemed out of compliance with the provisions of this subpart, except as provided in paragraph (g) of this section.

(g) *Excused excursions.* A number of excused excursions shall be allowed for each control or recovery device for each semiannual period. The number of excused excursions for each semiannual period is specified in paragraphs (g)(1) through (g)(6) of this section. This paragraph (g) applies to affected sources required to submit Periodic Reports semiannually or quarterly. The first semiannual period is the 6-month period starting the date the Notification of Compliance Status is due.

- (1) For the first semiannual period -- six excused excursions.
- (2) For the second semiannual period -- five excused excursions.
- (3) For the third semiannual period -- four excused excursions.
- (4) For the fourth semiannual period -- three excused excursions.
- (5) For the fifth semiannual period -- two excused excursions.
- (6) For the sixth and all subsequent semiannual periods -- one excused excursion.

30. **[40 CFR 63.1335]**

**General recordkeeping and reporting provisions.**

(a) *Data retention.* Unless otherwise specified in this subpart, the owner or operator of an affected source shall keep copies of all applicable records and reports required by this subpart for at least 5 years, as specified in paragraph (a)(1) of this section, with the exception listed in paragraph (a)(2) of this section.

(1) All applicable records shall be maintained in such a manner that they can be readily accessed. The most recent 6 months of records shall be retained on site or shall be accessible from a central location by computer or other means that provides access within 2 hours after a request. The remaining 4 and one-half years of records may be retained offsite. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.

(2) If an owner or operator submits copies of reports to the appropriate EPA Regional Office, the owner or operator is not required to maintain copies of reports. If the EPA Regional Office has waived the requirement of § 63.10(a)(4)(ii) for submittal of copies of reports, the owner or operator is not required to maintain copies of those reports.

(b) *Requirements of subpart A of this part.* The owner or operator of an affected source shall comply with the applicable recordkeeping and reporting requirements in subpart A of this part as specified in Table 1 of this subpart. These requirements include, but are not limited to, the requirements specified in paragraphs (b)(1) and (b)(2) of this section.

(1) *Start-up, shutdown, and malfunction plan.* The owner or operator of an affected source shall develop and implement a written start-up, shutdown, and malfunction plan as specified in § 63.6(e)(3). This plan shall describe, in detail, procedures for operating and maintaining the affected source during periods of start-up, shutdown, and malfunction and a

program for corrective action for malfunctioning process and air pollution control equipment used to comply with this subpart. Inclusion of Group 2 emission points is not required, unless these points are included in an emissions average. For equipment leaks (subject to § 63.1331), the start-up, shutdown, and malfunction plan requirement is limited to control devices and is optional for other equipment. For equipment leaks, the start-up, shutdown, and malfunction plan may include written procedures that identify conditions that justify a delay of repair. A provision for ceasing to collect, during a start-up, shutdown, or malfunction, monitoring data that would otherwise be required by the provisions of this subpart may be included in the start-up, shutdown, and malfunction plan only if the owner or operator has demonstrated to the Administrator, through the Precompliance Report or a supplement to the Precompliance Report, that the monitoring system would be damaged or destroyed if it were not shut down during the start-up, shutdown, or malfunction. The affected source shall keep the start-up, shutdown, and malfunction plan on-site. Records associated with the plan shall be kept as specified in paragraphs (b)(1)(i)(A) through (b)(1)(i)(C) of this section. Reports related to the plan shall be submitted as specified in paragraph (b)(1)(ii) of this section.

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

(A) Records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment or control devices or recovery devices or continuous monitoring systems used to comply with this subpart during which excess emissions (as defined in § 63.1310(j)(4)) occur.

(B) For each start-up, shutdown, or malfunction during which excess emissions (as defined in § 63.1310(j)(4)) occur, records reflecting whether the procedures specified in the affected source's start-up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan. For example, if a start-up, shutdown, and malfunction plan includes procedures for routing a control device to a backup control device, records shall be kept of whether the plan was followed. These records may take the form of a "checklist," or other form of recordkeeping that confirms conformance with the start-up shutdown, and malfunction plan for the event.

(C) Records specified in paragraphs (b)(1)(i)(A) through (b)(1)(i)(B) of this section are not required if they pertain solely to Group 2 emission points that are not included in an emissions average.

(ii) *Reports of start-up, shutdown, and malfunction.* For the purposes of this subpart, the semiannual start-up, shutdown, and malfunction reports shall be submitted on the same schedule as the Periodic Reports required under paragraph (e)(6) of this section instead of being submitted on the schedule specified in § 63.10(d)(5)(i). The reports shall include the information specified in § 63.10(d)(5)(i).

(2) *Application for approval of construction or reconstruction.* For new affected sources, each owner or operator shall comply with the provisions in § 63.5 regarding construction

and reconstruction, excluding the provisions specified in § 63.5(d)(1)(ii)(H), (d)(1)(iii), (d)(2), and (d)(3)(ii).

(c) [Reserved]

(d) *Recordkeeping and documentation.* Owners or operators required to keep continuous records shall keep records as specified in paragraphs (d)(1) through (d)(7) of this section, unless an alternative recordkeeping system has been requested and approved as specified in paragraph (g) of this section, and except as provided in paragraph (h) of this section. If a monitoring plan for storage vessels pursuant to § 63.1314(a)(9) requires continuous records, the monitoring plan shall specify which provisions, if any, of paragraphs (d)(1) through (d)(7) of this section apply. As described in § 63.1314(a)(9), certain storage vessels are not required to keep continuous records as specified in this paragraph. Owners and operators of such storage vessels shall keep records as specified in the monitoring plan required by § 63.1314(a)(9). Paragraphs (d)(8) and (d)(9) of this section specify documentation requirements.

(1) The monitoring system shall measure data values at least once every 15 minutes.

(2) The owner or operator shall record either each measured data value or block average values for 1 hour or shorter periods calculated from all measured data values during each period. If values are measured more frequently than once per minute, a single value for each minute may be used to calculate the hourly (or shorter period) block average instead of all measured values. Owners or operators of batch process vents shall record each measured data value.

(3) Daily average (or batch cycle daily average) values of each continuously monitored parameter shall be calculated for each operating day as specified in paragraphs (d)(3)(i) through (d)(3)(ii) of this section, except as specified in paragraphs (d)(6) and (d)(7) of this section.

(i) The daily average value or batch cycle daily average shall be calculated as the average of all parameter values recorded during the operating day, except as specified in paragraph (d)(7) of this section. For batch process vents, as specified in § 63.1326(e)(2)(i), only parameter values measured during those batch emission episodes, or portions thereof, in the batch cycle that the owner or operator has chosen to control shall be used to calculate the average. The calculated average shall cover a 24-hour period if operation is continuous, or the number of hours of operation per operating day if operation is not continuous.

(ii) The operating day shall be the period the owner or operator specifies in the operating permit or the Notification of Compliance Status for purposes of determining daily average values or batch cycle daily average values of monitored parameters.

(4)-(5) [Reserved]

(6) *Records required when all recorded values are within the established limits.* If all recorded values for a monitored parameter during an operating day are above the minimum

level or below the maximum level established in the Notification of Compliance Status or operating permit, the owner or operator may record that all values were above the minimum level or below the maximum level rather than calculating and recording a daily average (or batch cycle daily average) for that operating day.

(7) Monitoring data recorded during periods identified in paragraphs (d)(7)(i) through (d)(7)(v) of this section shall not be included in any average computed under this subpart. Records shall be kept of the times and durations of all such periods and any other periods during process or control device or recovery device operation when monitors are not operating.

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

(ii) Start-ups;

(iii) Shutdowns;

(iv) Malfunctions;

(v) Periods of non-operation of the affected source (or portion thereof), resulting in cessation of the emissions to which the monitoring applies.

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

(9) The owner or operator of an affected source granted a waiver under § 63.10(f) shall maintain the information, if any, specified by the Administrator as a condition of the waiver of recordkeeping or reporting requirements.

(e) *Reporting and notification.* In addition to the reports and notifications required by subpart A of this part as specified in Table 1 of this subpart, the owner or operator of an affected source shall prepare and submit the reports listed in paragraphs (e)(3) through (e)(8) of this section, as applicable. All reports required by this subpart, and the schedule for their submittal, are listed in Table 9 of this subpart.

(1) Owners and operators shall not be in violation of the reporting requirements of this subpart for failing to submit information required to be included in a specified report if the owner or operator meets the requirements in paragraphs (e)(1)(i) through (e)(1)(iii) of this section. Examples of circumstances where this paragraph may apply include information related to newly-added equipment or emission points, changes in the process, changes in equipment required or utilized for compliance with the requirements of this subpart, or changes in methods or equipment for monitoring, recordkeeping, or reporting.

(i) The information was not known in time for inclusion in the report specified by this subpart;

(ii) The owner or operator has been diligent in obtaining the information; and

(iii) The owner or operator submits a report according to the provisions of paragraphs (e)(1)(iii)(A) through (e)(1)(iii)(C) of this section.

(A) If this subpart expressly provides for supplements to the report in which the information is required, the owner or operator shall submit the information as a supplement to that report. The information shall be submitted no later than 60 days after it is obtained, unless otherwise specified in this subpart.

(B) If this subpart does not expressly provide for supplements, but the owner or operator must submit a request for revision of an operating permit pursuant to part 70 or part 71, due to circumstances to which the information pertains, the owner or operator shall submit the information with the request for revision to the operating permit.

(C) In any case not addressed by paragraph (e)(1)(iii)(A) or (e)(1)(iii)(B) of this paragraph, the owner or operator shall submit the information with the first Periodic Report, as required by this subpart, which has a submission deadline at least 60 days after the information is obtained.

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

(3) *Precompliance Report.* Owners or operators of affected sources requesting an extension for compliance; requesting approval to use alternative monitoring parameters, alternative continuous monitoring and recordkeeping, or alternative controls; requesting approval to use engineering assessment to estimate emissions from a batch emissions episode, as described in § 63.1323(b)(6)(i)(C); wishing to establish parameter monitoring levels according to the procedures contained in § 63.1334(c) or (d); or requesting approval to incorporate a provision for ceasing to collect monitoring data, during a start-up, shutdown, or malfunction, into the start-up, shutdown, and malfunction plan, when that monitoring equipment would be damaged if it did not cease to collect monitoring data, as permitted under § 63.1310(j)(3), shall submit a Precompliance Report according to the schedule described in paragraph (e)(3)(i) of this section. The Precompliance Report shall contain the information specified in paragraphs (e)(3)(ii) through (e)(3)(viii) of this section, as appropriate.

(i) *Submittal dates.* The Precompliance Report shall be submitted to the Administrator no later than December 19, 2000. If a Precompliance Report was submitted prior to June 19, 2000 and no changes need to be made to that Precompliance Report, the owner or operator shall re-submit the earlier report or submit notification that the previously submitted report is still valid. Unless the Administrator objects to a request submitted in the Precompliance Report within 45 days after its receipt, the request shall be deemed approved. For new

affected sources, the Precompliance Report shall be submitted to the Administrator with the application for approval of construction or reconstruction required in paragraph (b)(2) of this section. Supplements to the Precompliance Report may be submitted as specified in paragraph (e)(3)(ix) of this section.

(ii) A request for an extension for compliance, as specified in § 63.1311(e), may be submitted in the Precompliance Report. The request for a compliance extension shall include the data outlined in § 63.6(i)(6)(i)(A), (B), and (D), as required in § 63.1311(e)(1).

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

(iv) If the affected source seeks to comply using alternative continuous monitoring and recordkeeping as specified in paragraph (g) of this section, the owner or operator shall submit a request for approval in the Precompliance Report.

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

(vi) If a request for approval to use engineering assessment to estimate emissions from a batch emissions episode, as described in § 63.1323(b)(6)(i)(C) is being made, the information required by § 63.1323(b)(6)(iii)(B) shall be submitted in the Precompliance Report.

(vii) If an owner or operator establishes parameter monitoring levels according to the procedures contained in § 63.1334(c) or (d), the following information shall be submitted in the Precompliance Report:

(A) Identification of which procedures (*i.e.*, § 63.1334(c) or (d)) are to be used; and

(B) A description of how the parameter monitoring level is to be established. If the procedures in § 63.1334(c) are to be used, a description of how performance test data will be used shall be included.

(viii) If the owner or operator is requesting approval to incorporate a provision for ceasing to collect monitoring data, during a start-up, shutdown, or malfunction, into the start-up, shutdown, and malfunction plan, when that monitoring equipment would be damaged if it did not cease to collect monitoring data, the information specified in paragraphs (e)(3)(viii)(A) and (B) shall be supplied in the Precompliance Report or in a supplement to the Precompliance Report. The Administrator shall evaluate the supporting documentation and shall approve the request only if, in the Administrator's judgment, the specific

monitoring equipment would be damaged by the contemporaneous start-up, shutdown, or malfunction.

(A) Documentation supporting a claim that the monitoring equipment would be damaged by the contemporaneous start-up, shutdown, or malfunction; and

(B) A request to incorporate such a provision for ceasing to collect monitoring data during a start-up, shutdown, or malfunction, into the start-up, shutdown, and malfunction plan.

(ix) Supplements to the Precompliance Report may be submitted as specified in paragraphs (e)(3)(ix)(A) or (e)(3)(ix)(B) of this section. Unless the Administrator objects to a request submitted in a supplement to the Precompliance Report within 45 days after its receipt, the request shall be deemed approved.

(A) Supplements to the Precompliance Report may be submitted to clarify or modify information previously submitted.

(B) Supplements to the Precompliance Report may be submitted to request approval to use alternative monitoring parameters, as specified in paragraph (e)(3)(iii) of this section; to use alternative continuous monitoring and recordkeeping, as specified in paragraph (e)(3)(iv) of this section; to use alternative controls, as specified in paragraph (e)(3)(v) of this section; to use engineering assessment to estimate emissions from a batch emissions episode, as specified in paragraph (e)(3)(vi) of this section; to establish parameter monitoring levels according to the procedures contained in § 63.1334(c) or (d), as specified in paragraph (e)(3)(vii) of this section; or to include a provision for ceasing to collect monitoring data during a start-up, shutdown, or malfunction, in the start-up, shutdown, and malfunction plan, when that monitoring equipment would be damaged if it did not cease to collect monitoring data, as specified in paragraph (e)(3)(viii) of this section.

(4) Emissions Averaging Plan. For all existing affected sources using emissions averaging, an Emissions Averaging Plan shall be submitted for approval according to the schedule and procedures described in paragraph (e)(4)(i) of this section. The Emissions Averaging Plan shall contain the information specified in paragraph (e)(4)(ii) of this section, unless the information required in paragraph (e)(4)(ii) of this section is submitted with an operating permit application. An owner or operator of an affected source who submits an operating permit application instead of an Emissions Averaging Plan shall submit the information specified in paragraph (e)(8) of this section. In addition, a supplement to the Emissions Averaging Plan, as required under paragraph (e)(4)(iii) of this section, is to be submitted whenever additional alternative controls or operating scenarios may be used to comply with this subpart. Updates to the Emissions Averaging Plan shall be submitted in accordance with paragraph (e)(4)(iv) of this section.

(i) *Submittal and approval.* The Emissions Averaging Plan shall be submitted no later than September 19, 2000, and it is subject to Administrator approval. If an Emissions Averaging Plan was submitted prior to June 19, 2000 and no changes need to be made to that Emissions Averaging Plan, the owner or operator shall re-submit the earlier plan or submit notification that the previously submitted plan is still valid. The Administrator shall

determine within 120 days whether the Emissions Averaging Plan submitted presents sufficient information. The Administrator shall either approve the Emissions Averaging Plan, request changes, or request that the owner or operator submit additional information. Once the Administrator receives sufficient information, the Administrator shall approve, disapprove, or request changes to the plan within 120 days.

(ii) *Information required.* The Emissions Averaging Plan shall contain the information listed in paragraphs (e)(4)(ii)(A) through (e)(4)(ii)(N) of this section for all emission points included in an emissions average.

(A) The required information shall include the identification of all emission points in the planned emissions average and, where applicable, notation of whether each storage vessel, continuous process vent, batch process vent, aggregate batch vent stream, and process wastewater stream is a Group 1 or Group 2 emission point, as defined in § 63.1312 or as designated under § 63.1332 (c)(3) through (c)(5).

(B) The required information shall include the projected emission debits and credits for each emission point and the sum for the emission points involved in the average calculated according to § 63.1332. The projected credits shall be greater than or equal to the projected debits, as required under § 63.1332(e)(3).

(C) The required information shall include the specific control technology or pollution prevention measure that will be used for each emission point included in the average and date of application or expected date of application.

(D) The required information shall include the specific identification of each emission point affected by a pollution prevention measure. To be considered a pollution prevention measure, the criteria in § 63.1332(j)(1) shall be met. If the same pollution prevention measure reduces or eliminates emissions from multiple emission points in the average, the owner or operator shall identify each of these emission points.

(E) The required information shall include a statement that the compliance demonstration, monitoring, inspection, recordkeeping, and reporting provisions in § 63.1332 (m), (n), and (o) that are applicable to each emission point in the emissions average will be implemented beginning on or before the date of compliance.

(F) The required information shall include documentation of the data listed in paragraphs (e)(4)(ii)(F)(1) through (e)(4)(ii)(F)(5) of this section for each storage vessel and continuous process vent subject to § 63.1315 included in the average.

(1) The required documentation shall include the values of the parameters used to determine whether the emission point is Group 1 or Group 2. Where TRE index value is used for continuous process vent group determination, the estimated or measured values of the parameters used in the TRE equation in § 63.115(d) and the resulting TRE index value shall be submitted.

(2) The required documentation shall include the estimated values of all parameters needed for input to the emission debit and credit calculations in § 63.1332(g) and (h). These parameter values shall be specified in the affected source's Emissions Averaging Plan (or operating permit) as enforceable operating conditions. Changes to these parameters shall be reported as required by paragraph (e)(4)(iv) of this section.

(3) The required documentation shall include the estimated percent reduction if a control technology achieving a lower percent reduction than the efficiency of the applicable reference control technology or standard is or will be applied to the emission point.

(4) The required documentation shall include the anticipated nominal efficiency if a control technology achieving a greater percent emission reduction than the efficiency of the reference control technology is or will be applied to the emission point. The procedures in § 63.1332(i) shall be followed to apply for a nominal efficiency, and the report specified in paragraph (e)(7)(ii) of this section shall be submitted with the Emissions Averaging Plan as specified in paragraph (e)(7)(ii)(A) of this section.

(5) The required documentation shall include the monitoring plan specified in § 63.122(b), to include the information specified in § 63.120(d)(2)(i) and in either § 63.120(d)(2)(ii) or (d)(2)(iii) for each storage vessel controlled with a closed-vent system using a control device other than a flare.

(G) The information specified in paragraph (f) of this section shall be included in the Emissions Averaging Plan for:

(1) Each continuous process vent subject to § 63.1315 controlled by a pollution prevention measure or control technique for which monitoring parameters or inspection procedures are not specified in § 63.114; and

(2) Each storage vessel controlled by pollution prevention or a control technique other than an internal or external floating roof or a closed vent system with a control device.

(H) The required information shall include documentation of the data listed in paragraphs (e)(4)(ii)(H)(1) through (e)(4)(ii)(H)(5) of this section for each collection of continuous process vents located in a process section within the affected source subject to § 63.1316 (b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) included in the average.

(1) For continuous process vents subject to § 63.1316(b)(1)(i), the required documentation shall include the values of the parameters used to determine whether the emission point is Group 1 or Group 2. Continuous process vents subject to § 63.1316 (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) are considered Group 1 emission points for purposes of emissions averaging, as specified in § 63.1332(c)(5).

(2) The required documentation shall include the estimated values of all parameters needed for input to the emission debit and credit calculations in § 63.1332(g) and (h). These parameter values shall be specified in the affected source's Emissions Averaging Plan (or

operating permit) as enforceable operating conditions. Changes to these parameters shall be reported as required by paragraph (e)(4)(iv) of this section.

(3) For process sections generating debits or credits by comparing actual emissions expressed as kg HAP emissions per Mg of product to the applicable standard, the required documentation shall include the actual emission level expressed as kg HAP emissions per Mg of product.

(4) For process sections using combustion control devices, the required documentation shall include the estimated percent reduction if a control technology achieving a lower percent reduction than the efficiency of the applicable reference control technology or standard is or will be applied to the emission point.

(5) For process sections using combustion control devices, the required documentation shall include the anticipated nominal efficiency if a control technology achieving a greater percent emission reduction than the efficiency of the reference control technology is or will be applied to the emission point. The procedures in § 63.1332(i) shall be followed to apply for a nominal efficiency.

(I) For each pollution prevention measure or control device used to reduce air emissions of organic HAP from each collection of continuous process vents located in a process section within the affected source subject to § 63.1316 (b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) and for which no monitoring parameters or inspection procedures are specified in § 63.114, the information specified in paragraph (f) of this section, Alternative Monitoring Parameters, shall be included in the Emissions Averaging Plan.

(J) The required information shall include documentation of the data listed in paragraphs (e)(4)(ii)(J)(1) through (e)(4)(ii)(J)(3) of this section for each batch process vent and aggregate batch vent stream included in the average.

(1) The required documentation shall include the values of the parameters used to determine whether the emission point is Group 1 or Group 2.

(2) The required documentation shall include the estimated values of all parameters needed for input to the emission debit and credit calculations in § 63.1332(g) and (h). These parameter values shall be specified in the affected source's Emissions Averaging Plan (or operating permit) as enforceable operating conditions. Changes to these parameters shall be reported as required by paragraph (e)(4)(iv) of this section.

(3) For batch process vents, the required documentation shall include the estimated percent reduction for the batch cycle. For aggregate batch vent streams, the required documentation shall include the estimated percent reduction achieved on a continuous basis.

(K) For each pollution prevention measure or control device used to reduce air emissions of organic HAP from batch process vents or aggregate batch vent streams and for which no monitoring parameters or inspection procedures are specified in § 63.1324, the information

specified in paragraph (f) of this section, Alternative Monitoring Parameters, shall be included in the Emissions Averaging Plan.

(L) The required information shall include documentation of the data listed in paragraphs (e)(4)(ii)(L)(1) through (e)(4)(ii)(L)(4) of this section for each process wastewater stream included in the average.

(1) The required documentation shall include the data used to determine whether the wastewater stream is a Group 1 or Group 2 wastewater stream.

(2) The required documentation shall include the estimated values of all parameters needed for input to the wastewater emission credit and debit calculations in § 63.1332(g) and (h). These parameter values shall be specified in the affected source's Emissions Averaging Plan (or operating permit) as enforceable operating conditions. Changes to these parameters shall be reported as required by paragraph (e)(4)(iv) of this section.

(3) The required documentation shall include the estimated percent reduction if:

(i) A control technology that achieves an emission reduction less than or equal to the emission reduction that would otherwise have been achieved by a steam stripper designed to the specifications found in § 63.138(g) is or will be applied to the wastewater stream;

(ii) A control technology achieving less than or equal to 95 percent emission reduction is or will be applied to the vapor stream(s) vented and collected from the treatment processes; or

(iii) A pollution prevention measure is or will be applied.

(4) The required documentation shall include the anticipated nominal efficiency if the owner or operator plans to apply for a nominal efficiency under § 63.1332(i). A nominal efficiency shall be applied for if:

(i) A control technology that achieves an emission reduction greater than the emission reduction that would have been achieved by a steam stripper designed to the specifications found in § 63.138(g), is or will be applied to the wastewater stream; or

(ii) A control technology achieving greater than 95 percent emission reduction is or will be applied to the vapor stream(s) vented and collected from the treatment processes.

(M) For each pollution prevention measure, treatment process, or control device used to reduce air emissions of organic HAP from wastewater and for which no monitoring parameters or inspection procedures are specified in § 63.143, the information specified in paragraph (f) of this section, Alternative Monitoring Parameters, shall be included in the Emissions Averaging Plan.

(N) The required information shall include documentation of the data required by § 63.1332(k). The documentation shall demonstrate that the emissions from the emission points proposed to be included in the average will not result in greater hazard or, at the

option of the Administrator, greater risk to human health or the environment than if the emission points were not included in an emissions average.

(iii) *Supplement to Emissions Averaging Plan.* The owner or operator required to prepare an Emissions Averaging Plan under paragraph (e)(4) of this section shall also prepare a supplement to the Emissions Averaging Plan for any additional alternative controls or operating scenarios that may be used to achieve compliance.

(iv) *Updates to Emissions Averaging Plan.* The owner or operator of an affected source required to submit an Emissions Averaging Plan under paragraph (e)(4) of this section shall also submit written updates of the Emissions Averaging Plan to the Administrator for approval under the circumstances described in paragraphs (e)(4)(iv)(A) through (e)(4)(iv)(C) of this section unless the relevant information has been included and submitted in an operating permit application or amendment.

(A) The owner or operator who plans to make a change listed in either paragraph (e)(4)(iv)(A)(1) or (e)(4)(iv)(A)(2) of this section shall submit an Emissions Averaging Plan update at least 120 days prior to making the change.

(1) An Emissions Averaging Plan update shall be submitted whenever an owner or operator elects to achieve compliance with the emissions averaging provisions in § 63.1332 by using a control technique other than that specified in the Emissions Averaging Plan or plans to monitor a different parameter or operate a control device in a manner other than that specified in the Emissions Averaging Plan.

(2) An Emissions Averaging Plan update shall be submitted whenever an emission point or a TPPU is added to an existing affected source and is planned to be included in an emissions average, or whenever an emission point not included in the emissions average described in the Emissions Averaging Plan is to be added to an emissions average. The information in paragraph (e)(4) of this section shall be updated to include the additional emission point.

(B) The owner or operator who has made a change as defined in paragraph (e)(4)(iv)(B)(1) or (e)(4)(iv)(B)(2) of this section shall submit an Emissions Averaging Plan update within 90 days after the information regarding the change is known to the affected source. The update may be submitted in the next quarterly periodic report if the change is made after the date the Notification of Compliance Status is due.

(1) An Emissions Averaging Plan update shall be submitted whenever a process change is made such that the group status of any emission point in an emissions average changes.

(2) An Emissions Averaging Plan update shall be submitted whenever a value of a parameter in the emission credit or debit equations in § 63.1332 (g) or (h) changes such that it is below the minimum or above the maximum established level specified in the Emissions Averaging Plan and causes a decrease in the projected credits or an increase in the projected debits.

(C) The Administrator shall approve or request changes to the Emissions Averaging Plan update within 120 days of receipt of sufficient information regarding the change for emission points included in emissions averages.

(5) *Notification of Compliance Status.* For existing and new affected sources, a Notification of Compliance Status shall be submitted. For equipment leaks subject to § 63.1331, the owner or operator shall submit the information required in § 63.182(c) in the Notification of Compliance Status within 150 days after the first applicable compliance date for equipment leaks in the affected source, and an update shall be provided in the first Periodic Report that is due at least 150 days after each subsequent applicable compliance date for equipment leaks in the affected source. For all other emission points, including heat exchange systems, the Notification of Compliance Status shall contain the information listed in paragraphs (e)(5)(i) through (e)(5)(xi) of this section, as applicable, and shall be submitted no later than 150 days after the compliance dates specified in this subpart.

(i) The results of any emission point group determinations, process section applicability determinations, performance tests, inspections, any other information used to demonstrate compliance, values of monitored parameters established during performance tests, and any other information required to be included in the Notification of Compliance Status under §§ 63.1311(m), 63.122, and 63.1314 for storage vessels, § 63.117 for continuous process vents, § 63.146 for process wastewater, §§ 63.1316 through 63.1320 for continuous process vents subject to § 63.1316, § 63.1327 for batch process vents, § 63.1329 for process contact cooling towers, and § 63.1332 for emission points included in an emissions average. In addition, the owner or operator of an affected source shall comply with paragraphs (e)(5)(i)(A) and (e)(5)(i)(B) of this section.

(A) For performance tests, group determinations, and process section applicability determinations that are based on measurements, the Notification of Compliance Status shall include one complete test report, as described in paragraph (e)(5)(i)(B) of this section, for each test method used for a particular kind of emission point. For additional tests performed for the same kind of emission point using the same method, the results and any other information, from the test report, that is requested on a case-by-case basis by the Administrator shall be submitted, but a complete test report is not required.

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

(ii) For each monitored parameter for which a maximum or minimum level is required to be established under § 63.114(e) for continuous process vents, § 63.1324 for batch process vents and aggregate batch vent streams, § 63.143(f) for process wastewater, § 63.1332(m) for emission points in emissions averages, paragraph (e)(8) of this section, or paragraph (f) of this section, the Notification of Compliance Status shall contain the information

specified in paragraphs (e)(5)(ii)(A) through (e)(5)(ii)(D) of this section, unless this information has been established and provided in the operating permit application. Further, as described in § 63.1314(a)(9), for those storage vessels for which the monitoring plan required by § 63.1314(a)(9) specifies compliance with the provisions of § 63.1334, the owner or operator shall provide the information specified in paragraphs (e)(5)(ii)(A) through (e)(5)(ii)(D) of this section for each monitored parameter, unless this information has been established and provided in the operating permit application. For those storage vessels for which the monitoring plan required by § 63.1314(a)(9) does not require compliance with the provisions of § 63.1334, the owner or operator shall provide the information specified in § 63.120(d)(3) as part of the Notification of Compliance Status, unless this information has been established and provided in the operating permit application.

(A) The required information shall include the specific maximum or minimum level of the monitored parameter(s) for each emission point.

(B) The required information shall include the rationale for the specific maximum or minimum level for each parameter for each emission point, including any data and calculations used to develop the level and a description of why the level indicates proper operation of the control device.

(C) The required information shall include a definition of the affected source's operating day, as specified in paragraph (d)(3)(ii) of this section, for purposes of determining daily average values or batch cycle daily average values of monitored parameters.

(D) For batch process vents, the required information shall include a definition of each batch cycle that requires the control of one or more batch emission episodes during the cycle, as specified in § 63.1325(c)(2) and § 63.1334(b)(3)(iii).

(iii) For emission points included in an emissions average, the Notification of Compliance Status shall contain the values of all parameters needed for input to the emission credit and debit equations in § 63.1332 (g) and (h), calculated or measured according to the procedures in § 63.1332 (g) and (h), and the resulting calculation of credits and debits for the first quarter of the year. The first quarter begins on the compliance date specified.

(iv) The determination of applicability for flexible operation units as specified in § 63.1310(f).

(v) The parameter monitoring levels for flexible operation units, and the basis on which these levels were selected, or a demonstration that these levels are appropriate at all times, as specified in § 63.1310(f)(7).

(vi) The results for each predominant use determination made under § 63.1310(g), for storage vessels assigned to an affected source subject to this subpart.

(vii) The results for each predominant use determination made under § 63.1310(h), for recovery operations equipment assigned to an affected source subject to this subpart.

(viii) For owners or operators of Group 2 batch process vents establishing a batch mass input limitation as specified in § 63.1325(g), the affected source's operating year for purposes of determining compliance with the batch mass input limitation.

(ix) If any emission point is subject to this subpart and to other standards as specified in § 63.1311, and if the provisions of § 63.1311 allow the owner or operator to choose which testing, monitoring, reporting, and recordkeeping provisions will be followed, then the Notification of Compliance Status shall indicate which rule's requirements will be followed for testing, monitoring, reporting, and recordkeeping.

(x) An owner or operator who transfers a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream for treatment pursuant to § 63.132(g) shall include in the Notification of Compliance Status the name and location of the transferee and a description of the Group 1 wastewater stream or residual sent to the treatment facility.

(xi) An owner or operator complying with paragraph (h)(1) of this section shall notify the Administrator of the election to comply with paragraph (h)(1) of this section as part of the Notification of Compliance Status or as part of the appropriate Periodic Report as specified in paragraph (e)(6)(ix) of this section.

(6) *Periodic Reports.* For existing and new affected sources, the owner or operator shall submit Periodic Reports as specified in paragraphs (e)(6)(i) through (e)(6)(xi) of this section. In addition, for equipment leaks subject to § 63.1331, the owner or operator shall submit the information specified in § 63.182(d) under the conditions listed in § 63.182(d), and for heat exchange systems subject to § 63.1328, the owner or operator shall submit the information specified in § 63.104(f)(2) as part of the Periodic Report required by this paragraph (e)(6). Section 63.1334 shall govern the use of monitoring data to determine compliance for Group 1 emissions points and for Group 1 and Group 2 emission points included in emissions averages with the following exception: As discussed in § 63.1314(a)(9), for storage vessels to which the provisions of § 63.1334 do not apply, as specified in the monitoring plan required by § 63.120(d)(2), the owner or operator is required to comply with the requirements set out in the monitoring plan, and monitoring records may be used to determine compliance.

(i) Except as specified in paragraphs (e)(6)(xi) and (e)(6)(xii) of this section, a report containing the information in paragraph (e)(6)(ii) of this section or containing the information in paragraphs (e)(6)(iii) through (e)(6)(x) of this section, as appropriate, shall be submitted semiannually no later than 60 days after the end of each 6-month period. The first report shall be submitted no later than 240 days after the date the Notification of Compliance Status is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status is due.

(ii) If none of the compliance exceptions specified in paragraphs (e)(6)(iii) through (e)(6)(ix) of this section occurred during the 6-month period, the Periodic Report required by paragraph (e)(6)(i) of this section shall be a statement that there were no compliance exceptions as described in this paragraph for the 6-month period covered by that report and

no activities specified in paragraphs (e)(6)(iii) through (e)(6)(ix) of this section occurred during the 6-month period covered by that report.

(iii) For an owner or operator of an affected source complying with the provisions of §§ 63.1314 through 63.1330 for any emission point or process section, Periodic Reports shall include:

(A) All information specified in § 63.122 for storage vessels; §§ 63.117 and 63.118 and § 63.1320 for continuous process vents, as applicable; § 63.1327 for batch process vents and aggregate batch vent streams; § 63.104 for heat exchange systems; and § 63.146 for process wastewater;

(B) The daily average values or batch cycle daily average values of monitored parameters for both excused excursions, as defined in § 63.1334(g), and unexcused excursions, as defined in § 63.1334(f). For excursions caused by lack of monitoring data, the start-time and duration of periods when monitoring data were not collected shall be specified.

(C) [Reserved]

(D) The information in paragraphs (e)(6)(iii)(D)(1) through (e)(6)(iii)(D)(4) of this section, as applicable:

(1) Any supplements to the Emissions Averaging Plan, as required in paragraph (e)(4)(iii) of this section;

(2) Notification if a process change is made such that the group status of any emission point changes from Group 2 to Group 1. The owner or operator is not required to submit a notification of a process change if that process change caused the group status of an emission point to change from Group 1 to Group 2. However, until the owner or operator notifies the Administrator that the group status of an emission point has changed from Group 1 to Group 2, the owner or operator is required to continue to comply with the Group 1 requirements for that emission point. This notification may be submitted at any time.

(3) Notification if one or more emission point(s) (other than equipment leaks) or one or more TPPU is added to an affected source. The owner or operator shall submit the information contained in paragraphs (e)(6)(iii)(D)(3)(i) through (e)(6)(iii)(D)(3)(ii) of this section:

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

(ii) Notification of the group status of the additional emission point or all emission points in the TPPU.

(4) For process wastewater streams sent for treatment pursuant to § 63.132(g), reports of changes in the identity of the treatment facility or transferee.

(E) The information in paragraph (b)(1)(ii) of this section for reports of start-up, shutdown, and malfunction.

(iv) For each batch process vent with a batch mass input limitation, every second Periodic Report shall include the mass of HAP or material input to the batch unit operation during the 12-month period covered by the preceding and current Periodic Reports, and a statement of whether the batch process vent was in or out of compliance with the batch mass input limitation.

(v) If any performance tests are reported in a Periodic Report, the following information shall be included:

(A) One complete test report shall be submitted for each test method used for a particular kind of emission point tested. A complete test report shall contain the information specified in paragraph (e)(5)(i)(B) of this section.

(B) For additional tests performed for the same kind of emission point using the same method, results and any other information, pertaining to the performance test, that is requested on a case-by-case basis by the Administrator shall be submitted, but a complete test report is not required.

(vi) Notification of a change in the primary product of a TPPU, in accordance with the provisions in § 63.1310(f). This includes a change in primary product from one thermoplastic product to either another thermoplastic product or to a non-thermoplastic product.

(vii) The results for each change made to a predominant use determination made under § 63.1310(g) for a storage vessel that is assigned to an affected source subject to this subpart after the change.

(viii) The Periodic Report shall include the results for each change made to a predominant use determination made under § 63.1310(h) for recovery operations equipment assigned to an affected source subject to this subpart after the change.

(ix) An owner or operator complying with paragraph (h)(1) of this section shall notify the Administrator of the election to comply with paragraph (h)(1) of this section as part of the Periodic Report or as part of the Notification of Compliance Status as specified in paragraph (e)(5)(xi) of this section.

(x) An owner or operator electing not to retain daily average or batch cycle daily average values under paragraph (h)(2) of this section shall notify the Administrator as specified in paragraph (h)(2)(i) of this section.

(xi) The owner or operator of an affected source shall submit quarterly reports for all emission points included in an emissions average as specified in paragraphs (e)(6)(xi)(A) through (e)(6)(xi)(C) of this section.

(A) The quarterly reports shall be submitted no later than 60 days after the end of each quarter. The first report shall be submitted with the Notification of Compliance Status no later than 150 days after the compliance date.

(B) The quarterly reports shall include the information specified in paragraphs (e)(6)(xi)(B)(1) through (e)(6)(xi)(B)(7) of this section for all emission points included in an emissions average.

- (1) The credits and debits calculated each month during the quarter;
- (2) A demonstration that debits calculated for the quarter are not more than 1.30 times the credits calculated for the quarter, as required under § 63.1332(e)(4);
- (3) The values of any inputs to the debit and credit equations in § 63.1332(g) and (h) that change from month to month during the quarter or that have changed since the previous quarter;
- (4) Results of any performance tests conducted during the reporting period including one complete report for each test method used for a particular kind of emission point as described in paragraph (e)(6)(v) of this section;
- (5) Reports of daily average (or batch cycle daily average) values of monitored parameters for excursions as defined in § 63.1334(f);
- (6) For excursions caused by lack of monitoring data, the duration of periods when monitoring data were not collected shall be specified; and
- (7) Any other information the affected source is required to report under the operating permit or Emissions Averaging Plan for the affected source.

(C) Every fourth quarterly report shall include the following:

- (1) A demonstration that annual credits are greater than or equal to annual debits as required by § 63.1332(e)(3); and
  - (2) A certification of compliance with all the emissions averaging provisions in § 63.1332.
- (xii) The owner or operator of an affected source shall submit quarterly reports for particular emission points and process sections not included in an emissions average as specified in paragraphs (e)(6)(xii)(A) through (e)(6)(xii)(D) of this section.
- (A) The owner or operator of an affected source shall submit quarterly reports for a period of 1 year for an emission point or process section that is not included in an emissions average if:
- (1) A control or recovery device for a particular emission point or process section has more excursions, as defined in § 63.1334(f), than the number of excused excursions allowed under § 63.1334(g) for a semiannual reporting period; or
  - (2) The Administrator requests that the owner or operator submit quarterly reports for the emission point or process section.

(B) The quarterly reports shall include all information specified in paragraphs (e)(6)(iii) through (e)(6)(ix) of this section applicable to the emission point or process section for which quarterly reporting is required under paragraph (e)(6)(xii)(A) of this section. Information applicable to other emission points within the affected source shall be submitted in the semiannual reports required under paragraph (e)(6)(i) of this section.

(C) Quarterly reports shall be submitted no later than 60 days after the end of each quarter.

(D) After quarterly reports have been submitted for an emission point for 1 year without more excursions occurring (during that year) than the number of excused excursions allowed under § 63.1334(g), the owner or operator may return to semiannual reporting for the emission point or process section.

(7) *Other reports.* Other reports shall be submitted as specified in paragraphs (e)(7)(i) through (e)(7)(iv) of this section.

(i) For storage vessels, the notifications of inspections required by § 63.1314 shall be submitted as specified in § 63.122 (h)(1) and (h)(2).

(ii) For owners or operators of affected sources required to request approval for a nominal control efficiency for use in calculating credits for an emissions average, the information specified in § 63.1332(i) shall be submitted as specified in paragraph (e)(7)(ii)(A) or (B) of this section, as appropriate.

(A) If use of a nominal control efficiency is part of the initial Emissions Averaging Plan described in paragraph (e)(4)(ii) of this section, the information shall be submitted with the Emissions Averaging Plan.

(B) If an owner or operator elects to use a nominal control efficiency after submittal of the initial Emissions Averaging Plan as described in paragraph (e)(4)(ii) of this section, the information shall be submitted at the discretion of the owner or operator.

(iii) When the conditions of §§ 63.1310(f)(3)(iii), 63.1310(f)(9), or 63.1310(f)(10)(iii) are met, reports of changes to the primary product for a TPPU or process unit as required by §§ 63.1310(f)(3)(iii), 63.1310(f)(9), or 63.1310(f)(10)(iii)(C), respectively, shall be submitted.

(iv) Owners or operators of TPPU or emission points (other than equipment leak components subject to § 63.1331) that are subject to § 63.1310(i)(1) or (i)(2) shall submit a report as specified in paragraphs (e)(7)(iv)(A) and (B) of this section.

(A) Reports shall include:

(1) A description of the process change or addition, as appropriate;

(2) The planned start-up date and the appropriate compliance date, according to § 63.1310(i)(1) or (2); and

(3) Identification of the group status of emission points (except equipment leak components subject to § 63.1331) specified in paragraphs (e)(7)(iv)(A)(3)(i) through (e)(7)(iv)(A)(3)(iii) of this section, as applicable.

(i) All the emission points in the added TPPU as described in § 63.1310(i)(1).

(ii) All the emission points in an affected source designated as a new affected source under § 63.1310(i)(2)(i).

(iii) All the added or created emission points as described in § 63.1310(i)(2)(ii) or (i)(2)(iii).

(4) If the owner or operator wishes to request approval to use alternative monitoring parameters, alternative continuous monitoring or recordkeeping, alternative controls, engineering assessment to estimate emissions from a batch emissions episode, or wishes to establish parameter monitoring levels according to the procedures contained in § 63.1334(c) or (d), a Precompliance Report shall be submitted in accordance with paragraph (e)(7)(iv)(B) of this section.

(B) Reports shall be submitted as specified in paragraphs (e)(7)(iv)(B)(1) through (e)(7)(iv)(B)(3) of this section, as appropriate.

(1) Owners or operators of an added TPPU subject to § 63.1310(i)(1) shall submit a report no later than 180 days prior to the compliance date for the TPPU.

(2) Owners or operators of an affected source designated as a new affected source under § 63.1310(i)(2)(i) shall submit a report no later than 180 days prior to the compliance date for the affected source.

(3) Owners or operators of any emission point (other than equipment leak components subject to § 63.1331) subject to § 63.1310(i)(2)(ii) or (i)(2)(iii) shall submit a report no later than 180 days prior to the compliance date for those emission points.

(8) *Operating permit application.* An owner or operator who submits an operating permit application instead of an Emissions Averaging Plan or a Precompliance Report shall include the following information with the operating permit application:

(i) The information specified in paragraph (e)(4) of this section for points included in an emissions average; and

(ii) The information specified in paragraph (e)(3) of this section, Precompliance Report, as applicable.

(f) *Alternative monitoring parameters.* The owner or operator who has been directed by any section of this subpart or any section of another subpart referenced by this subpart, that expressly referenced this paragraph (f) to set unique monitoring parameters, or who requests approval to monitor a different parameter than those specified in § 63.1314 for storage vessels, § 63.1315 or § 63.1317, as appropriate, for continuous process vents, §

63.1321 for batch process vents and aggregate batch vent streams, or § 63.1330 for process wastewater shall submit the information specified in paragraphs (f)(1) through (f)(3) of this section in the Precompliance Report, as required by paragraph (e)(3) of this section. The owner or operator shall retain for a period of 5 years each record required by paragraphs (f)(1) through (f)(3) of this section.

(1) The required information shall include a description of the parameter(s) to be monitored to ensure the recovery device, control device, or pollution prevention measure is operated in conformance with its design and achieves the specified emission limit, percent reduction, or nominal efficiency, and an explanation of the criteria used to select the parameter(s).

(2) The required information shall include a description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation, the schedule for this demonstration, and a statement that the owner or operator will establish a level for the monitored parameter as part of the Notification of Compliance Status report required in paragraph (e)(5) of this section, unless this information has already been included in the operating permit application.

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

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

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

(g) *Alternative continuous monitoring and recordkeeping.* An owner or operator choosing not to implement the provisions listed in § 63.1315 or § 63.1317, as appropriate, for continuous process vents, § 63.1321 for batch process vents and aggregate batch vent streams, or § 63.1330 for process wastewater, may instead request approval to use alternative continuous monitoring and recordkeeping provisions according to the procedures specified in paragraphs (g)(1) through (g)(4) of this section. Requests shall be submitted in the Precompliance Report as specified in paragraph (e)(3)(iv) of this section, if not already included in the operating permit application, and shall contain the information specified in paragraphs (g)(2)(ii) and (g)(3)(ii) of this section, as applicable.

(1) The provisions in § 63.8(f)(5)(i) shall govern the review and approval of requests.

(2) An owner or operator of an affected source that does not have an automated monitoring and recording system capable of measuring parameter values at least once every 15 minutes and that does not generate continuous records may request approval to use a nonautomated system with less frequent monitoring, in accordance with paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(i) The requested system shall include manual reading and recording of the value of the relevant operating parameter no less frequently than once per hour. Daily average (or batch cycle daily average) values shall be calculated from these hourly values and recorded.

(ii) The request shall contain:

(A) A description of the planned monitoring and recordkeeping system;

(B) Documentation that the affected source does not have an automated monitoring and recording system;

(C) Justification for requesting an alternative monitoring and recordkeeping system; and

(D) Demonstration to the Administrator's satisfaction that the proposed monitoring frequency is sufficient to represent control or recovery device operating conditions, considering typical variability of the specific process and control or recovery device operating parameter being monitored.

(3) An owner or operator may request approval to use an automated data compression recording system that does not record monitored operating parameter values at a set frequency, but records all values that meet set criteria for variation from previously recorded values, in accordance with paragraphs (g)(3)(i) and (g)(3)(ii) of this section.

(i) The requested system shall be designed to:

(A) Measure the operating parameter value at least once during every 15 minute period;

(B) Except for the monitoring of batch process vents, calculate hourly average values each hour during periods of operation;

(C) Record the date and time when monitors are turned off or on;

(D) Recognize unchanging data that may indicate the monitor is not functioning properly, alert the operator, and record the incident;

(E) Calculate daily average (or batch cycle daily average) values of the monitored operating parameter based on all measured data; and

(F) If the daily average is not an excursion, as defined in § 63.1334(f), the data for that operating day may be converted to hourly average values and the four or more individual records for each hour in the operating day may be discarded.

(ii) The request shall contain:

(A) A description of the monitoring system and data compression recording system, including the criteria used to determine which monitored values are recorded and retained;

(B) The method for calculating daily averages and batch cycle daily averages; and

(C) A demonstration that the system meets all criteria in paragraph (g)(3)(i) of this section.

(4) An owner or operator may request approval to use other alternative monitoring systems according to the procedures specified in § 63.8(f)(4).

(h) *Reduced recordkeeping program.* For any parameter with respect to any item of equipment, the owner or operator may implement the recordkeeping requirements specified in paragraph (h)(1) or (h)(2) of this section as alternatives to the continuous operating parameter monitoring and recordkeeping provisions that would otherwise apply under this subpart. The owner or operator shall retain for a period of 5 years each record required by paragraph (h)(1) or (h)(2) of this section, except as otherwise provided in paragraph (h)(1)(vi)(D) of this section.

(1) The owner or operator may retain only the daily average (or batch cycle daily average) value, and is not required to retain more frequent monitored operating parameter values, for a monitored parameter with respect to an item of equipment, if the requirements of paragraphs (h)(1)(i) through (h)(1)(vi) of this section are met. An owner or operator electing to comply with the requirements of paragraph (h)(1) of this section shall notify the Administrator in the Notification of Compliance Status as specified in paragraph (e)(5)(xi) of this section or, if the Notification of Compliance Status has already been submitted, in the Periodic Report immediately preceding implementation of the requirements of paragraph (h)(1) of this section as specified in paragraph (e)(6)(ix) of this section.

(i) The monitoring system is capable of detecting unrealistic or impossible data during periods of operation other than start-ups, shutdowns, or malfunctions (e.g., a temperature reading of  $-200^{\circ}\text{C}$  on a boiler), and will alert the operator by alarm or other means. The owner or operator shall record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

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

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

(B) The running average is based on at least six 1-hour average values; and

(C) The running average reflects a period of operation other than a start-up, shutdown, or malfunction.

(iii) The monitoring system is capable of detecting unchanging data during periods of operation other than start-ups, shutdowns, or malfunctions, except in circumstances where the presence of unchanging data is the expected operating condition based on past

experience (e.g., pH in some scrubbers), and will alert the operator by alarm or other means. The owner or operator shall record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

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

(v) The owner or operator shall verify the proper functioning of the monitoring system, including its ability to comply with the requirements of paragraph (h)(1) of this section, at the times specified in paragraphs (h)(1)(v)(A) through (h)(1)(v)(C). The owner or operator shall document that the required verifications occurred.

(A) Upon initial installation.

(B) Annually after initial installation.

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

(vi) The owner or operator shall retain the records identified in paragraphs (h)(1)(vi)(A) through (h)(1)(vi)(D) of this section.

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

(B) A description of the applicable monitoring system(s), and of how compliance will be achieved with each requirement of paragraphs (h)(1)(i) through (h)(1)(v) of this section. The description shall identify the location and format (e.g., on-line storage, log entries) for each required record. If the description changes, the owner or operator shall retain both the current and the most recent superseded description, as provided in paragraph (a) of this section, except as provided in paragraph (h)(1)(vi)(D) of this section.

(C) A description, and the date, of any change to the monitoring system that would reasonably be expected to impair its ability to comply with the requirements of paragraph (h)(1) of this section.

(D) Owners and operators subject to paragraph (h)(1)(vi)(B) of this section shall retain the current description of the monitoring system as long as the description is current. The current description shall, at all times, be retained on-site or be accessible from a central location by computer or other means that provides access within 2 hours after a request. The owner or operator shall retain all superseded descriptions for at least 5 years after the date of their creation. Superseded descriptions shall be retained on-site (or accessible from a central location by computer or other means that provides access within 2 hours after a request) for at least 6 months after their creation. Thereafter, superseded descriptions may be stored off-site.

(2) If an owner or operator has elected to implement the requirements of paragraph (h)(1) of this section for a monitored parameter with respect to an item of equipment and a period of 6 consecutive months has passed without an excursion as defined in paragraph (h)(2)(iv) of this section, the owner or operator is no longer required to record the daily average (or batch cycle daily average) value for any operating day when the daily average (or batch cycle daily average) value is less than the maximum or greater than the minimum established limit. With approval by the Administrator, monitoring data generated prior to the compliance date of this subpart shall be credited toward the period of 6 consecutive months, if the parameter limit and the monitoring accomplished during the period prior to the compliance date was required and/or approved by the Administrator.

(i) If the owner or operator elects not to retain the daily average (or batch cycle daily average) values, the owner or operator shall notify the Administrator in the next Periodic Report as specified in paragraph (e)(6)(x) of this section. The notification shall identify the parameter and unit of equipment.

(ii) If, on any operating day after the owner or operator has ceased recording daily average (or batch cycle daily average) values as provided in paragraph (h)(2) of this section, there is an excursion as defined in paragraph (h)(2)(iv) of this section, the owner or operator shall immediately resume retaining the daily average (or batch cycle daily average) value for each operating day and shall notify the Administrator in the next Periodic Report. The owner or operator shall continue to retain each daily average (or batch cycle daily average) value until another period of 6 consecutive months has passed without an excursion as defined in paragraph (h)(2)(iv) of this section.

(iii) The owner or operator shall retain the records specified in paragraphs (h)(1)(i) through (h)(1)(iii) of this section, for the duration specified in paragraph (h) of this section. For any calendar week, if compliance with paragraphs (h)(1)(i) through (h)(1)(iv) of this section does not result in retention of a record of at least one occurrence or measured parameter value, the owner or operator shall record and retain at least one parameter value during a period of operation other than a start-up, shutdown, or malfunction.

(iv) For purposes of paragraph (h) of this section, an excursion means that the daily average (or batch cycle daily average) value of monitoring data for a parameter is greater than the maximum, or less than the minimum established value, except as provided in paragraphs (h)(2)(iv)(A) and (h)(2)(iv)(B) of this section.

(A) The daily average (or batch cycle daily average) value during any start-up, shutdown, or malfunction shall not be considered an excursion for purposes of paragraph (h)(2) of this section, if the owner or operator follows the applicable provisions of the start-up, shutdown, and malfunction plan required by § 63.6(e)(3).

(B) An excused excursion, as described in § 63.1334(g), shall not be considered an excursion for purposes of paragraph (h)(2) of this section.

**31. Table 1 to Subpart JJJ of Part 63 -- Applicability of general provisions to subpart JJJ affected sources**

Reference	Applies to	Subpart JJJ	Explanation
§ 63.1(a)(1).....	Yes.....		§ 63.1312 specifies definitions in addition to or that supersede definitions in § 63.2.
§ 63.1(a)(2).....	Yes.		
§ 63.1(a)(3).....	Yes.....		§ 63.1311(g) through (l) and §63.160(b) identify those standards which may apply in addition to the requirements of subparts JJJ and H of this part, and specify how compliance shall be achieved.
§ 63.1(a)(4).....	Yes.....		Subpart JJJ (this table) specifies the applicability of each paragraph in subpart A to subpart JJJ.
§ 63.1(a)(5).....	No.....		[Reserved.].
§ 63.1(a)(6)-(8).....	Yes.		
§ 63.1(a)(9).....	No.....		[Reserved.].
§ 63.1(a)(10).....	Yes.		
§ 63.1(a)(11).....	Yes.		
§ 63.1(a)(12)-(14)....	Yes.		
§ 63.1(b)(1).....	No.....		§ 63.1310(a) contains specific applicability criteria.
§ 63.1(b)(2).....	Yes.		
§ 63.1(b)(3).....	No.....		§ 63.1310(b) provides requirements for TPPUs not considered affected sources.
§ 63.1(c)(1).....	Yes.....		Subpart JJJ (this table) specifies the applicability of each paragraph in subpart A to subpart JJJ.
§ 63.1(c)(2).....	No.....		Area sources are not subject to subpart JJJ.
§ 63.1(c)(3).....	No.....		[Reserved.].

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§ 63.1(c)(4).....	Yes.	
§ 63.1(c)(5).....	Yes.....	Except that affected sources are not required to submit notifications that are not required by subpart JJJ.
§ 63.1(d).....	No.....	[Reserved.].
§ 63.1(e).....	Yes.	
§ 63.2.....	Yes.....	§ 63.1312 specifies those subpart A definitions that apply to subpart JJJ.
§ 63.3.....	Yes.	
§ 63.4(a)(1)-(3).....	Yes.	
§ 63.4(a)(4).....	No.....	[Reserved.].
§ 63.4(a)(5).....	Yes.	
§ 63.4(b).....	Yes.	
§ 63.4(c).....	Yes.	
§ 63.5(a)(1).....	Yes.....	Except the terms ``source'' and ``stationary source'' should be interpreted as having the same meaning as ``affected source.''
§ 63.5(a)(2).....	Yes.	
§ 63.5(b)(1).....	Yes.....	Except § 63.1310(i) defines when construction or reconstruction is subject to new source standards.
§ 63.5(b)(2).....	No.....	[Reserved.].
§ 63.5(b)(3).....	Yes.	
§ 63.5(b)(4).....	Yes.....	Except that the Initial Notification and § 63.9(b) requirements do not apply.
§ 63.5(b)(5).....	Yes.	
§ 63.5(b)(6).....	Yes.....	Except that § 63.1310(i) defines when construction or reconstruction is subject to new source standards.
§ 63.5(c).....	No.....	[Reserved.].
§ 63.5(d)(1)(i).....	Yes.....	Except that the references to the Initial Notification and § 63.9(b)(5) do not apply.
§ 63.5(d)(1)(ii).....	Yes.....	Except that § 63.5(d)(1)(ii)(H) does not apply.

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§ 63.5(d)(1)(iii).....	No.....	§ 63.1335(e)(5) and 63.1331(a)(4) specify Notification of  Compliance Status requirements.
§ 63.5(d)(2).....	No.	
§ 63.5(d)(3).....	Yes.....	Except § 63.5(d)(3)(ii) does not apply, and equipment leaks subject to § 63.1331 are exempt.
§ 63.5(d)(4).....	Yes.	
§ 63.5(e).....	Yes.	
§ 63.5(f)(1).....	Yes.	
§ 63.5(f)(2).....	Yes.....	Except that where § 63.9(b)(2) is referred to, the owner or operator need not comply.
§ 63.6(a).....	Yes.	
§ 63.6(b)(1).....	No.....	The dates specified in § 63.1311(b)apply, instead.
§ 63.6(b)(2).....	No.	
§ 63.6(b)(3).....	No.	
§ 63.6(b)(4).....	No.	
§ 63.6(b)(5).....	No.	
§ 63.6(b)(6).....	No.....	[Reserved.].
§ 63.6(b)(7).....	No.	
§ 63.6(c)(1).....	Yes.....	Except that § 63.1311 specifies the compliance date.
§ 63.6(c)(2).....	No.	
§ 63.6(c)(3).....	No.....	[Reserved.].
§ 63.6(c)(4).....	No.....	[Reserved.].
§ 63.6(c)(5).....	Yes.	
§ 63.6(d).....	No.....	[Reserved.].
§ 63.6(e).....	Yes.....	Except as otherwise specified for  individual paragraphs. Does not apply to Group 2 emission points, unless they are included in an emissions average.[SU]a[/SU]
§ 63.6(e)(1)(i).....	No.....	This is addressed by §63.1310(j)(4).
§ 63.6(e)(1)(ii).....	Yes.	
§ 63.6(e)(1)(iii).....	Yes.	
§ 63.6(e)(2).....	Yes.	

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§ 63.6(e)(3)(i).....	Yes.....	For equipment leaks (subject to § 63.1331), the start-up, shutdown, and malfunction plan requirement of §63.6(e)(3)(i) is limited to control devices and is optional for other equipment. The start-up, shutdown, malfunction plan may include written procedures that identify conditions that justify a delay of repair.
§ 63.6(e)(3)(i)(A).....	No.....	This is addressed by § 63.1310(j)(4).
§ 63.6(e)(3)(i)(B).....	Yes.	
§ 63.6(e)(3)(i)(C).....	Yes.	
§ 63.6(e)(3)(ii).....	Yes.	
§ 63.6(e)(3)(iii).....	No.....	Recordkeeping and reporting are specified in § 63.1335(b)(1).
§ 63.6(e)(3)(iv).....	No.....	Recordkeeping and reporting are specified in § 63.1335(b)(1).
§ 63.6(e)(3)(v).....	Yes.	
§ 63.6(e)(3)(vi).....	Yes.	
§ 63.6(e)(3)(vii).....	Yes.	
§ 63.6(e)(3)(vii)(A).....	Yes.	
§ 63.6(e)(3)(vii)(B).....	Yes.....	Except the plan shall provide for operation in (B) compliance with § 63.1310(j)(4).
§ 63.6(e)(3)(vii)(C).....	Yes.	
§ 63.6(e)(3)(viii).....	Yes.	
§ 63.6(f)(1).....	Yes.	
§ 63.6(f)(2).....	Yes.....	Except § 63.7(c), as referred to in § 63.6(f)(2)(iii)(D), does not apply, and except that §63.6(f)(2)(ii) does not apply to equipment leaks subject to §63.1331.
§ 63.6(f)(3).....	Yes.	
§ 63.6(g).....	Yes.	
§ 63.6(h).....	No.....	Subpart JJJ does not require opacity and visible emission standards.
§ 63.6(i)(1).....	Yes.	
§ 63.6(i)(2).....	Yes.	

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§ 63.6(i)(3).....	Yes.	
§ 63.6(i)(4)(i)(A).....	Yes.	
§ 63.6(i)(4)(i)(B).....	No.....	Dates are specified in § 63.1311(e) and § 63.1335(e)(3)(i).
§ 63.6(i)(4)(ii).....	No.	
§ 63.6(i)(5)-(14).....	Yes.	
§ 63.6(i)(15).....	No.....	[Reserved.].
§ 63.6(i)(16).....	Yes.	
§ 63.6(j).....	Yes.	
§ 63.7(a)(1).....	Yes.	
§ 63.7(a)(2).....	No.....	§ 63.1335(e)(5) specifies the submittal dates of performance test results for all emission points except equipment leaks; for equipment leaks, compliance demonstration results are reported in the Periodic Reports.
§ 63.7(a)(3).....	Yes.	
§ 63.7(b).....	No.....	§ 63.1333(a)(4) specifies notification requirements.
§ 63.7(c).....	No.	
§ 63.7(d).....	Yes.	
§ 63.7(e)(1).....	Yes.....	Except that all performance tests shall be conducted at maximum representative operating conditions achievable at the time without disruption of operations or damage to equipment.
§ 63.7(e)(2).....	Yes.	
§ 63.7(e)(3).....	No.....	Subpart JJJ specifies requirements.
§ 63.7(e)(4).....	Yes.	
§ 63.7(f).....	Yes.....	Except that § 63.144(b)(5)(iii)(A) and (B) shall apply for process wastewater. Also, because a site specific test plan is not required, the notification deadline in §63.7(f)(2)(i) shall be 60 days prior to the performance test, and in §63.7(f)(3), approval or disapproval of the alternative test method shall not be tied to the site specific test plan.

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§ 63.7(g).....	Yes.....	Except that the requirements in § 63.1335(e)(5) shall apply instead of references to the Notification of Compliance Status report in §63.9(h). In addition, equipment leaks subject to § 63.1331 are not required to conduct performance tests.
§ 63.7(h).....	Yes.....	Except § 63.7(h)(4)(ii) is not applicable, because the site-specific test plans in § 63.7(c)(2) are not required.
§ 63.8(a)(1).....	Yes.	
§ 63.8(a)(2).....	No.	
§ 63.8(a)(3).....	No.....	[Reserved]
§ 63.8(a)(4).....	Yes.	
§ 63.8(b)(1).....	Yes.	
§ 63.8(b)(2).....	No.....	Subpart JJJ specifies locations to conduct monitoring.
§ 63.8(b)(3).....	Yes.	
§ 63.8(c)(1).....	Yes.	
§ 63.8(c)(1)(i).....	Yes.	
§ 63.8(c)(1)(ii).....	No.....	For all emission points except equipment leaks, comply with § 63.1335(b)(1)(i)(B); for equipment leaks, comply with §63.181(g)(2)(iii).
§ 63.8(c)(1)(iii).....	Yes.	
§ 63.8(c)(2).....	Yes.	
§ 63.8(c)(3).....	Yes.	
§ 63.8(c)(4).....	No.....	§ 63.1334 specifies monitoring frequency; not applicable to equipment leaks because § 63.1331 does not require continuous monitoring systems.
§ 63.8(c)(5)-(8).....	No.	
§ 63.8(d).....	No.	
§ 63.8(e).....	No.	
§ 63.8(f)(1)-(3).....	Yes.	
§ 63.8(f)(4)(i).....	No.....	Time frame for submitting request is specified in § 63.1335(f) or (g); not

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		applicable to equipment leaks because § 63.1331 (through reference to subpart H) specifies acceptable alternative methods.
§ 63.8(f)(4)(ii).....	No.....	Contents of requests are specified in § 63.1335(f) or (g).
§ 63.8(f)(4)(iii).....	No.	
§ 63.8(f)(5)(i).....	Yes.	
§ 63.8(f)(5)(ii).....	No.	
§ 63.8(f)(5)(iii).....	Yes.	
§ 63.8(f)(6).....	No.....	Subpart JJJ does not require continuous emission monitors.
§ 63.8(g).....	No.....	Data reduction procedures specified in § 63.1335(d) and (h); not applicable to equipment leaks.
§ 63.9(a).....	Yes.	
§ 63.9(b).....	No.....	Subpart JJJ does not require an initial notification.
§ 63.9(c).....	Yes.	
§ 63.9(d).....	Yes.	
§ 63.9(e).....	No.....	§ 63.1333(a)(4) specifies notification deadline.
§ 63.9(f).....	No.....	Subpart JJJ does not require opacity and visible emission standards.
§ 63.9(g).....	No.	
§ 63.9(h).....	No.....	§ 63.1335(e)(5) specifies Notification of Compliance Status requirements.
§ 63.9(i).....	Yes.	
§ 63.9(j).....	No.	
§ 63.10(a).....	Yes.	
§ 63.10(b)(1).....	No.....	§ 63.1335(a) specifies record retention requirements.
§ 63.10(b)(2).....	No.....	Subpart JJJ specifies recordkeeping requirements.
§ 63.10(b)(3).....	No.....	§ 63.1310(b) requires documentation

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		of sources that are not affected sources.
§ 63.10(c).....	No.....	§ 63.1335 specifies recordkeeping requirements.
§ 63.10(d)(1).....	Yes.	
§ 63.10(d)(2).....	No.....	§ 63.1335(e) specifies performance test reporting requirements; not applicable to equipment leaks.
§ 63.10(d)(3).....	No.....	Subpart JJJ does not require opacity and visible emission standards.
§ 63.10(d)(4).....	Yes.	
§ 63.10(d)(5)(i).....	Yes.....	Except that reports required by § 63.10(d)(5)(i) may be submitted at the same time as Periodic Reports specified in § 63.1335(e)(6). The start-up, shutdown, and malfunction plan, and any records or reports of start-up, shutdown, and malfunction do not apply to Group 2 emission points unless they are included in an emissions average.
§ 63.10(d)(5)(ii).....	No.	
§ 63.10(e).....	No.....	§ 63.1335 specifies reporting requirements.
§ 63.10(f).....	Yes.	
§ 63.11.....	Yes.....	§ 63.11(b) specifies requirements for flares used to comply with provisions of this subpart. §63.1333(e) contains the requirements to conduct compliance demonstrations for flares subject to this subpart.
§ 63.12.....	Yes.....	Except that the authority of 63.1332(i) and the authority of §63.177 (for equipment leaks) shall not be delegated to States.
§ 63.13-63.15.....	Yes.	

[SU]a[/SU] The plan and any records or reports of start-up, shutdown, and malfunction do not apply to Group 2 emission points unless they are included in an emissions average.

32. **Table 2 to Subpart JJJ of Part 63 -- Group 1 Storage Vessels at Existing Affected Sources**

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

a Maximum true vapor pressure of total organic HAP at storage temperature.

33. **Table 3 to Subpart JJJ of Part 63 -- Group 1 Storage Vessels at Existing Affected Sources Producing the Listed Thermoplastics**

Thermoplastic	Chemical <sup>a</sup>	Vessel capacity (cubic meters)	Vapor pressure <sup>b</sup> (kilopascals)
ASA/AMSAN <sup>c</sup> .....	styrene/acrylonitrile..	≥ 3.78.....	≥ 0.47
Polystyrene	acrylonitrile.....	≥ 75.7.....	≥ 1.62
continuous processes..	all chemicals.....	≤ 75.7..... ≥75.7.	≥ 14.2
Nitrile <sup>c</sup> .....	acrylonitrile.....	≥ 13.25.....	≥ 1.8 ≥ 1.9

<sup>a</sup> Vessel capacity and vapor pressure criteria are specific to the listed chemical or to "all chemicals," as indicated.

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

<sup>c</sup> The applicability criteria in Table 2 of this subpart shall be used for chemicals not specifically listed in this table (i.e., Table 3).

34. **Table 3 to Subpart JJJ of Part 63 -- Group 1 Storage Vessels at Existing Affected Sources Producing the Listed Thermoplastics**

Vessel capacity (cubic meters)	Vapor pressure <sup>a</sup> (kilopascals)
38 ≤ capacity < 151.....	≥ 13.1
151 ≤ capacity.....	≥ 0.7

a Maximum true vapor pressure of total organic HAP at storage temperature.

35. **Table 5 to Subpart JJJ of Part 63 -- Group 1 Storage Vessels at New Affected Sources Producing the Listed Thermoplastics**

Thermoplastic	Chemical <sup>a</sup>	Vessel capacity (cubic meters)	Vapor pressure <sup>b</sup> (kilopascals)
ASA/AMSAN <sup>c</sup> .....	Styrene/ acrylonitrile mixture. ...	≥ 3.78.....	≥ 0.47
	Acrylonitrile.....	≥ 75.7.....	≥ 1.62
SAN, continuous <sup>d</sup> .....	All chemicals.....	≥ 2,271.....	≥ 0.5 and < 0.7
		< 151.....	≥ 10
		≥ 151.....	≥ 0.7
Nitrile <sup>c</sup> .....	Acrylonitrile.....	≥ 13.25.....	≥ 1.8
Polystyrene, continuous processes	All chemicals.....	≥19.6 and ≤45.4.....	≥ 7.48
		≥ 45.4 and <109.8.....	≥ 0.61
		≥ 109.8.....	≥0.53
ABS, continuous mass.....	Styrene.....	≥ 45.43.....	> 0.078
	All other chemicals	≥ 38 and ≤ 45.43.....	≥ 13.1
		≥ 45.43.....	≥ 0.53

<sup>a</sup> Vessel capacity and vapor pressure criteria are specific to the listed chemical, to "all chemicals," or to "all other chemicals," as indicated.

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

<sup>c</sup> The applicability criteria in Table 4 of this subpart shall be used for chemicals not specifically listed in this table (i.e., Table 5).

<sup>d</sup> The control level for the first two sets of applicability criteria are specified in 63.1314 as 90% and 98%, respectively. The control level for the third set of applicability criteria is the HON control level of 95%.

36. **Table 6 to Subpart JJJ of Part 63 -- Known organic HAP emitted from the production of thermoplastic products**

Thermoplastic product/sub category	Organic HAP/chemical name (CAS No.)							
	Acet- aldehyde (75-07-0)	Acrylo- nitrile (107-13-1)	1,3 Buta- diene (106-99-0)	1,4- Dioxane (123-91-1)	Ethylene Glycol (107-21-1)	Methanol (65-56-1)	Methyl metha- crylate (80-62-6)	Styrene (100-42-5)
ABS latex.....		X	X					X
ABS using a batch emulsion process.....		X	X					X

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ABS using a batch suspension process.....	X	X								X
ABS using a continuous emulsion process...	X	X								X
ABS using a continuous mass process.....	X	X								X
ASA/AMSAN.....	X									X
EPS.....										X
MABS.....	X	X								
MBS.....		X							X	X
Nitrile resin.....	X									
PET using a batch dimethyl terephthalate process.....	X				X	X	X			
PET using a batch terephthalic acid process.....	X				X	X				
PET using a continuous dimethyl terephthalate process...	X				X	X	X			
PET using a continuous terephthalic acid process.....	X				X	X				
PET using a continuous terephthalic acid high viscosity multiple end finisher process.....	X				X	X				
Polystyrene resin using a batch process...										X
Polystyrene resin using a continuous process.....										X
SAN using a batch process.....		X								X
SAN using a continuous process....		X								X

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CAS No. = Chemical Abstract Service Number.

ABS = Acrylonitrile butadiene styrene resin.

ASA/AMSAN = Acrylonitrile styrene resin/alpha methyl styrene acrylonitrile resin.

EPS = expandable polystyrene resin.

MABS = methyl methacrylate acrylonitrile butadiene styrene resin.

PET = poly(ethylene terephthalate) resin.

SAN = styrene acrylonitrile resin.

MBS = methyl methacrylate butadiene styrene resin.

37. **Table 7 to Subpart JJJ of Part 63 -- Group 1 batch process vents and aggregate batch vent streams -- monitoring, recordkeeping, and reporting requirements**

Control device	Parameters to be monitored	Recordkeeping and reporting requirements for monitored parameters
Thermal incinerator.....	Firebox temperature <sup>a</sup>	1. Continuous records as specified in § 63.1326(e)(1). <sup>b</sup> 2. Record and report the average firebox temperature measured during the performance test_NCS <sup>c</sup> 3. Record the batch cycle daily average firebox temperature as specified in § 63.1326(e)(2). 4. Report all batch cycle daily average temperatures that are below the minimum operating value established in the NCS or operating permit and all instances when monitoring data are not collected_PR. <sup>d,e</sup>
Catalytic incinerator.....	Temperature upstream and downstream of the catalyst bed.	1. Continuous records as specified in § 63.1326(e)(1). <sup>b</sup> 2. Record and report the average upstream and bed downstream temperatures and the average temperature difference across the catalyst bed measured during the performance test_NCS. <sup>c</sup> 3. Record the batch cycle daily average upstream temperature and temperature difference across catalyst bed as specified in § 63.1326(e)(2). 4. Report all batch cycle daily average upstream temperatures that are below the minimum upstream value established in the NCS or operating permit_PR. <sup>d,e</sup> 5. Report all batch cycle daily average temperature differences across the catalyst bed that are below the minimum difference established in the NCS or operating permit_PR. <sup>d,e</sup> 6. Report all instances when monitoring data are not collected. <sup>e</sup>
Boiler or Process Heater.....	Firebox temperature <sup>a</sup>	1. Continuous records as specified in

design heat input capacity  
less than 44 megawatts  
and where the batch  
process vents or  
aggregate batch vent  
streams are not intro-  
duced with or used as the  
primary fuel the primary fuel.

- § 63.1326(e)(1).<sup>b</sup>
- Record and report the average firebox temperature measured during the are not introduced with or used as performance test\_NCS.<sup>c</sup>
  - Record the batch cycle daily average firebox temperature as specified in §63.1326(e)(2).<sup>d</sup>
  - Report all batch cycle daily average temperatures that are below the minimum operating value established in the NCS or operating permit and all instances when monitoring data are not collected\_PR.<sup>d,e</sup>

Flare..... Presence of a flame at the  
pilot light

- Hourly records of whether the monitor was continuously operating during batch emission episodes, or portions thereof, selected for control and whether a flame was continuously present at the pilot light during said periods.
- Record and report the presence of a flame at the pilot light over the full period of the compliance determination\_NCS.<sup>c</sup>
- Record the times and durations of all periods during batch emission episodes, or portions thereof, selected for control when all flames at the pilot light of a flare are absent or the monitor is not operating.
- Report the times and durations of all periods during batch emission episodes, or portions thereof, selected for control when all flames at the pilot light of a flare are absent\_PR.<sup>d</sup>

Scrubber for halogen- ... a. pH of scrubber effluent,  
ated batch processes and  
vents or aggregate batch  
vent streams  
(Note: Controlled by a  
combustion device other  
than a flare).

- Continuous records as specified in 63.1326(e)(1).<sup>b</sup>
- Record and report the average pH of the scrubber effluent measured during the performance test\_NCS.<sup>c</sup>
- Record the batch cycle daily average pH of the scrubber effluent as specified in § 63.1326(e)(2).
- Report all batch cycle daily average pH values of the scrubber effluent that are below

the minimum operating value established in the NCS or operating permit and all instances when monitoring data are not collected\_PR. <sup>d</sup>  
<sup>e</sup>

b. Scrubber liquid and gas flow rates.

1. Records as specified in § flow rates.

63.1326(e)(1). <sup>b</sup>

2. Record and report the scrubber liquid/ gas ratio averaged over the full period of the performance test\_NCS. <sup>c</sup>

3. Record the batch cycle daily average scrubber liquid/gas ratio as specified in § 63.1326(e)(2).

4. Report all batch cycle daily average scrubber liquid/gas ratios that are below the minimum value established in the NCS or operating permit and all instances when monitoring data are not collected\_PR. <sup>d,e</sup>

Absorber <sup>f</sup>....

a. Exit temperature of the absorbing liquid, and.

1. Continuous records as specified in § 63.1326(e)(1). <sup>b</sup>

2. Record and report the average exit temperature of the absorbing liquid measured during the performance test\_NCS <sup>c</sup>

3. Record the batch cycle daily average exit temperature of the absorbing liquid as specified in § 63.1326(e)(2) for each batch cycle.

4. Report all the batch cycle daily average exit temperatures of the absorbing liquid that are above the maximum operating value established in the NCS or operating permit and all instances when monitoring data are not collected\_PR. <sup>d,e</sup>

b. Exit specific gravity for absorbing liquid.

1. Continuous records as specified in the

§ 63.1326(e)(1). <sup>b</sup>

2. Record and report the average exit specific gravity measured during the performance test\_NCS. <sup>c</sup>

3. Record the batch cycle daily average exit specific gravity as specified in § 63.1326(e)(2).

4. Report all batch cycle daily average exit specific gravity values that are above the maximum operating value established in the

Condenser <sup>f</sup> .....	Exit (product side) temperature.	<p>NCS or operating permit and all instances when monitoring data are not collected_PR. <sup>d e</sup></p> <ol style="list-style-type: none"> <li>1. Continuous records as specified in § 63.1326(e)(1). <sup>b</sup></li> <li>2. Record and report the average exit temperature measured during the performance test_NCS. <sup>c</sup></li> <li>3. Record the batch cycle daily average exit temperature as specified in § 63.1326(e)(2).</li> <li>4. Report all batch cycle daily average exit temperatures that are above the maximum operating value established in the NCS or operating permit and all instances when monitoring data are not collected_PR. <sup>d e</sup></li> </ol>
Carbon Adsorber <sup>f</sup> .....	<ol style="list-style-type: none"> <li>a. Total regeneration steam flow or nitrogen flow, or pressure (gauge or absolute) during carbon bed regeneration cycles, and</li> </ol>	<ol style="list-style-type: none"> <li>1. Record the total regeneration steam flow or nitrogen flow, or pressure for each carbon bed regeneration cycle</li> <li>2. Record and report the total regeneration steam flow or nitrogen flow, or pressure during carbon bed regeneration cycle measured during the performance test_NCS. <sup>c</sup></li> <li>3. Report all carbon bed regeneration cycles when the total regeneration steam flow or nitrogen flow, or pressure is above the maximum value established in the NCS or operating permit_PR. <sup>d e</sup></li> </ol>
	<ol style="list-style-type: none"> <li>b. Temperature of the carbon bed after regeneration and within 15 minutes of completing any cooling cycles</li> </ol>	<ol style="list-style-type: none"> <li>1. Record the temperature of the carbon bed after each regeneration and within 15 minutes of completing any cooling cycles</li> <li>2. Record and report the temperature of the carbon bed after each regeneration and within 15 minutes of completing any cooling cycle(s) measured during the performance test_NCS. <sup>c</sup></li> <li>3. Report all carbon bed regeneration cycles when the temperature of the carbon bed after regeneration, or within 15 minutes of completing any cooling cycle(s), is above the maximum value established in the NCS or operating permit_PR. <sup>d e</sup></li> </ol>
All control devices...	a. Diversion to the atmosphere	1. Hourly records of whether the flow

	from the control device or.	indicator was operating during batch emission episodes, or portions thereof, selected for control and whether a diversion was detected at any time during said periods as specified in § 63.1326(e)(3).
		2. Record and report the times of all periods during batch emission episodes, or portions thereof, selected for control when emissions are diverted through a bypass line or the flow indicator is not operating_PR. <sup>d</sup>
	b. Monthly inspection of sealed valves..	1. Records that monthly inspections were performed as specified in § 63.1326(e)(4)(i). 2. Record and report all monthly inspections that show the valves are in the diverting position or that a seal has been broken_PR. <sup>d</sup>
Absorber, condenser, and carbon Adsorber (as an alternative to the requirements previously presented in this table	Concentration level or reading indicated by an organic monitoring device at the outlet of the control device	1. Continuous records as specified in § 63.1326(e)(1). <sup>b</sup> 2. record and report the average batch vent concentration level or reading measured during the performance test 3. Record the batch cycle daily average concentration level or reading as specified § 63.1326(e)(2). 4. Report all batch cycle daily average concentration levels or readings that are above the maximum value established in the NCS or operating permit and all instances when monitoring data are not collected_PR. <sup>d e</sup>

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

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

<sup>c</sup> NCS = Notification of Compliance Status described in § 63.1335(e)(5).

<sup>d</sup> PR = Periodic Reports described in § 63.1335(e)(6).

<sup>e</sup> The periodic reports shall include the duration of periods when monitoring data are not collected as specified in § 63.1335(e)(6)(iii)(C).

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

38. **Table 8 to Subpart JJJ of Part 63 -- Operating Parameters for Which Levels Are Required To Be Established for Continuous and Batch Process Vents and Aggregate Batch Vent Streams**

Device	Parameters to be monitored	Established operating parameter(s)
Thermal incinerator.....	Firebox temperature.....	Minimum temperature.
Catalytic incinerator.....	Temperature upstream and downstream of the catalyst bed.	Minimum upstream temperature and minimum temperature difference across the catalyst bed.
Boiler or process heater...	Firebox temperature.....	Minimum temperature.
Scrubber for halogenated vents	pH of scrubber effluent; and and gas flow rates [63.1324(b)(4)(ii)].	Minimum pH; and minimum liquid/ gas ratio
Absorber.....	Exit temperature of the absorbing liquid; and exit specific gravity of the absorbing liquid.	Maximum temperature; and maximum specific gravity.
Condenser.....	Exit temperature.....	Maximum temperature.
Carbon adsorber.....	Total regeneration steam flow or nitrogen flow, or pressure (gauge or absolute) a during carbon bed regeneration cycle; and temperature of the carbon bed after regeneration (and within 15 minutes of completing any cooling cycle(s)).	Maximum flow or pressure; and maximum temperature
Other devices (or as an alternative to the requirements previously presented in this table) b	HAP concentration level or reading at outlet of device	Maximum HAP concentration or reading

a 25 to 50 mm (absolute) is a common pressure level obtained by pressure swing absorbers.

b Concentration is measured instead of an operating parameter.

**39. Table 9 to Subpart JJJ of Part 63 -- Routine reports required by this subpart**

**Facility Name: The Dow Chemical Company - Hanging Rock**  
**Facility ID: 0744000029**

Reference	Description of report	Due date
§ 63.1335(b) and subpart A.	Refer to Table 1 and subpart A.	Refer to subpart A.
§ 63.1335(e)(3).....	Precompliance Report	Existing affected sources_ December 19, 2000. New affected sources_ with application for approval of construction or reconstruction.
§ 63.1335(e)(4).....	Emissions Averaging plan	September 19, 2000.
§ 63.1335(e)(4)(iv)....	Updates to Emissions averaging plan	120 days prior to making the change necessitating the update.
§ 63.1335(e)(5).....	Notification of Compliance status <sup>b</sup>	Within 150 days after the compliance date.
§ 63.1335(e)(6).....	Periodic Reports....	Semiannually, no later than 60 days after the end of each 6-month period. See § 63.1335(e)(6)(i) for the due date for the first report.
§ 63.1335(e)(6)(xi)....	Quarterly reports for emission averaging plan	No later than 60 days after the end of each quarter. First report is due with the Notification of Compliance Status.
§ 63.1335(e)(6)(xii)...	Quarterly reports upon request Administrator	No later than 60 days after the end of each quarter.
§ 63.1335(e)(7)(i).....	Storage Vessels notification inspection	At least 30 days prior to the refilling of each storage vessel or the inspection of each storage vessel.
§ 63.1335(e)(7)(ii)....	Requests for approval of a nominal control efficiency for use in emissions averaging	Initial submittal is due with the Emissions Averaging plan specified in 63.1335(e)(4)(ii); later submittals are made at the discretion of the owner or operator as specified in § 63.1335(e)(7)(ii) (B).
§ 63.1335(e)(7)(iii)...	Notification of change in the primary product	1. For notification under § 63.1310(f)(3)(ii)_ notification submittal date at the discretion of the owner or operator. <sup>c</sup>  2. For notification under § 63.1310(f)(4)(ii)_w ithin 6 months of making the determination.

<sup>a</sup> There may be two versions of this report due at different times; one for equipment subject to § 63.1331 and one for other emission points subject to this subpart.

<sup>b</sup> There will be two versions of this report due at different times; one for equipment subject to § 63.1331 and one for other emission points subject to this subpart.

<sup>c</sup> Note that the TPPU remains subject to this subpart until the notification under § 63.1310(f)(3)(i) is made.

40. If USEPA changes 40 CFR Part 63, Subpart JJJ, the permittee may request conforming modifications to this permit.

41. The following insignificant emissions units are located at this facility:

B006 - natural gas fired space heater;  
B013 - rail car wash water(permit to install 07-257);  
B014 - rail car/wash drying air heater (permit to install 07-288);  
B015 - 9 mmBtu/hr natural gas fired boiler (permit to install 07-299);  
B017 - diesel fire water pump(permit to install 07-308);  
B018 - diesel fire pump(permit to install 07-308);  
B019 - performance forms space heater (permit to install 07-333);  
T006 - HCFC - 142b storage tank(permit to install 07-200);  
T007 - isobutane storage tank(permit to install 07-317); and  
T008 - HFC - 152a storage tank(permit to install 07-312).

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within the identified permit to install for the emissions unit. Insignificant emissions units listed above that are not subject to specific permit to install requirements are subject to one or more applicable requirements contained in the SIP-approved versions of OAC Chapters 3745-17, 3745-18, and 3745-21.

## **B. State Only Enforceable Section**

1. The following insignificant emissions units located at this facility are exempt from permit requirements because they are not subject to any applicable requirements or because they meet the "de minimis" criteria established in OAC rule 3745-15-05:

B002 - boiler gas vent;  
B004 - gas fired boiler - polystyrene;  
B007 - 504 building heaters;  
B009 - line 1 M/L space heater;  
Z001 - waste water treatment;  
Z005 - EtCl storage tank;  
Z006 - CO2 storage tank;  
Z007 - PF line 3 space heater;  
Z008 - sill seal space heaters;

Z009 - propane storage tank;  
Z010 - line 1 M/L ink storage vent;  
Z011 - line 1 M/L ink printer;  
Z012 - PF line 3 ink storage vent;  
Z013 - PF line 3 ink printer;  
Z014 - line 1 M/L pin mixer;  
Z015 - line 1 M/L laminator;  
Z016 - PF line 3 pin mixer;  
Z017 - PF line 3 laminator;  
Z019 - polystyrene railcar unloading;  
Z020 - polystyrene storage silo vent;  
Z021 - line 1 M/L day bin;  
Z022 - PF line 3 day bin;  
Z023 - PF line 3 add. trans;  
Z024 - line 1 M/L add. trans;  
Z026 - recycle storage silo vent;  
Z027 - recycle storage silo vent;  
Z028 - recycle storage;  
Z029 - line 1 M/L recycle day;  
Z030 - Pf line 3 recycle day;  
Z033 - sill seal hot wire cutter;  
Z034 - thermo mass punch;  
Z035 - maintenance welding area;  
Z036 - 534 building lab hood;  
Z100 - add transfer blower;  
Z101 - PF storage silo vent;  
Z102 - PF line 1 day bin;  
Z103 - line 1 recycle day bin;  
Z105 - line 1 gear pump;  
Z106 - line 1 pin mixer HO heater;  
Z107 - line 1 pin mixer seal 01;  
Z108 - line 1 trim cooler;  
Z109 - PF line 2 day bin;  
Z110 - line 2 recycle day bin;  
Z112 - line 2 gear pump;  
Z119 - recycle PF silo vents;  
Z120 - boiler condenser tank;  
Z122 - 507 warehouse heater - west;  
Z123 - 507 warehouse heater - east;  
Z124 - 507 curing warehouse heaters;  
Z125 - 504 loading dock heaters;  
Z126 - 500 building heaters;  
Z127 - line 1 ink jet printer;  
Z128 - line 1 ink jet storage tank;

**Facility Name: The Dow Chemical Company - Hanging Rock**  
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Z129 - line 2 ink jet printer;  
Z130 - line 2 ink jet storage tank;  
Z132 - 509 building heaters;  
Z133 - PF production storage building;  
Z134 - 509 building heaters; and  
Z135 - sill seal production storage.

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Dowtherm Boiler R-1 (B010)

**Part III - Terms and Conditions for Emissions Units**

Emissions Unit ID: Dowtherm Boiler R-1 (B010)  
 Activity Description: Dowtherm Boiler R-1 (StyronTM)

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
9 mmBtu/hr per hour natural gas, no. 2 fuel oil, and byproduct fired boiler	OAC rule 3745-31-05(A)(3) (PTI 07-420)	0.18 lb/hr of particulate emissions
		0.79 tpy of particulate emissions
		2.73 lbs/hr of nitrogen oxides (NOx)
		11.96 tpy of NOx
		3.66 lbs/hr of sulfur dioxide (SO2)
		16.05 tpy of SO2
		0.047 lb/hr of volatile organic compounds (VOC)
		0.21 tpy of VOC
		0.004 lb/hr of carbon monoxide (CO)
		0.02 tpy of CO

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CO emissions shall not exceed 100 ppmv on a dry basis corrected to 7% oxygen as a rolling, hourly average

The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07, 3745-17-10, 3745-18-06, 3745-21-08 and 3745-23-06.

See A.I.2.a and A.I.2.g below.

OAC rule 3745-17-07(A)

Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

OAC rule 3745-17-10(B)(1)

Particulate emissions shall not exceed 0.020 lb/mmBtu of actual heat input.

OAC rule 3745-18-06(B)

See A.I.2.b below.

OAC rule 3745-21-08(B)

See A.I.2.c below.

OAC rule 3745-23-06(B)

See A.I.2.d below.

40 CFR Part 63, Subpart JJJ

See A.I.2.e and A.I.2.f below.

## **2. Additional Terms and Conditions**

- 2.a** Compliance with 40 CFR Part 266, Subpart H and sections A.II.1 and A.II.2 below shall satisfy the best available technology requirement for this emissions unit specified in OAC rule 3745-31-05(A)(3).
- 2.b** Fuel burning equipment which have heat input capacities equal to or less than 10 mmBtu/hr rated capacity are exempt from OAC rule 3745-18-06(D), (F), and (G).
- 2.c** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply

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with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 07-420.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 07-420.
- 2.e** This emissions unit is used as a control device for emissions units P002 (Polystyrene Polymerization Process - Train #1) and P010 (Polystyrene Polymerization Process - Train #2). Emissions units P002 and P010 are subject to the requirements of 40 CFR Part 63, Subpart JJJ. Because this emissions unit is used as a control device, it is also subject to the requirements of 40 CFR Part 63, Subpart JJJ (see Part II section A.5 - Specific Facility Terms and Conditions).
- Note: B010 and B020 are both subject to 40 CFR Part 266, Subpart H. 40 CFR Part 63, Subpart JJJ incorporates by reference certain provisions of 40 CFR Part 63, Subpart G, including 40 CFR 63.116(b), which exempts from performance testing requirements those control devices (such as B010 and B020) that are subject to and in compliance with 40 CFR Part 266, Subpart H.
- 2.f** The permittee shall reduce emissions from emissions units P002 and P010 process vents, as defined in 40 CFR 63.1312, by 98 weight percent or to a concentration of 20 parts per million by volume (ppmv) on a dry basis, whichever is less stringent. If the permittee elects to comply with the 20 ppmv standard, the concentration shall include a correction to 3 percent oxygen only when supplemental combustion air is used to combust the emissions. Compliance shall be based on either organic HAP or TOC.
- 2.g** The company has demonstrated that sulfur content is negligible in byproduct fuel. Therefore, it is not necessary to develop monitoring, recordkeeping and/or reporting requirements to ensure compliance.

## **II Operational Restrictions**

1. No. 2 fuel oil shall be burned for emergency backup only when natural gas is not available.

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**Facility ID:** 0744000029  
**Emissions Unit:** Dowtherm Boiler R-1 (B010)

2. No. 2 fuel oil shall have a sulfur content of less than or equal to 0.4 percent, by weight.
3. The amount of fuel burned in this emissions unit shall not exceed 50% / 50% mix of natural gas (or no. 2 fuel oil as emergency backup) and byproduct fuel. This 50% byproduct fuel equates to 228 lbs/hr of byproduct waste fuel.
4. The no. 2 fuel oil shall have a sulfur content and heat content that meets the allowable SO<sub>2</sub> emission limitation of 3.66 lbs/hr.
5. If a boiler or heater is used to comply with the percent reduction requirement or concentration limit specified in section A.I.2.f, then the vent stream shall be introduced into the flame zone of such a device.

### **III Monitoring and/or Recordkeeping**

1. The permittee shall maintain daily records of the quantity of each fuel burned in this emissions unit, including the ratio of the mix of byproduct waste fuel to natural gas (or no. 2 fuel oil as emergency backup).
2. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content, and the calculated sulfur dioxide emission rate (in lbs/hr at maximum capacity).

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as ASTM methods D240 and D4294), or equivalent methods as approved by the Director.

3. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emission unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emission incident; and
  - e. any corrective actions taken to eliminate the visible emissions.

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If the weekly checks show emissions that are representative of normal operation for 1 operating quarter, the required frequency of visible emission checks may be reduced to bi-weekly (once every two weeks, when the emissions unit is in operation). If a subsequent check by the permittee or an Ohio EPA inspector indicates emissions that are not representative of normal operation, the frequency of emission checks shall revert back to weekly until such time as there is 1 operating quarter of normal visible emissions.

4. The permittee shall maintain copies of the annual performance specification test report for the CO and O<sub>2</sub> continuous emission monitoring systems (CEMs). The performance specification test shall be conducted in accordance with the requirements of 40 CFR Part 266, Appendix IX. These records shall be available to the agency upon request.
5. The monitoring and record keeping provisions of 40 CFR Part 63, Subpart JJJ for this emissions unit are specified in Part II, sections A.4 through A.52.
6. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install 07-420, issued on 7/17/96: A.III.1 through A.III.5. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

#### **IV Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the byproduct waste fuel usage limitation described in section A.II.3.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all times when a shipment of oil is received which exceeds the 0.4 percent, by weight, sulfur content limitation.
3. The permittee shall submit quarterly deviation reports that identify all exceedances of the 3.66 lbs/hr SO<sub>2</sub> emission limitation based upon the calculations required in section A.III.2 for the no. 2 fuel oil.
4. The deviation reports shall be submitted in accordance with the requirements specified in Part 1 - General Term and Condition A.1.c of this permit.
5. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective action taken to eliminate the visible particulate emissions. These reports shall be submitted to the Portsmouth local air agency by January 31 and July 31 of each year and shall cover the previous 6-month period.

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**Emissions Unit:** Dowtherm Boiler R-1 (B010)

6. The reporting provision of 40 CFR Part 63, Subpart JJJ for this emissions unit are specified in Part II, sections A.4 through A.52.
7. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install 07-420, issued on 7/17/96: A.IV.1 through A.IV.6. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

## **V Testing Requirements**

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

20% opacity as a 6-minute average

Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9 and the methods and procedures required in OAC rule 3745-17-03(B)(1).

- 1.b Emission Limitation:

0.047 lb/hr of VOC

Applicable Compliance Method:

Compliance shall be demonstrated based upon the stack testing requirements specified in section A.V.2.

- 1.c Emission Limitation:

0.21 tpy of VOC

Applicable Compliance Method:

This limitation was derived by multiplying the allowable hourly emission limitation by 8,760 hours per year, and then dividing by 2,000 pounds/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance will be shown with the annual limitation.

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1.d Emission Limitation:

2.73 lbs/hr of NOx

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the NOx emission factor in lb/mmescf of fuel fired, by the maximum quantity of fuel burned per hour, in mmescf. The NOx emission factor shall be calculated from the results of the most recent stack test which demonstrated compliance.

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 7.

1.e Emission Limitation:

11.96 tpy of NOx

Applicable Compliance Method:

This limitation was derived by multiplying the allowable hourly emission limitation by 8,760 hours per year, and then dividing by 2,000 pounds/ton; therefore, provided compliance is shown with the hourly emission limitation, compliance will be shown with the annual limitation.

1.f Emission Limitation:

0.18 lb/hr of particulate emissions

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the particulate emission factor in lb/mmescf of fuel fired, by the maximum quantity of fuel burned per hour, in mmescf. The particulate emission factor shall be calculated from the results of the most recent stack test which demonstrated compliance.

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

1.g Emission Limitation:

0.79 tpy of particulate emissions

Applicable Compliance Method:

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**Facility ID:** 0744000029  
**Emissions Unit:** Dowtherm Boiler R-1 (B010)

This limitation was derived by multiplying the allowable hourly emission limitation by 8,760 hours per year, and then dividing by 2,000 pounds/ton; therefore, provided compliance is shown with the hourly emission limitation, compliance will be shown with the annual limitation.

1.h Emission Limitation:

0.004 lb/hr of CO

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the CO emission factor in lb/mmcf of fuel fired, by the maximum quantity of fuel burned per hour, in mmcf. The CO emission factor shall be calculated from the results of the most recent stack test which demonstrated compliance.

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 10.

1.i Emission Limitation:

0.02 tpy of CO

Applicable Compliance Method:

This limitation was derived by multiplying the allowable hourly emission limitation by 8,760 hours per year, and then dividing by 2,000 pounds/ton; therefore, provided compliance is shown with the hourly emission limitation, compliance will be shown with the annual limitation.

1.j Emission limitation:

CO emissions shall not exceed 100 ppmv on a dry basis corrected to 7% oxygen as a rolling, hourly average

Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements of 40 CFR Part 266, Subpart H.

1.k Emission Limitation:

3.66 lbs/hr of SO<sub>2</sub>

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Dowtherm Boiler R-1 (B010)

Applicable Compliance Method:

Compliance may be demonstrated based upon the records required in sections A.III.1 through A.III.3 and by multiplying the SO<sub>2</sub> emission factor in lb/1000 gallon of fuel fired, by the maximum quantity of fuel burned per hour, in gallons. The SO<sub>2</sub> emission factor shall be obtained from AP-42, Volume 1, 5th Edition, Chapter 1, Section 1.3, Table 1.3-1, dated September, 1998 and the sulfur content of the fuel.

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 6.

1.1 Emission Limitation:

16.05 tpy of SO<sub>2</sub>

Applicable Compliance Method:

This limitation was derived by multiplying the allowable hourly emission limitation by 8,760 hours per year, and then dividing by 2,000 pounds/ton; therefore, provided compliance is shown with the hourly emission limitation, compliance will be shown with the annual limitation.

1.m Emission Limitation:

reduce emissions by 98 weight percent or to a concentration of 20 parts per million by volume (ppmv) on a dry basis, whichever is less stringent

Applicable Compliance Method:

Compliance shall be demonstrated based upon compliance with 40 CFR Part 266, Subpart H.

2. B010 and B020 are identical emissions units. For compliance demonstration purposes, 40 CFR 266.103(c)(3) provides that "the owner or operator may seek approval on a case-by-case basis to use compliance test data from one unit in lieu of testing a similar onsite unit." The permittee has obtained such approval for B010 and B020 from USEPA Region V. Consequently, the permittee is only required to conduct, or have conducted, emission testing for one of the two emissions units in accordance with the following requirements:

- a. The emission testing shall be conducted in accordance with the applicable test methods and testing frequency requirements of 40 CFR Part 266 Subpart H.

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**Facility ID:** 0744000029  
**Emissions Unit:** Dowtherm Boiler R-1 (B010)

- b. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity and using the maximum allowed byproduct fuel burning rate, unless otherwise specified or approved by the Portsmouth local air agency.
3. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Portsmouth local air agency's refusal to accept the results of the emission test(s).

Personnel from the Portsmouth local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Portsmouth local air agency.

4. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #07-420, issued on 7/17/96: A.V.1 through A.V.3. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

## **VI Miscellaneous Requirements**

None

Facility Name: The Dow Chemical Company - Hanging Rock  
Facility ID: 0744000029  
Emissions Unit: Dowtherm Boiler R-1 (B010)

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<b>Operations, Property, and/or Equipment</b>	<b>Applicable Rules/Requirements</b>	<b>Applicable Emissions Limitations/Control Measures</b>
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**2. Additional Terms and Conditions**

None

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

None

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Dowtherm Boiler R-3 (B020)

**Part III - Terms and Conditions for Emissions Units**

Emissions Unit ID: Dowtherm Boiler R-3 (B020)  
 Activity Description: Dowtherm Boiler R-3 (StyronTM)

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
9 mmBtu/hr per hour natural gas, no. 2 fuel oil, and byproduct fired boiler	OAC rule 3745-31-05(A)(3) (PTI 07-420)	0.18 lb/hr of particulate emissions
		0.79 tpy of particulate emissions
		2.73 lbs/hr of nitrogen oxides (NOx)
		11.96 tpy of NOx
		3.66 lbs/hr of sulfur dioxide (SO2)
		16.05 tpy of SO2
		0.047 lb/hr of volatile organic compounds (VOC)
		0.21 tpy of VOC
		0.004 lb/hr of carbon monoxide (CO)
		0.02 tpy of CO

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**Emissions Unit:** Dowtherm Boiler R-3 (B020)

CO emissions shall not exceed 100 ppmv on a dry basis corrected to 7% oxygen as a rolling, hourly average

The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07, 3745-17-10, 3745-18-06, 3745-21-08 and 3745-23-06.

See A.I.2.a and A.I.2.g below.

OAC rule 3745-17-07(A)

Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

OAC rule 3745-17-10(B)(1)

Particulate emissions shall not exceed 0.020 lb/mmBtu of actual heat input.

OAC rule 3745-18-06(B)

See A.I.2.b below.

OAC rule 3745-21-08(B)

See A.I.2.c below.

OAC rule 3745-23-06(B)

See A.I.2.d below.

40 CFR Part 63, Subpart JJJ

See A.I.2.e and A.I.2.f below.

## **2. Additional Terms and Conditions**

- 2.a** Compliance with 40 CFR Part 266, Subpart H and sections A.II.1 and A.II.2 below shall satisfy the best available technology requirement for this emissions unit specified in OAC rule 3745-31-05(A)(3).
- 2.b** Fuel burning equipment which have heat input capacities equal to or less than 10 mmBtu/hr rated capacity are exempt from OAC rule 3745-18-06(D), (F), and (G).
- 2.c** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply

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with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 07-420.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 07-420.
- 2.e** This emissions unit is used as a control device for emissions units P002 (Polystyrene Polymerization Process - Train #1) and P010 (Polystyrene Polymerization Process - Train #2). Emissions units P002 and P010 are subject to the requirements of 40 CFR Part 63, Subpart JJJ. Because this emissions unit is used as a control device, it is also subject to the requirements of 40 CFR Part 63, Subpart JJJ (see Part II section A.5 - Specific Facility Terms and Conditions).
- Note: B010 and B020 are both subject to 40 CFR Part 266, Subpart H. 40 CFR Part 63, Subpart JJJ incorporates by reference certain provisions of 40 CFR Part 63, Subpart G, including 40 CFR 63.116(b), which exempts from performance testing requirements those control devices (such as B010 and B020) that are subject to and in compliance with 40 CFR Part 266, Subpart H.
- 2.f** The permittee shall reduce emissions from emissions units P002 and P010 process vents, as defined in 40 CFR 63.1312, by 98 weight percent or to a concentration of 20 parts per million by volume (ppmv) on a dry basis, whichever is less stringent. If the permittee elects to comply with the 20 ppmv standard, the concentration shall include a correction to 3 percent oxygen only when supplemental combustion air is used to combust the emissions. Compliance shall be based on either organic HAP or TOC.
- 2.g** The company has demonstrated that sulfur content is negligible in byproduct fuel. Therefore, it is not necessary to develop monitoring, recordkeeping and/or reporting requirements to ensure compliance.

## **II Operational Restrictions**

1. No. 2 fuel oil shall be burned for emergency backup only when natural gas is not available.

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**Facility ID:** 0744000029  
**Emissions Unit:** Dowtherm Boiler R-3 (B020)

2. No. 2 fuel oil shall have a sulfur content of less than or equal to 0.4 percent, by weight.
3. The amount of fuel burned in this emissions unit shall not exceed 50% / 50% mix of natural gas (or no. 2 fuel oil as emergency backup) and byproduct fuel. This 50% byproduct fuel equates to 228 lbs/hr of byproduct waste fuel.
4. The no. 2 fuel oil shall have a sulfur content and heat content that meets the allowable SO<sub>2</sub> emission limitation of 3.66 lbs/hr.
5. If a boiler or heater is used to comply with the percent reduction requirement or concentration limit specified in section A.I.2.f, then the vent stream shall be introduced into the flame zone of such a device.

### **III Monitoring and/or Recordkeeping**

1. The permittee shall maintain daily records of the quantity of each fuel burned in this emissions unit, including the ratio of the mix of byproduct waste fuel to natural gas (or no. 2 fuel oil as emergency backup).
2. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content, and the calculated sulfur dioxide emission rate (in lbs/hr at maximum capacity).

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as ASTM methods D240 and D4294), or equivalent methods as approved by the Director.

3. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emission unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emission incident; and
  - e. any corrective actions taken to eliminate the visible emissions.

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**Emissions Unit:** Dowtherm Boiler R-3 (B020)

If the weekly checks show emissions that are representative of normal operation for 1 operating quarter, the required frequency of visible emission checks may be reduced to bi-weekly (once every two weeks, when the emissions unit is in operation). If a subsequent check by the permittee or an Ohio EPA inspector indicates emissions that are not representative of normal operation, the frequency of emission checks shall revert to weekly until such time as there is 1 operating quarter of normal visible emissions.

4. The permittee shall maintain copies of the annual performance specification test report for the CO and O2 continuous emission monitoring systems (CEMs). The performance specification test shall be conducted in accordance with the requirements of 40 CFR Part 266, Appendix IX. These records shall be available to the agency upon request.
5. The monitoring and record keeping provisions of 40 CFR Part 63, Subpart JJJ for this emissions unit are specified in Part II, sections A.4 through A.52.
6. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install 07-420, issued on 7/17/96: A.III.1 through A.III.5. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

#### **IV Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the byproduct waste fuel usage limitation described in section A.II.3.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all times when a shipment of oil is received which exceeds the 0.4 percent, by weight, sulfur content limitation.
3. The permittee shall submit quarterly deviation reports that identify all exceedances of the 3.66 lbs/hr SO2 emission limitation based upon the calculations required in sections A.III.2 for the fuel oil.
4. The deviation reports shall be submitted in accordance with the requirements specified in Part 1 - General Term and Condition A.1.c of this permit.
5. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective action taken to eliminate the visible particulate emissions. These reports shall be submitted to the Portsmouth local air agency by January 31 and July 31 of each year and shall cover the previous 6-month period.

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**Facility ID:** 0744000029  
**Emissions Unit:** Dowtherm Boiler R-3 (B020)

6. The reporting provisions of 40 CFR Part 63, Subpart JJJ for this emissions unit are specified in Part II, sections A.4 through A.52.
7. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install 07-420, issued on 7/17/96: A.IV.1 through A.IV.6. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

## **V Testing Requirements**

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

20% opacity as a 6-minute average

Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9 and the methods and procedures required in OAC rule 3745-17-03(B)(1).

- 1.b Emission Limitation:

0.047 lb/hr of VOC

Applicable Compliance Method:

Compliance shall be demonstrated based upon the stack testing requirements specified in section A.V.2.

- 1.c Emission Limitation:

0.21 tpy of VOC

Applicable Compliance Method:

This limitation was derived by multiplying the allowable hourly emission limitation by 8,760 hours per year, and then dividing by 2,000 pounds/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance will be shown with the annual limitation.

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**Emissions Unit:** Dowtherm Boiler R-3 (B020)

1.d Emission Limitation:

2.73 lbs/hr of NOx

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the NOx emission factor in lb/mmescf of fuel fired, by the maximum quantity of fuel burned per hour, in mmescf. The NOx emission factor shall be calculated from the results of the most recent stack test which demonstrated compliance.

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 7.

1.e Emission Limitation:

11.96 tpy of NOx

Applicable Compliance Method:

This limitation was derived by multiplying the allowable hourly emission limitation by 8,760 hours per year, and then dividing by 2,000 pounds/ton; therefore, provided compliance is shown with the hourly emission limitation, compliance will be shown with the annual limitation.

1.f Emission Limitation:

0.18 lb/hr of particulate emissions

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the particulate emission factor in lb/mmescf of fuel fired, by the maximum quantity of fuel burned per hour, in mmescf. The particulate emission factor shall be calculated from the results of the most recent stack test which demonstrated compliance.

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

1.g Emission Limitation:

0.79 tpy of particulate emissions

Applicable Compliance Method:

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**Facility ID:** 0744000029  
**Emissions Unit:** Dowtherm Boiler R-3 (B020)

This limitation was derived by multiplying the allowable hourly emission limitation by 8,760 hours per year, and then dividing by 2,000 pounds/ton; therefore, provided compliance is shown with the hourly emission limitation, compliance will be shown with the annual limitation.

1.h Emission Limitation:

0.004 lb/hr of CO

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the CO emission factor in lb/mmcf of fuel fired, by the maximum quantity of fuel burned per hour, in mmcf. The CO emission factor shall be calculated from the results of the most recent stack test which demonstrated compliance.

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 10.

1.i Emission Limitation:

0.02 tpy of CO

Applicable Compliance Method:

This limitation was derived by multiplying the allowable hourly emission limitation by 8,760 hours per year, and then dividing by 2,000 pounds/ton; therefore, provided compliance is shown with the hourly emission limitation, compliance will be shown with the annual limitation.

1.j Emission limitation:

CO emissions shall not exceed 100 ppmv on a dry basis corrected to 7% oxygen as a rolling, hourly average

Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements of 40 CFR Part 266, Subpart H.

1.k Emission Limitation:

3.66 lbs/hr of SO<sub>2</sub>

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**Facility ID:** 0744000029  
**Emissions Unit:** Dowtherm Boiler R-3 (B020)

Applicable Compliance Method:

Compliance may be demonstrated based upon the records required in sections A.III.1 through A.III.3 and by multiplying the SO<sub>2</sub> emission factor in lb/1000 gallon of fuel fired, by the maximum quantity of fuel burned per hour, in gallons. The SO<sub>2</sub> emission factor shall be obtained from AP-42, Volume 1, 5th Edition, Chapter 1, Section 1.3, Table 1.3-1, dated September, 1998 and the sulfur content of the fuel.

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 6.

1.1 Emission Limitation:

16.05 tpy of SO<sub>2</sub>

Applicable Compliance Method:

This limitation was derived by multiplying the allowable hourly emission limitation by 8,760 hours per year, and then dividing by 2,000 pounds/ton; therefore, provided compliance is shown with the hourly emission limitation, compliance will be shown with the annual limitation.

1.m Emission Limitation:

reduce emissions by 98 weight percent or to a concentration of 20 parts per million by volume (ppmv) on a dry basis, whichever is less stringent

Applicable Compliance Method:

Compliance shall be demonstrated based upon compliance with 40 CFR Part 266, Subpart H.

2. B010 and B020 are identical emissions units. For compliance demonstration purposes, 40 CFR 266.103(c)(3) provides that "the owner or operator may seek approval on a case-by-case basis to use compliance test data from one unit in lieu of testing a similar onsite unit." The permittee has obtained such approval for B010 and B020 from USEPA Region V. Consequently, the permittee is only required to conduct, or have conducted, emission testing for one of the two emissions units in accordance with the following requirements:

- a. The emission testing shall be conducted in accordance with the applicable test methods and testing frequency requirements of 40 CFR Part 266, Subpart H.

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**Emissions Unit:** Dowtherm Boiler R-3 (B020)

- b. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity and using the maximum allowed byproduct fuel burning rate, unless otherwise specified or approved by the Portsmouth local air agency.
3. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Portsmouth local air agency's refusal to accept the results of the emission test(s).

Personnel from the Portsmouth local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Portsmouth local air agency.

4. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #07-420, issued on 7/17/96: A.V.1 through A.V.3. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

## **VI Miscellaneous Requirements**

None

Facility Name: The Dow Chemical Company - Hanging Rock  
Facility ID: 0744000029  
Emissions Unit: Dowtherm Boiler R-3 (B020)

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

None

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Fugitive Dust-Roads (F001)

**Part III - Terms and Conditions for Emissions Units**

Emissions Unit ID: Fugitive Dust-Roads (F001)  
 Activity Description: Fugitive Dust - Plant Roadways & Parking Areas

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
plant roadways and parking areas	OAC rule 3745-17-08(B)	See A.I.2.a below.
	OAC rule 3745-17-07(B)	See A.I.2.b below.

2. **Additional Terms and Conditions**

- 2.a Since this emissions unit is not located in an Appendix A area, pursuant to paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) do not apply to this emissions unit.
- 2.b Pursuant to paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) do not apply to this emissions unit.

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Fugitive Dust-Roads (F001)

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None

Facility Name: The Dow Chemical Company - Hanging Rock  
Facility ID: 0744000029  
Emissions Unit: Fugitive Dust-Roads (F001)

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. **Additional Terms and Conditions**

None

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

None

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Cold Solvent Cleaner (L001)

**Part III - Terms and Conditions for Emissions Units**

Emissions Unit ID: Cold Solvent Cleaner (L001)  
 Activity Description: Flat Plate Heater Cold Cleaner (H-561)

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
500-gallon immersion batch cold cleaning machine H-560	OAC rule 3745-31-05(A)(3) (PTI 07-452)	<0.5 tpy of volatile organic compounds (VOC)
	OAC rule 3745-21-09(O)	This rule is equivalent to or less stringent than 40 CFR Part 63, Subpart T.
	40 CFR Part 63, Subpart T	See A.I.2.a below.

2. **Additional Terms and Conditions**

- 2.a The cold cleaner shall employ a tightly fitting cover that shall be closed at all times except during parts entry and removal, and a water layer at a minimum thickness of 2.5 cm (1 inch) on the surface of the solvent within the cleaning machine.

**II Operational Restrictions**

1. The cold cleaner shall be equipped with a device for draining the cleaned parts; and if the solvent has a vapor pressure greater than 0.6 pound per square inch absolute measured at 100 degrees Fahrenheit, the drainage facility shall be constructed internally so that the parts are enclosed under the cover during draining, unless an internal type draining device cannot fit into the cleaning system.

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Cold Solvent Cleaner (L001)

2. The cold cleaner shall be operated and maintained in accordance with the following practices to minimize solvent evaporation from the unit:
  - a. provide a permanent, legible, conspicuous label, summarizing the operating requirements;
  - b. store waste solvent in covered containers;
  - c. close the cover whenever parts are not being handled in the cleaner;
  - d. drain the cleaned parts until dripping ceases;
  - e. if used, supply a solvent spray that is a solid fluid stream (not a fine, atomized, or shower type spray) at a pressure that does not exceed 10 pounds per square inch gauge; and
  - f. clean only materials that are neither porous nor absorbent.
3. The cold cleaner shall be operated with a cover, and if the solvent has a vapor pressure greater than 0.3 pound per square inch absolute, measured at 100 degrees Fahrenheit, or if the solvent is heated or agitated, the cover shall be designed and constructed so that it can be easily operated with one hand.

### **III Monitoring and/or Recordkeeping**

1. The permittee shall maintain records of the items cleaned, the types of solvents employed and the vapor pressure of each solvent (pounds per square inch absolute) measured at 100 degrees Fahrenheit. The records shall be kept in a readily accessible location for at least 5 years and shall be made available to the Director upon verbal or written request.
2. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install 07-452, issued on 2/4/98: A.III.1. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

### **IV Reporting Requirements**

1. The permittee shall submit a compliance report no later than 150 days after December 2, 1997. This report shall include the following information:
  - a. the name and address of the permittee;
  - b. the address (i.e., physical location) of the solvent cleaning machine;

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Cold Solvent Cleaner (L001)

- c. a statement, signed by the permittee of the solvent cleaning machine for which the report is being submitted is in compliance with 40 CFR Part 63; and
  - d. the compliance approach for the solvent cleaning machine.
2. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install 07-452, issued on 2/4/98: A.IV.1. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

## **V Testing Requirements**

1. Compliance with the emission limitation in section A.I.1 of these terms and conditions shall be determined in accordance with the following method:

1.a Emission Limitation:

<0.5 tpy of VOC

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the maximum surface area cleaned per year in the cold cleaner by 0.0013 feet (estimates a layer approximately 1/64th of an inch of solvent remaining on part), and by the density of the solvent (81.12 pounds/cubic feet for methylene chloride), and then dividing by 2000 lbs/ton.

2. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install 07-452, issued on 2/4/98: A.V.1. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

## **VI Miscellaneous Requirements**

None

Facility Name: The Dow Chemical Company - Hanging Rock  
Facility ID: 0744000029  
Emissions Unit: Cold Solvent Cleaner (L001)

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

None

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Cold Solvent Cleaner (L002)

**Part III - Terms and Conditions for Emissions Units**

Emissions Unit ID: Cold Solvent Cleaner (L002)  
 Activity Description: Flat Plate Heater Cold Cleaner (H-562)

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
500-gallon immersion batch cold cleaning machine H-560	OAC rule 3745-31-05(A)(3) (PTI 07-452)	<0.5 tpy of volatile organic compounds (VOC)
	OAC rule 3745-21-09(O)	This rule is equivalent to or less stringent than 40 CFR Part 63, Subpart T.
	40 CFR Part 63, Subpart T	See A.I.2.a below.

2. **Additional Terms and Conditions**

- 2.a The cold cleaner shall employ a tightly fitting cover that shall be closed at all times except during parts entry and removal, and a water layer at a minimum thickness of 2.5 cm (1 inch) on the surface of the solvent within the cleaning machine.

**II Operational Restrictions**

1. The cold cleaner shall be equipped with a device for draining the cleaned parts; and if the solvent has a vapor pressure greater than 0.6 pound per square inch absolute measured at 100 degrees Fahrenheit, the drainage facility shall be constructed internally so that the parts are enclosed under the cover during draining, unless an internal type draining device cannot fit into the cleaning system.

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**Emissions Unit:** Cold Solvent Cleaner (L002)

2. The cold cleaner shall be operated and maintained in accordance with the following practices to minimize solvent evaporation from the unit:
  - a. provide a permanent, legible, conspicuous label, summarizing the operating requirements;
  - b. store waste solvent in covered containers;
  - c. close the cover whenever parts are not being handled in the cleaner;
  - d. drain the cleaned parts until dripping ceases;
  - e. if used, supply a solvent spray that is a solid fluid stream (not a fine, atomized, or shower type spray) at a pressure that does not exceed 10 pounds per square inch gauge; and
  - f. clean only materials that are neither porous nor absorbent.
3. The cold cleaner shall be operated with a cover, and if the solvent has a vapor pressure greater than 0.3 pound per square inch absolute, measured at 100 degrees Fahrenheit, or if the solvent is heated or agitated, the cover shall be designed and constructed so that it can be easily operated with one hand.

### **III Monitoring and/or Recordkeeping**

1. The permittee shall maintain records of the items cleaned, the types of solvents employed and the vapor pressure of each solvent (pounds per square inch absolute) measured at 100 degrees Fahrenheit. The records shall be kept in a readily accessible location for at least 5 years and shall be made available to the Director upon verbal or written request.
2. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install 07-452, issued on 2/4/98: A.III.1. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

### **IV Reporting Requirements**

1. The permittee shall submit a compliance report no later than 150 days after December 2, 1997. This report shall include the following information:
  - a. the name and address of the permittee;
  - b. the address (i.e., physical location) of the solvent cleaning machine;

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Cold Solvent Cleaner (L002)

- c. a statement, signed by the permittee of the solvent cleaning machine for which the report is being submitted is in compliance with 40 CFR Part 63; and
  - d. the compliance approach for the solvent cleaning machine.
2. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install 07-452, issued on 2/4/98: A.IV.1. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

## **V Testing Requirements**

1. Compliance with the emission limitation in section A.I.1 of these terms and conditions shall be determined in accordance with the following method:
  - 1.a Emission Limitation:  
  
<0.5 tpy of VOC  
  
Applicable Compliance Method:  
  
Compliance shall be demonstrated by multiplying the maximum surface area cleaned per year in the cold cleaner by 0.0013 feet (estimates a layer approximately 1/64th of an inch of solvent remaining on part), and by the density of the solvent (81.12 pounds/cubic feet for methylene chloride), and then dividing by 2000 lbs/ton.
2. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install 07-452, issued on 2/4/98: A.V.1. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

## **VI Miscellaneous Requirements**

None

Facility Name: The Dow Chemical Company - Hanging Rock  
Facility ID: 0744000029  
Emissions Unit: Cold Solvent Cleaner (L002)

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. **Additional Terms and Conditions**

None

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

None

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Dow Polystyrene Polymerization Process - Train #1 (P002)

**Part III - Terms and Conditions for Emissions Units**

Emissions Unit ID: Dow Polystyrene Polymerization Process - Train #1 (P002)

Activity Description: Process which produces Polystyrene (Styron™)

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
polystyrene process train #1 vented to Dowtherm boilers R-1 and R-3	OAC rule 3745-31-05(A)(3) (PTI 07-00479)	0.06 lb/hr of volatile organic compounds (VOC)
		0.26 tpy of VOC
		See A.I.2.d and A.I.2.e below.
	OAC rule 3745-21-09(DD)	See A.I.2.c below.
	40 CFR Part 63, Subpart JJJ	Polystyrene Resin Thermoplastic Product Process Unit
		See A.I.2.b below.
		Additional requirements are specified in Part II, sections A.4 through A.39 - Specific Facility Terms and Conditions.
	OAC rule 3745-21-09(CC)	See A.I.2.a below.

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**Facility ID:** 0744000029  
**Emissions Unit:** Dow Polystyrene Polymerization Process - Train #1 (P002)

## **2. Additional Terms and Conditions**

- 2.a** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.b** The permittee of an affected emissions unit producing polystyrene resin using a continuous process shall comply with the requirements of this rule by reducing emissions from all process vents, as defined in 40 CFR 63.1312, by 98 weight percent or to a concentration of 20 parts per million by volume (ppmv) on a dry basis, whichever is less stringent. If the permittee elects to comply with the 20 ppmv standard, the concentration shall include a correction to 3 percent oxygen only when supplemental combustion air is used to combust the emissions. Compliance shall be based on either organic HAP or TOC.
- 2.c** The leak detection and repair (LDAR) program specified by this applicable rule is equivalent to or less stringent than the LDAR program specified by 40 CFR Part 63, Subpart JJJ.
- 2.d** Compliance with 40 CFR Part 63, Subpart JJJ shall satisfy the best available technology (BAT) requirement for this emissions unit.
- 2.e** Process emissions from this emissions unit shall be vented to the Dowtherm boilers R-1 (B010) and R-3 (B020). There shall be no increase in the allowable emissions from the Dowtherm boilers. The Dowtherm boilers R-1 and R-3 shall also comply with the applicable requirements of 40 CFR Part 266, Subpart H.

## **II Operational Restrictions**

1. If a boiler or heater is used to comply with the percent reduction requirement or concentration limit specified in A.I.2.b, then the vent stream shall be introduced into the flame zone of such a device.

## **III Monitoring and/or Recordkeeping**

1. The monitoring and record keeping provisions of the LDAR program for this emissions unit are specified in Part II, sections A.4 through A.39.
2. The permittee shall maintain daily records, in pounds, of the amount of each raw material used in this process unit and the hourly VOC emissions from this emissions unit.
3. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install 07-00479, issued on 5/3/00: A.III.1 and A.III.2. The monitoring and record keeping requirements contained in the above-referenced Permit to Install

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**Facility ID:** 0744000029  
**Emissions Unit:** Dow Polystyrene Polymerization Process - Train #1 (P002)

are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

#### **IV Reporting Requirements**

1. The reporting provisions of the LDAR program for this emissions unit are specified in Part II, sections A.4 through A.39.
2. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install 07-00479, issued on 5/3/00: A.IV.1. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

#### **V Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

0.06 lb/hr of VOC

Applicable Compliance Method:

Compliance shall be demonstrated based upon the most recent version of the emissions tracking program, approved by the Portsmouth local air agency, and used to calculate emissions from this emission unit. This program has been defined by The Dow Chemical Corporation as the "ESOP-25 Styron-Magnum Air Emission Calculator" and shall be retained on site. This program shall include calculations using monitoring and record keeping as described in section A.III.2 of this permit and shall be based on emission factors from Compilation of Air Pollutant Emission Factors AP-42, Fifth Edition, Volume I, Chapters 6 and 7 and/or other appropriate factors to calculate emissions rates from this emissions unit. This program shall be available to an OEPA representative at any time during normal business hours.

- 1.b Emission Limitation:

0.26 tpy of VOC

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**Facility ID:** 0744000029  
**Emissions Unit:** Dow Polystyrene Polymerization Process - Train #1 (P002)

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the allowable hourly emission limitation by 8760 hours per year, and then dividing by 2000 lbs/ton.

1.c Emission Limitation:

reduce emissions by 98 weight percent or to a concentration of 20 parts per million by volume (ppmv) on a dry basis, whichever is less stringent

Applicable Compliance Method:

Compliance shall be demonstrated based upon compliance with 40 CFR Part 266, Subpart H for the Dowtherm boilers R-1 and R-3 (B010 and B020).

2. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install 07-00479, issued on 5/3/00: A.V.1. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

## **VI Miscellaneous Requirements**

None

Facility Name: The Dow Chemical Company - Hanging Rock  
Facility ID: 0744000029  
Emissions Unit: Dow Polystyrene Polymerization Process - Train #1 (P002)

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

None

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Plant - Line #1 (P003)

**Part III - Terms and Conditions for Emissions Units**

Emissions Unit ID: Performance Foams Plant - Line #1 (P003)

Activity Description: Performance Foams Plant - Line #1

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
performance foams plant- line #1 controlled by a thermal oxidizer	OAC rule 3745-31-05(A)(3) (PTI 07-00494)	Controlled volatile organic compound (VOC) emissions from this emissions unit shall not exceed 4.4 lbs/hr.  Allowable emissions from the thermal oxidizer (for the emissions units specified in section A.I.2.b) shall not exceed the following:  2.75 lbs/hr of particulate emissions 12 tpy of particulate emissions  0.12 lb/hr of sulfur dioxide (SO <sub>2</sub> ) 0.53 tpy of SO <sub>2</sub>  6.0 lbs/hr of nitrogen oxides (NO <sub>x</sub> ) 26.3 tpy of NO <sub>x</sub>  40.2 lbs/hr of volatile organic compounds (VOC)  The requirements of this rule also include compliance with the

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Plant - Line #1 (P003)

requirements of OAC rule 3745-31-05(D).

See A.I.2.a through A.I.2.e and A.I.2.g below.

OAC rule 3745-31-05(D) 15.9 tons of VOC per rolling, 365-day period for emissions units P003 and P022, combined  
SYNTHETIC MINOR TO AVOID PSD (THIS LIMITATION UPON P003 AND P022 WAS PART OF AN EARLIER PTI TO AVOID PSD)

OAC rule 3745-17-07(A) See A.I.2.f below.

OAC rule 3745-17-11(B) See A.I.2.f below.

## 2. Additional Terms and Conditions

- 2.a VOC emissions from this emissions unit shall not exceed 15.9 tpy, based upon a rolling, 365-day summation of the daily emissions.
- 2.b The following emissions units are vented to the regenerative thermal oxidizer (RTO): P003 (performance foams line #1), P022 (performance foams line #2), P023 (performance foams recycle line), P014 (performance foams line #3), P017 (performance foams primary curing warehouse #1) and P018 (performance foams primary curing warehouse #2).
- 2.c VOC emissions vented to the RTO shall be controlled by at least 98% at maximum operating capacity.
- 2.d The shutdown of the RTO shall be accompanied by the shutdown of all the performance foam process units which are vented to it.
- 2.e There shall be no visible emissions in excess of 10% opacity, as a 6-minute average, during any 60-minute observation period.
- 2.f The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

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**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Plant - Line #1 (P003)

**2.g** The 4.4 lbs/hr VOC limitation for this emissions unit and the 40.2 lbs/hr VOC limitation for emissions units P003, P014, P017, P018, P022, and P023, combined, were established to reflect the hourly potential to emit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limits.

## **II Operational Restrictions**

1. Combined blowing agent (VOC) usage for emissions unit P003 and P022 shall not exceed 2540 tpy, based upon a rolling, 365-day summation of the daily usages.
2. A minimum temperature of 1425 degrees Fahrenheit shall be maintained in the combustion zone of the thermal oxidizer.
3. The thermal oxidizer, including any associated equipment and piping, shall be designed, operated, and maintained so as to prevent the emissions of objectionable odors.

## **III Monitoring and/or Recordkeeping**

1. The facility shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emission unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

- a. all 3-hr blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was less than 1425 degrees Fahrenheit; and
  - b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit is in operation.
2. The permittee shall maintain daily records of the following information for P003 and P022:
    - a. the daily usage of blowing agent (VOC), in lbs;
    - b. the total combined rolling, 365-day total of the tons of blowing agent (VOC) employed;
    - c. the product type groups produced;
    - d. the product type die loss factors;

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Plant - Line #1 (P003)

- e. the hole punching factor;
- f. the daily VOC vent emissions;
- g. the total combined VOC (blowing agent) emissions, in tons, calculated as a rolling, 365-day summation;
- h. the date and time of each thermal oxidizer shutdown; and
- i. the duration of time for each thermal oxidizer shutdown.

The daily vent emissions for emissions units P003 and P022 are calculated by multiplying the amount of blowing agent released in each process by the destruction efficiency of the control device. The blowing agent released in the process is calculated based on the quantity of product produced on each line (P003 and P022) per day and the amount of blowing agent on each product.

- 3. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emission from the RTO stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emissions incident; and
  - e. any corrective actions taken to eliminate the visible emissions.

If the weekly checks show emissions that are representative of normal operation for 1 operating quarter, the required frequency of visible emission checks may be reduced to bi-weekly (once every two weeks, when the emissions unit is in operation). If a subsequent check by the permittee or an Ohio EPA inspector indicates emissions that are not representative of normal operation, the frequency of emission checks shall revert back to weekly until such time as there is 1 operating quarter of normal visible emissions.

- 4. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install # 07-00494, issued on 5/30/2002: A.III.1 through

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Plant - Line #1 (P003)

A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

#### **IV Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 365-day combined emission and usage limitations for VOC (blowing agent) for P003 and P022 .
2. The permittee shall submit deviation (excursion) reports that identify all 3-hour blocks of time during which the thermal oxidizer combustion zone temperature does not comply with the temperature limitation specified in section A.III.1. Each report shall be submitted within 30 days after the deviation occurs.
3. The deviation reports shall be submitted in accordance with the requirements specified in Part 1 - General Term and Condition A.1.c of this permit.
4. The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Portsmouth local air agency by January 31 and July 31 of each year and shall cover the previous 6-month period.
5. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #07-00494, issued on 5/30/2002: A.IV.1 through A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

#### **V Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:
  - 1.a Emission Limitations:  
  
2.75 lbs/hr of particulates from the thermal oxidizer  
0.12 lb/hr of SO<sub>2</sub> from the thermal oxidizer  
6.0 lbs/hr of NO<sub>x</sub> from the thermal oxidizer

Applicable Compliance Method:

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Plant - Line #1 (P003)

If required, compliance shall be demonstrated based upon emission tests performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, using the following Test Methods: for particulates, Methods 1 through 5 of 40 CFR Part 60, Appendix A; for SO<sub>2</sub>, Methods 1 through 4 and Method 6 of 40 CFR Part 60, Appendix A; for NO<sub>x</sub>, Methods 1 through 4 and Method 7 of 40 CFR Part 60, Appendix A.

1.b Emission Limitations:

40.2 lbs/hr of VOC from the thermal oxidizer

VOC emissions vented to the thermal oxidizer shall be controlled by at least 98% at maximum operating capacity.

Applicable Compliance Method:

Compliance shall be demonstrated based upon emission tests performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, using the Test Methods as described in section A.V.2.

1.c Emission Limitations:

12 tpy of particulates from the thermal oxidizer

0.53 tpy of SO<sub>2</sub> from the thermal oxidizer

26.3 tpy of NO<sub>x</sub> from the thermal oxidizer

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the appropriate hourly allowable emission limitation by the actual annual hours of operation, and then dividing by 2000 lbs/hr.

1.d Emission Limitation:

VOC emissions from this emissions unit shall not exceed 4.4 lbs/hr.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the most recent version of the Ethafoam Emissions Tracking Procedure, approved by the Portsmouth local air agency, and used to calculate emissions from this emissions unit. This procedure has been defined by The Dow Chemical Corporation as the "Ethafoam Product Database" and shall be retained on site. This program shall include calculations using monitoring and record keeping as described in section A.III.2 above and shall include calculations based on emission factors developed based on the

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Plant - Line #1 (P003)

product mix to calculate emission rates. This program shall be available to an OEPA representative at any time during normal business hours.

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Method 25 or 25A.

1.e Emission Limitation:

VOC vent emissions from this emissions unit shall not exceed 15.9 tpy, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

Compliance with this emission limitation shall be demonstrated based upon the monitoring and record keeping specified in section A.III.2.

1.f Emission Limitation:

15.9 tons of VOC per rolling, 365-day period for emissions units P003 and P022, combined

Applicable Compliance Method:

Compliance with this emission limitation shall be demonstrated based upon the monitoring and record keeping as described in section A.III.2 using the summation of the emissions for emissions units P003 and P022.

1.g Emission Limitation:

There shall be no visible emissions in excess of 10% opacity as a 6-minute average in any 60-minute observation period.

Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9.

2. The following emissions units vent to the RTO: P003 (performance foams line #1), P022 (performance foams line #2), P014 (performance foams line #3), P023 (performance foams recycle line), P017 (curing warehouse), and P018 (curing warehouse).

The permittee shall conduct, or have conducted, emission testing for the RTO in accordance with the following requirements:

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Plant - Line #1 (P003)

- a. The emission testing shall be conducted within 12 months prior to the expiration of this permit.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate VOC and the control efficiency limitation for VOC.
- c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for VOC, Methods 1 through 4 and Method 25A of 40 CFR Part 60, Appendix A. The test method(s) which must be employed to demonstrate compliance with the control efficiency limitation for VOC is specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
- d. The test(s) shall be conducted while all the above-mentioned emissions units are operating at or near their maximum capacities, unless otherwise specified or approved by the Portsmouth local air agency.
- e. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10(C). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Portsmouth local air agency's refusal to accept the results of the emission test(s).

Personnel from the Portsmouth local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Portsmouth local air agency.

3. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #07-00494, issued on 5/30/02: A.V.1 and A.V.2. The testing requirements contained in the

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Plant - Line #1 (P003)

above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

## **VI Miscellaneous Requirements**

None

Facility Name: The Dow Chemical Company - Hanging Rock  
Facility ID: 0744000029  
Emissions Unit: Performance Foams Plant - Line #1 (P003)

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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performance foams plant- line #1  
controlled by a thermal oxidizer

2. **Additional Terms and Conditions**

None

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

1. The permit to install for this emissions unit (PTI 07-00494) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: VOC (blowing agent)

TLV(ug/m3): 177055

Maximum Hourly Emission Rate (lb/hr): 40.2\*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 224.64

MAGLC (ug/m3): 42156

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Plant - Line #1 (P003)

\* This was modeled for emissions units P003, P022, P023, P014, P017, and P018, combined.

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
  - a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
  - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
  - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Plant - Line #1 (P003)

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Line 1 M/L Plstcs Pro (P009)

**Part III - Terms and Conditions for Emissions Units**

Emissions Unit ID: Line 1 M/L Plstcs Pro (P009)

Activity Description: Raw materials are processed to form Expanded Polystyrene Foam

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
polystyrene foam plant - mainline and product storage warehouses	OAC rule 3745-31-05(A)(3) (PTI 07-390)	7.9 lbs/hr of volatile organic compounds (VOC) (ethyl chloride)  33 tpy of VOC (ethyl chloride) as a rolling, 12-month summation  216 tpy of VOC (ethyl chloride) fugitive emissions as a rolling, 12-month summation  5.5 lbs/hr of HCFC 142b  20.3 tpy of HCFC 142b as a rolling, 12-month summation  11 tpy HCFC 142b fugitive emissions as a rolling, 12-month summation  4.8 lbs/hr of HFC 152a  7.7 tpy HFC 152a as a rolling, 12-month summation

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Line 1 M/L Plstcs Pro (P009)

## 2. Additional Terms and Conditions

- 2.a** OAC rule 3745-21-07 does not apply to this emissions unit because none of the materials used in this process is a liquid organic material.

## II Operational Restrictions

None

## III Monitoring and/or Recordkeeping

1. The permittee shall maintain monthly records consisting of the following:
  - a. the usage of each blowing agent [HCFC 142b, HFC 152a, and VOC (ethyl chloride)], in pounds;
  - b. the die loss factors;
  - c. the processing losses;
  - d. the storage factor;
  - e. the rolling, 12-month total of the tons of each blowing agent [HCFC 142b, HFC 152a, and VOC (ethyl chloride)] employed;
  - f. the HCFC 142b, HFC 152a, and VOC (ethyl chloride) vent emissions (calculated by multiplying the total amount of blowing agent used in the process by the die loss factor), and the rolling, 12-month summation of the vent emissions for each compound;
  - g. the HCFC 142b, HFC 152a, and VOC (ethyl chloride) fugitive emissions (calculated by subtracting the die losses and processing losses, from the total amount of blowing agent used in the process, and then multiplying by the storage factor), and the rolling, 12-month summation of the vent emissions for each compound;
  - h. the hours of operation; and
  - i. the average hourly combined vent and fugitive emissions for HCFC 142b, HFC 152a, and VOC (ethyl chloride).
2. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install # 07-390, modified on 7/8/98: A.III.1. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Line 1 M/L Plstcs Pro (P009)

that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

#### **IV Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that include the following information:
  - a. an identification of each month during which the average hourly VOC emissions exceeded 7.9 lbs/hr, and the actual average hourly VOC emissions for each such month;
  - b. an identification of each month during which the average hourly HCFC 142b emissions exceeded 5.5 lbs/hr, and the actual average hourly HCFC 142b emissions for each such month; and
  - c. an identification of each month during which the average hourly HFC 152a emissions exceeded 4.8 lbs/hr, and the actual average hourly HFC 152a emissions for each such month.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitations for HCFC 142b, HFC 152a, and VOC (ethyl chloride).
3. The deviation reports shall be submitted in accordance with the requirements specified in Part 1 - General Term and Condition A.1.c of this permit.
4. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #07-390, modified on 7/8/98: A.IV.1 through A.IV.3. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

#### **V Testing Requirements**

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following method:
  - 1.a Emission Limitations:  
  
7.9 lbs/hr of VOC (ethyl chloride)  
5.5 lbs/hr of HCFC 142b  
4.8 lbs/hr of HFC 152a

Applicable Compliance Method:

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Line 1 M/L Plstcs Pro (P009)

Compliance shall be demonstrated based upon the records required in section A.III.1 and the most recent version of the emissions tracking program, approved by the Portsmouth local air agency, and used to calculate emissions from this emission unit. This program has been defined by The Dow Chemical Corporation as the "Foam Blowing Agent Emission Model" and shall be retained on site. This program shall include calculations using monitoring and record keeping as described in section A.III.1 above and/or other appropriate factors to calculate emissions rates from this emissions unit. This program shall be available to an OEPA representative at any time during normal business hours.

If required, compliance shall be demonstrated based upon stack testing using the procedures specified in 40 CFR Part 60, Appendix A.

1.b Emission Limitations:

33 tpy of VOC (ethyl chloride) as a rolling, 12-month summation  
216 tpy of VOC (ethyl chloride) fugitive emissions as a rolling, 12-month summation  
20.3 tpy of HCFC 142b as a rolling, 12-month summation  
11 tpy HCFC 142b fugitive emissions as a rolling, 12-month summation  
7.7 tpy HFC 152a as a rolling, 12-month summation

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping requirements described in section A.III.1 of these terms and conditions. The rolling tpy limit shall be demonstrated by the summation of the emissions for the current month and the previous 11 months.

2. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #07-390, modified on 7/8/98: A.V.1. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

**VI Miscellaneous Requirements**

None

Facility Name: The Dow Chemical Company - Hanging Rock  
Facility ID: 0744000029  
Emissions Unit: Line 1 M/L Plstcs Pro (P009)

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

None

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Dow Polystyrene Polymerization Process - Train #2 (P010)

**Part III - Terms and Conditions for Emissions Units**

Emissions Unit ID: Dow Polystyrene Polymerization Process - Train #2 (P010)  
 Activity Description: Process which produces polystyrene copolymers (StyronTM)

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
polystyrene process train #2 vented to the dowtherm boilers R-1 and R-3	OAC rule 3745-31-05(A)(3) (PTI 07-446)	no visible particulate emissions from the rework filter receiver ME-710, transfer system, and screening operation  See A.I.2.d and A.I.2.e below.
	OAC rule 3745-21-09(DD)	See A.I.2.c below.
	40 CFR Part 63, Subpart JJJ	Styrene Acrylonitrile Resin Thermoplastic Product Process Unit  See A.I.2.b below.
		Additional requirements are specified in Part II, sections A.4 through A.39 - Specific Facility Terms and Conditions.
	OAC rule 3745-21-09(CC)	See A.I.2.a below.

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Dow Polystyrene Polymerization Process - Train #2 (P010)

## **2. Additional Terms and Conditions**

- 2.a** The permittee shall not discharge into the ambient air any volatile organic compounds (VOC) from the material recovery section in excess of 0.12 pound of VOC per 1000 pounds of product produced.
- 2.b** The permittee of an affected emissions unit producing polystyrene resin using a continuous process shall comply with the requirements of this rule by reducing emissions from all process vents, as defined in 40 CFR 63.1312, by 98 weight percent or to a concentration of 20 parts per million by volume (ppmv) on a dry basis, whichever is less stringent. If the permittee elects to comply with the 20 ppmv standard, the concentration shall include a correction to 3 percent oxygen only when supplemental combustion air is used to combust the emissions. Compliance shall be based on either organic HAP or TOC
- 2.c** The leak detection and repair (LDAR) program specified by this applicable rule is equivalent to or less stringent than the LDAR program specified by 40 CFR Part 63, Subpart JJJ.
- 2.d** Compliance with 40 CFR Part 63, Subpart JJJ shall satisfy the best available technology (BAT) requirement for this emissions unit.
- 2.e** Process emissions from this emissions unit shall be vented to the Dowtherm boilers R-1 (B010) and R-3 (B020). There shall be no increase in the allowable emissions from the Dowtherm boilers. The Dowtherm boilers R-1 and R-3 shall also comply with the applicable requirements of 40 CFR Part 266, Subpart H.

## **II Operational Restrictions**

1. If a boiler or heater is used to comply with the percent reduction requirement or concentration limit specified in section A.I.2.b, then the vent stream shall be introduced into the flame zone of such a device.

## **III Monitoring and/or Recordkeeping**

1. The monitoring and record keeping provisions of the LDAR program for this emissions unit are specified in Part II, sections A.4 through A.39.
2. The permittee shall maintain daily records, in pounds, of the amount of each raw material used in this process unit and the hourly VOC emissions from this emissions unit.
3. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install # 07-446, issued on 10/1/97: A.III.1 and A.III.2. The

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Dow Polystyrene Polymerization Process - Train #2 (P010)

monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

#### **IV Reporting Requirements**

1. The reporting provisions of the LDAR program for this emissions unit are specified in Part II, sections A.4 through A.39.
2. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install 07-00479, issued on 5/3/00: A.IV.1. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

#### **V Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:

The permittee shall not discharge into the ambient air any volatile organic compounds (VOC) from the material recovery section in excess of 0.12 pound of VOC per 1000 pounds of product produced.

Applicable Compliance Method:

Compliance shall be demonstrated based on the results of the most recent compliance test conducted on the Dowtherm heaters (B010 and B020).

1.b Emission Limitation:

Reduce emissions by 98 weight percent or to a concentration of 20 parts per million by volume (ppmv) on a dry basis, whichever is less stringent.

Applicable Compliance Method:

Compliance shall be demonstrated based on compliance with 40 CFR Part 266, Subpart H for the Dowtherm boilers R-1 and R-3 (B010 and B020).

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Dow Polystyrene Polymerization Process - Train #2 (P010)

1.c Emission Limitation:

no visible particulate emissions from the rework filter receiver ME-710, transfer system, and screening operation

Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 22.

2. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #07-446, issued on 10/1/97: A.V.1. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

**VI Miscellaneous Requirements**

None

Facility Name: The Dow Chemical Company - Hanging Rock  
Facility ID: 0744000029  
Emissions Unit: Dow Polystyrene Polymerization Process - Train #2 (P010)

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

None

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Plant - Line #3 (P014)

**Part III - Terms and Conditions for Emissions Units**

Emissions Unit ID: Performance Foams Plant - Line #3 (P014)  
 Activity Description: Performance Foams Manufacturing Process - Line 3.

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
performance foams plant- line #3 controlled by a thermal oxidizer	OAC rule 3745-31-05(A)(3) (PTI 07-00494)	Controlled volatile organic compounds (VOC) emissions from this emissions unit shall not exceed 3.3 lbs/hr.  Allowable emissions from the thermal oxidizer (for the emissions units specified in section A.I.2.b) shall not exceed the following:  2.75 lbs/hr of particulate emissions 12 tpy of particulate emissions  0.12 lb/hr of sulfur dioxide (SO <sub>2</sub> ) 0.53 tpy of SO <sub>2</sub>  6.0 lbs/hr of nitrogen oxides (NO <sub>x</sub> ) 26.3 tpy of NO <sub>x</sub>  40.2 lbs/hr of volatile organic compounds (VOC)  The requirements of this rule also include compliance with the

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Plant - Line #3 (P014)

requirements of OAC rule 3745-31-05(D).

See A.I.2.a through A.I.2.e and A.I.2.g below.

OAC rule 3745-31-05(D)

SYNTHETIC MINOR TO AVOID PSD

23.2 tons of VOC per rolling, 365-day period for emissions units P003, P022, P014, and P023, combined

OAC rule 3745-17-07(A)

See A.I.2.f below.

OAC rule 3745-17-11(B)

See A.I.2.f below.

## 2. Additional Terms and Conditions

- 2.a** VOC emissions from this emissions unit shall not exceed 14.5 tpy, based upon a rolling, 365-day summation of the daily emissions.
- 2.b** The following emissions units are vented to the regenerative thermal oxidizer (RTO): P003 (performance foams line #1), P022 (performance foams line #2), P023 (performance foams recycle line), P014 (performance foams line #3), P017 (performance foams primary curing warehouse #1) and P018 (performance foams primary curing warehouse #2).
- 2.c** VOC emissions vented to the RTO shall be controlled by at least 98% at maximum operating capacity.
- 2.d** The shutdown of the RTO shall be accompanied by the shutdown of all the performance foam process units which are vented to it.
- 2.e** There shall be no visible emissions in excess of 10% opacity, as a 6-minute average, during any 60-minute observation period.
- 2.f** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.g** The 3.3 lbs/hr VOC limitation for this emissions unit and the 40.2 lbs/hr VOC limitation for emissions units P003, P014, P017, P018, P022, and P023, combined, were established to reflect the hourly potential to emit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limits.

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Plant - Line #3 (P014)

## **II Operational Restrictions**

1. Combined blowing agent (VOC) usage for emissions unit P003, P022, and P014 shall not exceed 3540 tpy, based upon a rolling, 365-day summation of the daily usage.
2. A minimum temperature of 1425 degrees Fahrenheit shall be maintained in the combustion zone of the thermal oxidizer.
3. The thermal oxidizer, including any associated equipment and piping, shall be designed, operated, and maintained so as to prevent the emissions of objectionable odors.

## **III Monitoring and/or Recordkeeping**

1. The facility shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emission unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

- a. all 3-hr blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was less than 1425 degrees Fahrenheit; and
  - b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emission unit is in operation.
2. The permittee shall maintain daily records of the following information for P003, P014, and P022:
    - a. the daily usage of blowing agent (VOC), in lbs;
    - b. the total combined rolling, 365-day total of the tons of blowing agent (VOC) employed;
    - c. the product type groups produced;
    - d. the product type die loss factors;
    - e. the hole punching factor;
    - f. the daily VOC vent emissions;

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Plant - Line #3 (P014)

- g. the total combined VOC (blowing agent) emissions, in tons, calculated as a rolling, 365-day summation;
- h. the date and time of each thermal oxidizer shutdown; and
- i. the duration of time for each thermal oxidizer shutdown.

The daily vent emissions for emissions units P003, P014, and P022 are calculated by multiplying the amount of blowing agent released in each process by the destruction efficiency of the control device. The blowing agent released in the process is calculated based on the quantity of product produced on each line (P003, P014, and P022) per day and the amount of blowing agent on each product.

- 3. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emission from the RTO stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emissions incident; and
  - e. any corrective actions taken to eliminate the visible emissions.

If the weekly checks show emissions that are representative of normal operation for 1 operating quarter, the required frequency of visible emission checks may be reduced to bi-weekly (once every two weeks, when the emissions unit is in operation). If a subsequent check by the permittee or an Ohio EPA inspector indicates emissions that are not representative of normal operation, the frequency of emission checks shall revert back to weekly until such time as there is 1 operating quarter of normal visible emissions.

- 4. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install # 07-00494, issued on 5/30/02: A.III.1 and A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Plant - Line #3 (P014)

#### **IV Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 365-day combined emission and usage limitations for blowing agent (VOC) for P003, P014 and P022.
2. The permittee shall submit deviation (excursion) reports that identify all 3-hour blocks of time during which the thermal oxidizer combustion zone temperature does not comply with the temperature limitation specified in section A.III.1. Each report shall be submitted within 30 days after the deviation occurs.
3. The deviation reports shall be submitted in accordance with the requirements specified in Part 1 - General Term and Condition A.1.c of this permit.
4. The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Portsmouth local air agency by January 31 and July 31 of each year and shall cover the previous 6-month period.
5. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #07-00494, issued on 5/30/02: A.IV.1 through A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

#### **V Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:
  - 1.a Emission Limitations:  
  
2.75 lbs/hr of particulates from the thermal oxidizer  
0.12 lb/hr of SO<sub>2</sub> from the thermal oxidizer  
6.0 lbs/hr of NO<sub>x</sub> from the thermal oxidizer

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon emission tests performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, using the following Test Methods: for particulates, Methods 1 through 5 of 40 CFR Part 60, Appendix A; for SO<sub>2</sub>,

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**Emissions Unit:** Performance Foams Plant - Line #3 (P014)

Methods 1 through 4 and Method 6 of 40 CFR Part 60, Appendix A; for NO<sub>x</sub>, Methods 1 through 4 and Method 7 of 40 CFR Part 60, Appendix A.

1.b Emission Limitations:

40.2 lbs/hr of VOC from the thermal oxidizer

VOC emissions vented to the thermal oxidizer shall be controlled by at least 98% at maximum operating capacity.

Applicable Compliance Method:

Compliance shall be demonstrated based upon emission tests performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, using the Test Methods as described in section A.V.2.

1.c Emission Limitations:

12 tpy of particulates from the thermal oxidizer

0.53 tpy of SO<sub>2</sub> from the thermal oxidizer

26.3 tpy of NO<sub>x</sub> from the thermal oxidizer

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the appropriate hourly allowable emission limitation by the actual annual hours of operation, and then dividing by 2000 lbs/hr.

1.d Emission Limitation:

VOC emissions from this emissions unit shall not exceed 3.3 lbs/hr.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the most recent version of the Ethafoam Emissions Tracking Procedure, approved by the Portsmouth local air agency, and used to calculate emissions from this emissions unit. This procedure has been defined by The Dow Chemical Corporation as the "Ethafoam Product Database" and shall be retained on site. This program shall include calculations using monitoring and record keeping as described in section A.III.2 above and shall include calculations based on emission factors developed based on the product mix to calculate emission rates. This program shall be available to an OEPA representative at any time during normal business hours.

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Method 25 or 25A.

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**Emissions Unit:** Performance Foams Plant - Line #3 (P014)

1.e Emission Limitation:

VOC vent emissions from this emissions unit shall not exceed 14.5 tpy, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

Compliance with this emission limitation shall be demonstrated based upon the monitoring and record keeping specified in section A.III.2.

1.f Emission Limitation:

23.2 tons of VOC per rolling, 365-day period for emissions units P003 , P022, P014 and P023, combined

Applicable Compliance Method:

Compliance with this emission limitation shall be demonstrated based upon the monitoring and record keeping as described in section A.III.2 using the summation of the emissions for emissions units P003, P022, P014, and P023.

1.g Emission Limitation:

There shall be no visible emissions in excess of 10% opacity as a 6-minute average in any 60-minute observation period.

Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9.

2. The following emissions units vent to the RTO: P003 (performance foams line #1), P022 (performance foams line #2), P014 (performance foams line #3), P023 (performance foams recycle line), P017 (curing warehouse), and P018 (curing warehouse).

The permittee shall conduct, or have conducted, emission testing for the RTO in accordance with the following requirements:

- a. The emission testing shall be conducted within 12 months prior to the expiration of this permit.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for VOC and the control efficiency limitation for VOC.

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- c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for VOC, Methods 1 through 4 and Method 25A of 40 CFR Part 60, Appendix A. The test method(s) which must be employed to demonstrate compliance with the control efficiency limitation for VOC is specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
- d. The test(s) shall be conducted while all the above-mentioned emissions units are operating at or near their maximum capacities, unless otherwise specified or approved by the Portsmouth local air agency.
- e. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10(C). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Portsmouth local air agency's refusal to accept the results of the emission test(s).

Personnel from the Portsmouth local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Portsmouth local air agency.

3. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #07-00494, issued on 5/30/02: A.V.1 and A.V.2. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

## **VI Miscellaneous Requirements**

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**Emissions Unit:** Performance Foams Plant - Line #3 (P014)

None

Facility Name: The Dow Chemical Company - Hanging Rock  
Facility ID: 0744000029  
Emissions Unit: Performance Foams Plant - Line #3 (P014)

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

**Operations, Property,  
and/or Equipment**

**Applicable Rules/Requirements**

**Applicable Emissions  
Limitations/Control Measures**

performance foams plant- line #3  
controlled by a thermal oxidizer

**2. Additional Terms and Conditions**

None

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

1. The permit to install for this emissions unit (PTI 07-00494) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: VOC (blowing agent)

TLV(ug/m3): 177055

Maximum Hourly Emission Rate (lb/hr): 40.2\*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 224.64

MAGLC (ug/m3): 42156

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**Emissions Unit:** Performance Foams Plant - Line #3 (P014)

\* This was modeled for emissions units P003, P022, P023, P014, P017, and P018, combined.

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
  - a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
  - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
  - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Plant - Line #3 (P014)

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Polystyrene Recycle Processing Unit (P015)

**Part III - Terms and Conditions for Emissions Units**

Emissions Unit ID: Polystyrene Recycle Processing Unit (P015)

Activity Description: Recycles Polystyrene. Lines 1 & 2 Polystyrene Recycling Unit.

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>	
polystyrene foam recycle line controlled with a baghouse	OAC rule 3745-31-05(A)(3) (PTI 07-390)	1 lb/hr of particulate emissions	
		4.38 tpy of particulate emissions as a rolling, 12-month summation	
		45.5 lbs/hr of volatile organic compounds (VOC) (ethyl chloride)	
		199.2 tpy of VOC (ethyl chloride) as a rolling, 12-month summation	
		162.8 lbs/hr of HCFC 142b	
		713.2 tpy of HCFC 142b as a rolling, 12-month summation	
		79.2 lbs/hr of HFC 152a	
		249 tpy of HFC 152a as a rolling, 12-month summation	
		OAC rule 3745-17-11(B)	See A.I.2.a below.
		OAC rule 3745-17-07(A)	

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**Facility ID:** 0744000029  
**Emissions Unit:** Polystyrene Recycle Processing Unit (P015)

Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

## **2. Additional Terms and Conditions**

- 2.a** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

## **II Operational Restrictions**

None

## **III Monitoring and/or Recordkeeping**

1. The permittee shall maintain monthly records consisting of the following:
  - a. the weight fraction of HCFC 142b, HFC 152a, and ethyl chloride, used in recycle products for emissions unit P009;
  - b. the amount of scrap recycled, in lbs;
  - c. the scrap cure factor;
  - d. the HCFC 142b, HFC 152a, and VOC (ethyl chloride) emissions;
  - e. the HCFC 142b, 152a, and VOC (ethyl chloride) emissions, calculated as a rolling, 12-month summation;
  - f. the rolling, 12-month total of the tons of HCFC 142b, 152a, and ethyl chloride employed;
  - g. the total hours of operation; and
  - h. the average hourly emission rate for HCFC 142b, 152a, and VOC (ethyl chloride).
2. The permittee shall perform weekly checks, when the emission unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse stack for this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;

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**Emissions Unit:** Polystyrene Recycle Processing Unit (P015)

- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emission incident; and
- e. any corrective actions taken to eliminate the visible emissions.

If the weekly checks show emissions that are representative of normal operation for 1 operating quarter, the required frequency of visible emission checks may be reduced to bi-weekly (once every two weeks, when the emissions unit is in operation). If a subsequent check by the permittee or an Ohio EPA inspector indicates emissions that are not representative of normal operation, the frequency of emission checks shall revert back to weekly until such time as there is 1 operating quarter of normal visible emissions.

3. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install # 07-390, modified on 7/8/98: A.III.1 and A.III.2. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

#### **IV Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that include the following information:
  - a. an identification of each month during which the average hourly VOC emissions exceeded 45.5 lbs/hr, and the actual average hourly VOC emissions for each such month;
  - b. an identification of each month during which the average hourly HCFC 142b emissions exceeded 162.8 lbs/hr, and the actual average hourly HCFC 142b emissions for each such month; and
  - c. an identification of each month during which the average hourly HFC 152a emissions exceeded 79.2 lbs/hr, and the actual average hourly HFC 152a emissions for each such month.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month emission limitations for HCFC 142b, HFC 152a, and VOC.
3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be

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**Facility ID:** 0744000029  
**Emissions Unit:** Polystyrene Recycle Processing Unit (P015)

submitted to the Portsmouth local air agency by January 31 and July 31 of each year and shall cover the previous 6-month period.

4. The deviation reports shall be submitted in accordance with the requirements specified in Part 1 - General Term and Condition A.1.c of this permit.
5. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #07-390, modified on 7/8/98: A.IV.1 through A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

## **V Testing Requirements**

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

20% opacity as a 6-minute average

Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9 and the methods and procedures required in OAC rule 3745-17-03(B)(1).

- 1.b Emission Limitation:

45.5 lbs/hr of VOC (ethyl chloride)

162.8 lbs/hr of HCFC 142b

79.2 lbs/hr of HFC 152a

Applicable Compliance Method:

Compliance shall be demonstrated based upon the records required in section A.III.1 and the most recent version of the emissions tracking program, approved by the Portsmouth local air agency, and used to calculate emissions from this emission unit. This program has been defined by The Dow Chemical Corporation as the "Foam Blowing Agent Emission Model" and shall be retained on site. This program shall include calculations using monitoring and record keeping as described in section A.III.1 above and/or other appropriate factors to calculate emissions rates from this emissions unit. This program shall be available to an OEPA representative at any time during normal business hours.

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Polystyrene Recycle Processing Unit (P015)

If required, compliance shall be demonstrated based upon stack testing using the procedures specified in 40 CFR Part 60, Appendix A.

1.c Emission Limitation:

1 lb/hr of particulate emissions

Applicable Compliance Method:

Compliance may be demonstrated based upon the most recent version of the emissions tracking program, approved by the Portsmouth local air agency, and used to calculate emissions from this emission unit. This program has been defined by The Dow Chemical Corporation as the "Foam Blowing Agent Emission Model" and shall be retained on site. This program shall include calculations using monitoring and record keeping as described in section A.III.1 above and/or other appropriate factors to calculate emissions rates from this emissions unit. This program shall be available to an OEPA representative at any time during normal business hours.

If required, compliance shall be demonstrated based upon stack testing using the procedures specified in 40 CFR Part 60, Appendix A.

1.d Emission Limitation:

4.38 tpy of particulate emissions as a rolling, 12-month summation

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the allowable hourly particulate emission limitation by the actual annual hours of operation, and then dividing by 2000 lbs/ton.

1.e Emission Limitation:

199.2 tpy of VOC (ethyl chloride) as a rolling, 12-month summation

713.2 tpy of HCFC 142b as a rolling, 12-month summation

249 tpy of HFC 152a as a rolling, 12-month summation

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping requirements described in section A.III.1 of these terms and conditions. The rolling TPY limit shall demonstrated by the summation of the current month emissions and the previous 11 month emissions.

2. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #07-390, modified on 7/8/98: A.V.1 and A.V.2. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating

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**Facility ID:** 0744000029  
**Emissions Unit:** Polystyrene Recycle Processing Unit (P015)

permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

**VI Miscellaneous Requirements**

None

Facility Name: The Dow Chemical Company - Hanging Rock  
Facility ID: 0744000029  
Emissions Unit: Polystyrene Recycle Processing Unit (P015)

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. **Additional Terms and Conditions**

None

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

None

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Primary Curing Warehouse #1 (P017)

**Part III - Terms and Conditions for Emissions Units**

Emissions Unit ID: Performance Foams Primary Curing Warehouse #1 (P017)  
 Activity Description: Performance Foams Primary Curing Warehouse #1, controlled by Thermal Oxidizer.

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
performance foams primary curing warehouse #1 controlled by a thermal oxidizer	OAC rule 3745-31-05(A)(3) (PTI 07-00494)	Controlled volatile organic compounds (VOC) emissions shall not exceed 8.1 lbs/hr.  Allowable emissions from the thermal oxidizer (for the emissions units specified in section A.I.2.b) shall not exceed the following:  2.75 lbs/hr of particulate emissions 12 tpy of particulate emissions  0.12 lb/hr of sulfur dioxide (SO <sub>2</sub> ) 0.53 tpy of SO <sub>2</sub>  6.0 lbs/hr of nitrogen oxides (NO <sub>x</sub> ) 26.3 tpy of NO <sub>x</sub>  40.2 lbs/hr of volatile organic compounds (VOC)  The requirements of this rule also include compliance with the

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Primary Curing Warehouse #1 (P017)

requirements of OAC rule 3745-31-05(D).

See A.I.2.a through A.I.2.d, A.I.2.f, and A.I.2.g below.

OAC rule 3745-31-05(D)  
SYNTHETIC MINOR TO AVOID PSD See A.I.2.a below.

OAC rule 3745-17-07(A) See A.I.2.e below.

OAC rule 3745-17-11(B) See A.I.2.e below.

## 2. Additional Terms and Conditions

- 2.a** VOC emissions from this emissions unit shall not exceed 14.0 tpy, based upon a rolling, 365-day summation of the daily emissions.
- 2.b** The following emissions units are vented to the regenerative thermal oxidizer (RTO): P003 (performance foams line #1), P022 (performance foams line #2), P023 (performance foams recycle line), P014 (performance foams line #3), P017 (performance foams primary curing warehouse #1) and P018 (performance foams primary curing warehouse #2).
- 2.c** VOC emissions vented to the RTO shall be controlled by at least 98% at maximum operating capacity.
- 2.d** There shall be no visible emissions in excess of 10% opacity, as a 6-minute average, during any 60-minute observation period.
- 2.e** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.f** The 8.1 lbs/hr VOC limitation for this emissions unit and the 40.2 lbs/hr VOC limitation for emissions units P003, P014, P017, P018, P022, and P023, combined, were established to reflect the hourly potential to emit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limits.
- 2.g** Combined VOC emissions from performance foams primary curing warehouse #1 (P017) and #2 (P018) shall not exceed 16,000 lbs/day when the thermal oxidizer is shutdown.

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**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Primary Curing Warehouse #1 (P017)

## **II Operational Restrictions**

1. The blowing agent (VOC) usage restriction on the performance foams lines (P003, P022, and P014) results in restricted annual emissions from this emissions unit.
2. A minimum temperature of 1425 degrees Fahrenheit shall be maintained in the combustion zone of the thermal oxidizer.
3. The thermal oxidizer, including any associated equipment and piping, shall be designed, operated, and maintained so as to prevent the emissions of objectionable odors.

## **III Monitoring and/or Recordkeeping**

1. The facility shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emission unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

- a. all 3-hr blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was less than 1425 degrees Fahrenheit; and
  - b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emission unit is in operation.
2. The permittee shall maintain daily records of the following information:
    - a. the curing warehouse factor;
    - b. the curing warehouse inventory;
    - c. the daily VOC vent emissions from this emissions unit;
    - d. the VOC emissions, in tons, calculated as a rolling, 365-day summation for this emissions unit;
    - e. the date and time of each thermal oxidizer shutdown;
    - f. the duration of time for each thermal oxidizer shutdown;

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Primary Curing Warehouse #1 (P017)

- g. the daily emissions from this emissions unit when the thermal oxidizer is shutdown;
- h. the daily emissions from emissions units P017 and P018, combined, when the thermal oxidizer is shutdown; and
- i. the rolling, 365-day total of the tons of blowing agent (VOC) employed for all performance foams process lines (P003, P022, and P014) calculated each day.

The daily vent emissions for emissions unit are calculated by multiplying the amount of blowing agent released from this emission unit by the destruction efficiency of the control device. The blowing agent released is calculated based on the daily curing warehouse inventory and the curing warehouse factor. The curing warehouse factor is dependent on the amount of blowing agent employed in performance foams process lines (P003, P022 and P014).

- 3. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emission from the RTO stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emissions incident; and
  - e. any corrective actions taken to eliminate the visible emissions.

If the weekly checks show emissions that are representative of normal operation for 1 operating quarter, the required frequency of visible emission checks may be reduced to bi-weekly (once every two weeks, when the emissions unit is in operation). If a subsequent check by the permittee or an Ohio EPA inspector indicates emissions that are not representative of normal operation, the frequency of emission checks shall revert back to weekly until such time as there is 1 operating quarter of normal visible emissions.

- 4. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install # 07-00494, issued on 05/30/02: A.III.1 through A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this

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**Emissions Unit:** Performance Foams Primary Curing Warehouse #1 (P017)

operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

#### **IV Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 365-day VOC emission limitation.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all blocks of time during which the thermal oxidizer combustion zone temperature does not comply with the temperature limitation specified in section A.III.1.
3. The deviation reports shall be submitted in accordance with the requirements specified in Part 1 - General Term and Condition A.1.c of this permit.
4. The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Portsmouth local air agency by January 31 and July 31 of each year and shall cover the previous 6-month period.
5. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #07-00494, issued on 05/30/02: A.IV.1 through A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

#### **V Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:
  - 1.a Emission Limitations:  
  
2.75 lbs/hr of particulates from the thermal oxidizer  
0.12 lb/hr of SO<sub>2</sub> from the thermal oxidizer  
6.0 lbs/hr of NO<sub>x</sub> from the thermal oxidizer

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon emission tests performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, using the following Test Methods: for particulates, Methods 1 through 5 of 40 CFR Part 60, Appendix A; for SO<sub>2</sub>,

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Methods 1 through 4 and Method 6 of 40 CFR Part 60, Appendix A; for NO<sub>x</sub>, Methods 1 through 4 and Method 7 of 40 CFR Part 60, Appendix A.

1.b Emission Limitations:

40.2 lbs/hr of VOC from the thermal oxidizer

VOC emissions vented to the thermal oxidizer shall be controlled by at least 98% at maximum operating capacity.

Applicable Compliance Method:

Compliance shall be demonstrated based upon emission tests performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, using the Test Methods as described in section A.V.2.

1.c Emission Limitations:

12 tpy of particulates from the thermal oxidizer

0.53 tpy of SO<sub>2</sub> from the thermal oxidizer

26.3 tpy of NO<sub>x</sub> from the thermal oxidizer

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the appropriate hourly allowable emission limitation by the actual annual hours of operation, and then dividing by 2000 lbs/hr.

1.d Emission Limitation:

VOC emissions from this emissions unit shall not exceed 8.1 lbs/hr.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the most recent version of the Ethafoam Emissions Tracking Procedure, approved by the Portsmouth local air agency, and used to calculate emissions from this emission unit. This procedure has been defined by The Dow Chemical Corporation as the "Ethafoam Product Database" and shall be retained on site. This program shall include calculations using monitoring and record keeping as described in section A.III.2 above and shall include calculations based on emission factors developed based on the product mix to calculate emission rates. This program shall be available to an OEPA representative at any time during normal business hours.

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Method 25 or 25A.

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**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Primary Curing Warehouse #1 (P017)

1.e Emission Limitation:

VOC emissions from this emissions unit shall not exceed 14.0 tpy, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

Compliance with this emission limitation shall be demonstrated based upon the monitoring and record keeping specified in section A.III.2.

1.f Emission Limitation:

Combined VOC emissions from performance foams primary curing warehouse #1 (P017) and #2 (P018) shall not exceed 16,000 lbs/day when the thermal oxidizer is shutdown.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the records required in section A.III.2 and the most recent version of the Ethafoam Emissions Tracking Procedure, approved by the Portsmouth local air agency, and used to calculate emissions from this emission unit. This procedure has been defined by The Dow Chemical Corporation as the "Ethafoam Product Database" and shall be retained on site. This program shall include calculations using monitoring and record keeping as described in section A.III.2 above and shall include calculations based on emission factors developed based on the product mix to calculate emission rates. This program shall be available to an OEPA representative at any time during normal business hours.

1.g Emission Limitation:

There shall be no visible emissions in excess of 10% opacity as a 6-minute average in any 60-minute observation period.

Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9.

2. The following emissions units vent to the RTO: P003 (performance foams line #1), P022 (performance foams line #2), P014 (performance foams line #3), P023 (performance foams recycle line), P017 (curing warehouse), and P018 (curing warehouse).

The permittee shall conduct, or have conducted, emission testing for the RTO in accordance with the following requirements:

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**Emissions Unit:** Performance Foams Primary Curing Warehouse #1 (P017)

- a. The emission testing shall be conducted within 12 months prior to expiration of this permit.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for VOC and the control efficiency limitation for VOC.
- c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for VOC, Methods 1 through 4 and Method 25A of 40 CFR Part 60, Appendix A. The test method(s) which must be employed to demonstrate compliance with the control efficiency limitation for VOC is specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
- d. The test(s) shall be conducted while all the above-mentioned emissions unit are operating at or near their maximum capacities, unless otherwise specified or approved by the Portsmouth local air agency.
- e. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10(C). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Portsmouth local air agency's refusal to accept the results of the emission test(s).

Personnel from the Portsmouth local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Portsmouth local air agency.

3. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #07-00494, issued on 05/30/02: A.V.1 and A.V.2. The testing requirements contained in the

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above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

**VI Miscellaneous Requirements**

None

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**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Primary Curing Warehouse #1 (P017)

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
performance foams primary curing warehouse #1 controlled by a thermal oxidizer		

**2. Additional Terms and Conditions**

None

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

1. The permit to install for this emissions unit (PTI 07-00494) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: VOC (blowing agent)  
 TLV(ug/m3): 177055

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Maximum Hourly Emission Rate (lb/hr): 40.2\*  
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 224.64  
MAGLC (ug/m3): 42156

\* This was modeled for emissions units P003, P022, P023, P014, P017, and P018, combined.

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
  - a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
  - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
  - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

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- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Primary Curing Warehouse #2 (P018)

**Part III - Terms and Conditions for Emissions Units**

Emissions Unit ID: Performance Foams Primary Curing Warehouse #2 (P018)  
 Activity Description: Performance Foams Primary Curing Warehouse #2, controlled by Thermal Oxidizer.

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
performance foams primary curing warehouse #2 controlled by a thermal oxidizer	OAC rule 3745-31-05(A)(3) (PTI 07-00494)	Controlled volatile organic compounds (VOC) emissions shall not exceed 19.2 lbs/hr.  Allowable emissions from the thermal oxidizer (for the emissions units specified in section A.I.2.b) shall not exceed the following:  2.75 lbs/hr of particulate emissions 12 tpy of particulate emissions  0.12 lb/hr of sulfur dioxide (SO <sub>2</sub> ) 0.53 tpy of SO <sub>2</sub>  6.0 lbs/hr of nitrogen oxides (NO <sub>x</sub> ) 26.3 tpy of NO <sub>x</sub>  40.2 lbs/hr of volatile organic compounds (VOC)  The requirements of this rule also include compliance with the

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requirements of OAC rule  
3745-31-05(D).

See A.I.2.a through A.I.2.d, A.I.2.f  
and A.I.2.g below.

OAC rule 3745-31-05(D)  
SYNTHETIC MINOR TO AVOID PSD See A.I.2.a below.

OAC rule 3745-17-07(A) See A.I.2.e below.

OAC rule 3745-17-11(B) See A.I.2.e below.

## 2. Additional Terms and Conditions

- 2.a** VOC emissions from this emissions unit shall not exceed 31.5 tpy, based upon a rolling, 365-day summation of the daily emissions.
- 2.b** The following emissions units are vented to the regenerative thermal oxidizer (RTO): P003 (performance foams line #1), P022 (performance foams line #2), P023 (performance foams recycle line), P014 (performance foams line #3), P017 (performance foams primary curing warehouse #1) and P018 (performance foams primary curing warehouse #2).
- 2.c** VOC emissions vented to the RTO shall be controlled by at least 98% at maximum operating capacity.
- 2.d** There shall be no visible emissions in excess of 10% opacity, as a 6-minute average, during any 60-minute observation period.
- 2.e** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.f** The 19.2 lbs/hr VOC limitation for this emissions unit and the 40.2 lbs/hr VOC limitation for emissions units P003, P014, P017, P018, P022, and P023, combined, were established to reflect the hourly potential to emit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limits.
- 2.g** Combined VOC emissions from performance foams primary curing warehouse #1 (P017) and #2 (P018) shall not exceed 16,000 lbs/day when the thermal oxidizer is shutdown.

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**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Primary Curing Warehouse #2 (P018)

## **II Operational Restrictions**

1. The blowing agent (VOC) usage restriction on the performance foams lines (P003, P022, and P014) results in restricted annual emissions from this emissions unit.
2. A minimum temperature of 1425 degrees Fahrenheit shall be maintained in the combustion zone of the thermal oxidizer.
3. The thermal oxidizer, including any associated equipment and piping, shall be designed, operated, and maintained so as to prevent the emissions of objectionable odors.

## **III Monitoring and/or Recordkeeping**

1. The facility shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emission unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

- a. all 3-hr blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was less than 1425 degrees Fahrenheit; and
  - b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emission unit is in operation.
2. The permittee shall maintain daily records of the following information:
    - a. the curing warehouse factor;
    - b. the curing warehouse inventory;
    - c. the daily VOC vent emissions from this emissions unit;
    - d. the VOC emissions, in tons, calculated as a rolling, 365-day summation for this emissions unit;
    - e. the date and time of each thermal oxidizer shutdown;
    - f. the duration of time for each thermal oxidizer shutdown;

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- g. the daily emissions from this emissions unit when the thermal oxidizer is shutdown;
- h. the daily emissions from emissions units P017 and P018, combined, when the thermal oxidizer is shutdown; and
- i. the rolling, 365-day total of the tons of blowing agent (VOC) employed for all performance foams process lines (P003, P022, and P014) calculated each day.

The daily vent emissions for emissions unit are calculated by multiplying the amount of blowing agent released from this emission unit by the destruction efficiency of the control device. The blowing agent released is calculated based on the daily curing warehouse inventory and the curing warehouse factor. The curing warehouse factor is dependent on the amount of blowing agent employed in performance foams process lines (P003, P022 and P014).

- 3. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emission from the RTO stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emissions incident; and
  - e. any corrective actions taken to eliminate the visible emissions.

If the weekly checks show emissions that are representative of normal operation for 1 operating quarter, the required frequency of visible emission checks may be reduced to bi-weekly (once every two weeks, when the emissions unit is in operation). If a subsequent check by the permittee or an Ohio EPA inspector indicates emissions that are not representative of normal operation, the frequency of emission checks shall revert back to weekly until such time as there is 1 operating quarter of normal visible emissions.

- 4. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install # 07-00494, issued on 05/30/02: A.III.1 through A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this

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**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Primary Curing Warehouse #2 (P018)

operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

#### **IV Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 365-day VOC emission limitation.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all blocks of time during which the thermal oxidizer combustion zone temperature does not comply with the temperature limitation specified in section A.III.1.
3. The deviation reports shall be submitted in accordance with the requirements specified in Part 1 - General Term and Condition A.1.c of this permit.
4. The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Portsmouth local air agency by January 31 and July 31 of each year and shall cover the previous 6-month period.
5. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #07-00494, issued on 05/30/02: A.IV.1 through A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

#### **V Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:
  - 1.a Emission Limitations:  
  
2.75 lbs/hr of particulates from the thermal oxidizer  
0.12 lb/hr of SO<sub>2</sub> from the thermal oxidizer  
6.0 lbs/hr of NO<sub>x</sub> from the thermal oxidizer

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon emission tests performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, using the following Test Methods: for particulates, Methods 1 through 5 of 40 CFR Part 60, Appendix A; for SO<sub>2</sub>,

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**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Primary Curing Warehouse #2 (P018)

Methods 1 through 4 and Method 6 of 40 CFR Part 60, Appendix A; for NO<sub>x</sub>, Methods 1 through 4 and Method 7 of 40 CFR Part 60, Appendix A.

1.b Emission Limitations:

40.2 lbs/hr of VOC from the thermal oxidizer

VOC emissions vented to the thermal oxidizer shall be controlled by at least 98% at maximum operating capacity.

Applicable Compliance Method:

Compliance shall be demonstrated based upon emission tests performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, using the Test Methods as described in section A.V.2.

1.c Emission Limitations:

12 tpy of particulates from the thermal oxidizer

0.53 tpy of SO<sub>2</sub> from the thermal oxidizer

26.3 tpy of NO<sub>x</sub> from the thermal oxidizer

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the appropriate hourly allowable emission limitation by the actual annual hours of operation, and then dividing by 2000 lbs/hr.

1.d Emission Limitation:

VOC emissions from this emissions unit shall not exceed 19.2 lbs/hr.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the most recent version of the Ethafoam Emissions Tracking Procedure, approved by the Portsmouth local air agency, and used to calculate emissions from this emission unit. This procedure has been defined by The Dow Chemical Corporation as the "Ethafoam Product Database" and shall be retained on site. This program shall include calculations using monitoring and record keeping as described in section A.III.2 above and shall include calculations based on emission factors developed based on the product mix to calculate emission rates. This program shall be available to an OEPA representative at any time during normal business hours.

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Method 25 or 25A.

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**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Primary Curing Warehouse #2 (P018)

1.e Emission Limitation:

VOC vent emissions from this emissions unit shall not exceed 31.5 tpy, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

Compliance with this emission limitation shall be demonstrated based upon the monitoring and record keeping specified in section A.III.2.

1.f Emission Limitation:

Combined VOC emissions from performance foams primary curing warehouse #1 (P017) and #2 (P018) shall not exceed 16,000 lbs/day when the thermal oxidizer is shutdown.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the records required in section A.III.2 and the most recent version of the Ethafoam Emissions Tracking Procedure, approved by the Portsmouth local air agency, and used to calculate emissions from this emission unit. This procedure has been defined by The Dow Chemical Corporation as the "Ethafoam Product Database" and shall be retained on site. This program shall include calculations using monitoring and record keeping as described in section A.III.2 above and shall include calculations based on emission factors developed based on the product mix to calculate emission rates. This program shall be available to an OEPA representative at any time during normal business hours.

1.g Emission Limitation:

There shall be no visible emissions in excess of 10% opacity as a 6-minute average in any 60-minute observation period.

Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9.

2. The following emissions units vent to the RTO: P003 (performance foams line #1), P022 (performance foams line #2), P014 (performance foams line #3), P023 (performance foams recycle line), P017 (curing warehouse), and P018 (curing warehouse).

The permittee shall conduct, or have conducted, emission testing for the RTO in accordance with the following requirements:

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Primary Curing Warehouse #2 (P018)

- a. The emission testing shall be conducted within 12 months prior to the expiration of this permit.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates VOC and the control efficiency limitation for VOC.
- c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for VOC, Methods 1 through 4 and Method 25A of 40 CFR Part 60, Appendix A. The test method(s) which must be employed to demonstrate compliance with the control efficiency limitation for VOC is specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
- d. The test(s) shall be conducted while all the above-mentioned emissions unit are operating at or near their maximum capacities, unless otherwise specified or approved by the Portsmouth local air agency.
- e. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10(C). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Portsmouth local air agency's refusal to accept the results of the emission test(s).

Personnel from the Portsmouth local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Portsmouth local air agency.

3. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #07-00494, issued on 05/30/02: A.V.1 and A.V.2. The testing requirements contained in the

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Primary Curing Warehouse #2 (P018)

above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

**VI Miscellaneous Requirements**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Primary Curing Warehouse #2 (P018)

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
performance foams primary curing warehouse #2 controlled by a thermal oxidizer		

**2. Additional Terms and Conditions**

None

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

1. The permit to install for this emissions unit (PTI 07-00494) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: VOC (blowing agent)  
 TLV(ug/m3): 177055

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Primary Curing Warehouse #2 (P018)

Maximum Hourly Emission Rate (lb/hr): 40.2\*  
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 224.64  
MAGLC (ug/m3): 42156

\* This was modeled for emissions units P003, P022, P023, P014, P017, and P018, combined.

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
  - a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
  - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
  - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Primary Curing Warehouse #2 (P018)

- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Product Storage Warehouse #1 (P019)

**Part III - Terms and Conditions for Emissions Units**

Emissions Unit ID: Performance Foams Product Storage Warehouse #1 (P019)  
 Activity Description: Performance Foams Product Storage Warehouse #1.

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
performance foams product storage warehouse #1	OAC rule 3745-31-05(A)(3) (PTI 07-00494)	800 lbs/day of volatile organic compounds (VOC)  The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
	OAC rule 3745-31-05(D) (PTI 07-00494) Synthetic Minor to avoid PSD	See A.I.2.a below.

2. **Additional Terms and Conditions**

- 2.a VOC emissions from this emissions unit shall not exceed 70 tpy, based upon a rolling, 365-day summation of the daily emissions.

**II Operational Restrictions**

1. The blowing agent (VOC) usage restriction for the performance foams lines (P003, P022, and P014) results in restricted annual emissions from this emissions unit.

**III Monitoring and/or Recordkeeping**

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Product Storage Warehouse #1 (P019)

1. The permittee shall maintain daily records of the following information for this emissions unit:
  - a. the amount of prime product placed in this storage warehouse, in board feet;
  - b. the storage warehouse factor (lbs/million board feet stored);
  - c. the daily VOC emissions, in lbs, i.e., (a) x (b);
  - d. the rolling, 365-day total amount, in tons, of blowing agent (VOC) employed in all performance foam lines (P003, P014, and P022) calculated each day; and
  - e. the VOC emissions, in tons, calculated as a rolling, 365-day summation.

The storage warehouse factor is calculated by subtracting the amount of blowing agent released from each product type during production and during primary curing from the initial amount of blowing agent in the product. The storage warehouse factor is dependent on the amount of blowing agent employed in performance foams process lines (P003, P022 and P014).

2. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install # 07-00494, issued on 05/30/02: A.III.1. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

#### **IV Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 365-day VOC emission limitation.
2. The deviation reports shall be submitted in accordance with the requirements specified in Part 1 - General Term and Condition A.1.c of this permit.
3. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #07-00494, issued on 05/30/02: A.IV.1 and A.IV.2. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

#### **V Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:
  - 1.a Emission Limitation:

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Product Storage Warehouse #1 (P019)

800 lbs/day of volatile organic compounds (VOC)

Applicable Compliance Method:

Compliance shall be demonstrated based upon the most recent version of the Ethafoam Emissions Tracking Procedure, approved by the Portsmouth local air agency, and used to calculate emissions from this emission unit. This procedure has been defined by The Dow Chemical Corporation as the "Ethafoam Product Database" and shall be retained on site. This program shall include calculations using monitoring and record keeping as described in section A.III.1 above and shall include calculations based on emission factors developed based on the product mix to calculate emission rates. This program shall be available to an OEPA representative at any time during normal business hours.

1.b Emission Limitation:

VOC emissions shall not exceed 70 tpy, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

Compliance shall be determined based upon the monitoring and record keeping as described in section A.III.1

2. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #07-00494, issued on 05/30/02: A.V.1. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

## **VI Miscellaneous Requirements**

None

Facility Name: The Dow Chemical Company - Hanging Rock  
Facility ID: 0744000029  
Emissions Unit: Performance Foams Product Storage Warehouse #1 (P019)

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

None

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Product Storage Warehouse #2 (P020)

**Part III - Terms and Conditions for Emissions Units**

Emissions Unit ID: Performance Foams Product Storage Warehouse #2 (P020)  
 Activity Description: Performance Foams Product Storage Warehouse #2.

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
performance foams product storage warehouse #2	OAC rule 3745-31-05(A)(3) (PTI 07-00494)	600 lbs/day of volatile organic compounds (VOC)  The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
	OAC rule 3745-31-05(D) (PTI 07-00494) Synthetic Minor to avoid PSD	See A.I.2.a below.

2. **Additional Terms and Conditions**

- 2.a VOC emissions from this emissions unit shall not exceed 53 tpy, based upon a rolling, 365-day summation of the daily emissions.

**II Operational Restrictions**

1. The blowing agent (VOC) usage restriction for the performance foams lines (P003, P022, and P014) results in restricted annual emissions from this emissions unit.

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Product Storage Warehouse #2 (P020)

### **III Monitoring and/or Recordkeeping**

1. The permittee shall maintain daily records of the following information for this emissions unit:
  - a. the amount of prime product placed in this storage warehouse, in board feet;
  - b. the storage warehouse factor (lbs/million board feet stored);
  - c. the daily VOC emissions, in lbs, i.e., (a) x (b);
  - d. the rolling, 365-day total amount, in tons, of blowing agent (VOC) employed in all performance foam lines (P003, P014, and P022) calculated each day; and
  - e. the VOC emissions, in tons, calculated as a rolling, 365-day summation.

The storage warehouse factor is calculated by subtracting the amount of blowing agent released from each product type during production and during primary curing from the initial amount of blowing agent in the product. The storage warehouse factor is dependent on the amount of blowing agent employed in performance foams process lines (P003, P022 and P014).

2. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install # 07-00494, issued on 05/30/02: A.III.1. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

### **IV Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 365-day VOC emission limitation.
2. The deviation reports shall be submitted in accordance with the requirements specified in Part 1 - General Term and Condition A.1.c of this permit.
3. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #07-00494, issued on 05/30/02: A.IV.1 and A.IV.2. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

### **V Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Product Storage Warehouse #2 (P020)

1.a Emission Limitation:

600 lbs/day of volatile organic compounds (VOC)

Applicable Compliance Method:

Compliance shall be demonstrated based upon the most recent version of the Ethafoam Emissions Tracking Procedure, approved by the Portsmouth local air agency, and used to calculate emissions from this emission unit. This procedure has been defined by The Dow Chemical Corporation as the "Ethafoam Product Database" and shall be retained on site. This program shall include calculations using monitoring and record keeping as described in section A.III.1 above and shall include calculations based on emission factors developed based on the product mix to calculate emission rates. This program shall be available to an OEPA representative at any time during normal business hours.

1.b Emission Limitation:

VOC emissions shall not exceed 53 tpy, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

Compliance shall be determined based upon the monitoring and record keeping as described in section A.III.1.

2. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #07-00494, issued on 05/30/02: A.V.1. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

## **VI Miscellaneous Requirements**

None

Facility Name: The Dow Chemical Company - Hanging Rock  
Facility ID: 0744000029  
Emissions Unit: Performance Foams Product Storage Warehouse #2 (P020)

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. **Additional Terms and Conditions**

None

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

None

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Product Storage Warehouse #3 (P021)

**Part III - Terms and Conditions for Emissions Units**

Emissions Unit ID: Performance Foams Product Storage Warehouse #3 (P021)  
 Activity Description: Performance Foams Product Storage Warehouse #3.

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
performance foams product storage warehouse #3	OAC rule 3745-31-05(A)(3) (PTI 07-00494)	200 lbs/day of volatile organic compounds (VOC)  The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
	OAC rule 3745-31-05(D) (PTI 07-00494) Synthetic Minor to avoid PSD	See A.I.2.a below.

**2. Additional Terms and Conditions**

- 2.a VOC emissions from this emissions unit shall not exceed 18 tpy, based upon a rolling, 365-day summation of the daily emissions.

**II Operational Restrictions**

1. The blowing agent (VOC) usage restriction for the performance foams lines (P003, P022, and P014) results in restricted annual emissions from this emissions unit.

**III Monitoring and/or Recordkeeping**

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Product Storage Warehouse #3 (P021)

1. The permittee shall maintain daily records of the following information for this emissions unit:
  - a. the amount of prime product placed in this storage warehouse, in board feet;
  - b. the storage warehouse factor (lbs/million board feet stored);
  - c. the daily VOC emissions, in lbs, i.e., (a) x (b);
  - d. the rolling, 365-day total amount, in tons, of blowing agent (VOC) employed in all performance foam lines (P003, P014, and P022) calculated each day; and
  - e. the VOC emissions, in tons, calculated as a rolling, 365-day summation.

The storage warehouse factor is calculated by subtracting the amount of blowing agent released from each product type during production and during primary curing from the initial amount of blowing agent in the product. The storage warehouse factor is dependent on the amount of blowing agent employed in performance foams process lines (P003, P022 and P014).

2. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install # 07-00494, issued on 05/30/02: A.III.1. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

#### **IV Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 365-day VOC emission limitation.
2. The deviation reports shall be submitted in accordance with the requirements specified in Part 1 - General Term and Condition A.1.c of this permit.
3. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #07-00494, issued on 05/30/02: A.IV.1 and A.IV.2. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

#### **V Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:
  - 1.a Emission Limitation:

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Product Storage Warehouse #3 (P021)

200 lbs/day of volatile organic compounds (VOC)

Applicable Compliance Method:

Compliance shall be demonstrated based upon the most recent version of the Ethafoam Emissions Tracking Procedure, approved by the Portsmouth local air agency, and used to calculate emissions from this emission unit. This procedure has been defined by The Dow Chemical Corporation as the "Ethafoam Product Database" and shall be retained on site. This program shall include calculations using monitoring and record keeping as described in section A.III.1 above and shall include calculations based on emission factors developed based on the product mix to calculate emission rates. This program shall be available to an OEPA representative at any time during normal business hours.

1.b Emission Limitation:

VOC emissions shall not exceed 18 tpy, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

Compliance shall be determined based upon the monitoring and record keeping as described in section A.III.1.

2. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #07-00494, issued on 05/30/02: A.V.1. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

## **VI Miscellaneous Requirements**

None

Facility Name: The Dow Chemical Company - Hanging Rock  
Facility ID: 0744000029  
Emissions Unit: Performance Foams Product Storage Warehouse #3 (P021)

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. **Additional Terms and Conditions**

None

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

None

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Line #2 (P022)

**Part III - Terms and Conditions for Emissions Units**

Emissions Unit ID: Performance Foams Line #2 (P022)  
 Activity Description: Performance Foams Line #2, controlled by Thermal Oxidizer.

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
performance foams plant- line #2 controlled by a thermal oxidizer	OAC rule 3745-31-05(A)(3) (PTI 07-00494)	Controlled volatile organic compounds (VOC) emissions shall not exceed 5.2 lbs/hr.  Allowable emissions from the thermal oxidizer (for the emissions units specified in section A.I.2.b) shall not exceed the following:  2.75 lbs/hr of particulate emissions 12 tpy of particulate emissions  0.12 lb/hr of sulfur dioxide (SO <sub>2</sub> ) 0.53 tpy of SO <sub>2</sub>  6.0 lbs/hr of nitrogen oxides (NO <sub>x</sub> ) 26.3 tpy of NO <sub>x</sub>  40.2 lbs/hr of volatile organic compounds (VOC)  The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Line #2 (P022)

See A.I.2.a through A.I.2.e and A.I.2.g below.

OAC rule 3745-31-05(D) 15.9 tons of VOC per rolling, 365-day period for emissions units P003 and P022, combined  
SYNTHETIC MINOR TO AVOID PSD (THIS LIMITATION UPON P003 AND P022 WAS PART OF AN EARLIER PTI TO AVOID PSD)

OAC rule 3745-17-07(A) See A.I.2.f below.

OAC rule 3745-17-11(B) See A.I.2.f below.

## 2. Additional Terms and Conditions

- 2.a VOC emissions from this emissions unit shall not exceed 15.9 tpy, based upon a rolling, 365-day summation of the daily emissions.
- 2.b The following emissions units are vented to the regenerative thermal oxidizer (RTO): P003 (performance foams line #1), P022 (performance foams line #2), P023 (performance foams recycle line), P014 (performance foams line #3), P017 (performance foams primary curing warehouse #1) and P018 (performance foams primary curing warehouse #2).
- 2.c VOC emissions vented to the RTO shall be controlled by at least 98% at maximum operating capacity.
- 2.d The shutdown of the RTO shall be accompanied by the shutdown of all the performance foam process units which are vented to it.
- 2.e There shall be no visible emissions in excess of 10% opacity, as a 6-minute average, during any 60-minute observation period.
- 2.f The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.g The 5.2 lbs/hr VOC limitation for this emissions unit and the 40.2 lbs/hr VOC limitation for emissions units P003, P014, P017, P018, P022, and P023, combined, were established to reflect the hourly potential to emit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limits.

## II Operational Restrictions

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Line #2 (P022)

1. Combined blowing agent (VOC) usage for emissions unit P003 and P022 shall not exceed 2540 tpy, based upon a rolling, 365-day summation of the daily usages.
2. A minimum temperature of 1425 degrees Fahrenheit shall be maintained in the combustion zone of the thermal oxidizer.
3. The thermal oxidizer, including any associated equipment and piping, shall be designed, operated, and maintained so as to prevent the emissions of objectionable odors.

### **III Monitoring and/or Recordkeeping**

1. The facility shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emission unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

- a. all 3-hr blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was less than 1425 degrees Fahrenheit; and
  - b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit is in operation.
2. The permittee shall maintain daily records of the following information for P003 and P022:
    - a. the daily usage of blowing agent (VOC), in lbs;
    - b. the total combined rolling, 365-day total of the tons of blowing agent (VOC) employed;
    - c. the product type groups produced;
    - d. the product type die loss factors;
    - e. the hole punching factor;
    - f. the daily VOC vent emissions;
    - g. the total combined VOC (blowing agent) emissions, in tons, calculated as a rolling, 365-day summation;

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Line #2 (P022)

- h. the date and time of each thermal oxidizer shutdown; and
- i. the duration of time for each thermal oxidizer shutdown.

The daily vent emissions for emissions units P003 and P022 are calculated by multiplying the amount of blowing agent released in each process by the destruction efficiency of the control device. The blowing agent released in the process is calculated based on the quantity of product produced on each line (P003 and P022) per day and the amount of blowing agent on each product.

- 3. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emission from the RTO stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emissions incident; and
  - e. any corrective actions taken to eliminate the visible emissions.

If the weekly checks show emissions that are representative of normal operation for 1 operating quarter, the required frequency of visible emission checks may be reduced to bi-weekly (once every two weeks, when the emissions unit is in operation). If a subsequent check by the permittee or an Ohio EPA inspector indicates emissions that are not representative of normal operation, the frequency of emission checks shall revert back to weekly until such time as there is 1 operating quarter of normal visible emissions.

- 4. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install # 07-00494, issued on 05/30/02: A.III.1 through A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

#### **IV Reporting Requirements**

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Line #2 (P022)

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 365-day combined emission and usage limitations for VOC (blowing agent) for P003 and P022.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all blocks of time during which the thermal oxidizer combustion zone temperature does not comply with the temperature limitation specified in section A.III.1.
3. The deviation reports shall be submitted in accordance with the requirements specified in Part 1 - General Term and Condition A.1.c of this permit.
4. The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Portsmouth local air agency by January 31 and July 31 of each year and shall cover the previous 6-month period.
5. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #07-00494, issued on 05/30/02: A.IV.1 through A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

## **V Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:
  - 1.a Emission Limitations:  
  
2.75 lbs/hr of particulates from the thermal oxidizer  
0.12 lb/hr of SO<sub>2</sub> from the thermal oxidizer  
6.0 lbs/hr of NO<sub>x</sub> from the thermal oxidizer  
  
Applicable Compliance Method:  
  
If required, compliance shall be demonstrated based upon emission tests performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, using the following Test Methods: for particulates, Methods 1 through 5 of 40 CFR Part 60, Appendix A; for SO<sub>2</sub>, Methods 1 through 4 and Method 6 of 40 CFR Part 60, Appendix A; for NO<sub>x</sub>, Methods 1 through 4 and Method 7 of 40 CFR Part 60, Appendix A.
  - 1.b Emission Limitations:

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Line #2 (P022)

40.2 lbs/hr of VOC from the thermal oxidizer

VOC emissions vented to the thermal oxidizer shall be controlled by at least 98% at maximum operating capacity.

Applicable Compliance Method:

Compliance shall be demonstrated based upon emission tests performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, using the Test Methods as described in section A.V.2.

1.c Emission Limitations:

12 tpy of particulates from the thermal oxidizer  
0.53 tpy of SO<sub>2</sub> from the thermal oxidizer  
26.3 tpy of NO<sub>x</sub> from the thermal oxidizer

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the appropriate hourly allowable emission limitation by the actual annual hours of operation, and then dividing by 2000 lbs/hr.

1.d Emission Limitation:

VOC emissions from this emissions unit shall not exceed 5.2 lbs/hr.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the most recent version of the Ethafoam Emissions Tracking Procedure, approved by the Portsmouth local air agency, and used to calculate emissions from this emission unit. This procedure has been defined by The Dow Chemical Corporation as the "Ethafoam Product Database" and shall be retained on site. This program shall include calculations using monitoring and record keeping as described in section A.III.2 above and shall include calculations based on emission factors developed based on the product mix to calculate emission rates. This program shall be available to an OEPA representative at any time during normal business hours.

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Method 25 or 25A.

1.e Emission Limitation:

VOC vent emissions from this emissions unit shall not exceed 15.9 tpy, based upon a rolling, 365-day summation of the daily emissions.

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Line #2 (P022)

Applicable Compliance Method:

Compliance with this emission limitation shall be demonstrated based upon the monitoring and record keeping specified in section A.III.2.

1.f Emission Limitation:

15.9 tons of VOC per rolling, 365-day period for emissions units P003 and P022, combined

Applicable Compliance Method:

Compliance with this emission limitation shall be demonstrated based upon the monitoring and record keeping as described in section A.III.2 using the summation of the emissions for emissions units P003 and P022.

1.g Emission Limitation:

There shall be no visible emissions in excess of 10% opacity as a 6-minute average in any 60-minute observation period.

Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9.

2. The following emissions units vent to the RTO: P003 (performance foams line #1), P022 (performance foams line #2), P014 (performance foams line #3), P023 (performance foams recycle line), P017 (curing warehouse), and P018 (curing warehouse).

The permittee shall conduct, or have conducted, emission testing for the RTO in accordance with the following requirements:

- a. The emission testing shall be conducted within 12 months prior to the expiration of this permit.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for VOC and the control efficiency limitation for VOC.
- c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for VOC, Methods 1 through 4 and Method 25A of 40 CFR Part 60, Appendix A. The test method(s) which must be employed to demonstrate compliance with the control efficiency limitation for VOC is specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Line #2 (P022)

- d. The test(s) shall be conducted while all the above-mentioned emissions units are operating at or near their maximum capacities, unless otherwise specified or approved by the Portsmouth local air agency.
- e. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10(C). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Portsmouth local air agency's refusal to accept the results of the emission test(s).

Personnel from the Portsmouth local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Portsmouth local air agency.

3. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #07-00494, issued on 05/30/02: A.V.1 and A.V.2. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

## **VI Miscellaneous Requirements**

None

Facility Name: The Dow Chemical Company - Hanging Rock  
Facility ID: 0744000029  
Emissions Unit: Performance Foams Line #2 (P022)

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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performance foams plant- line #2  
controlled by a thermal oxidizer

2. **Additional Terms and Conditions**

None

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

1. The permit to install for this emissions unit (PTI 07-00494) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: VOC (blowing agent)

TLV(ug/m3): 177055

Maximum Hourly Emission Rate (lb/hr): 40.2\*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 224.64

MAGLC (ug/m3): 42156

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Line #2 (P022)

\* This was modeled for emissions units P003, P022, P023, P014, P017, and P018, combined.

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
  - a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
  - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
  - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Line #2 (P022)

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Recycle Line (P023)

**Part III - Terms and Conditions for Emissions Units**

Emissions Unit ID: Performance Foams Recycle Line (P023)

Activity Description: Performance Foams Recycle Line.

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
performance foams recycle line controlled by a thermal oxidizer	OAC rule 3745-31-05(A)(3) (PTI 07-00494)	Controlled volatile organic compounds (VOC) emissions shall not exceed 17.0 lbs/hr.  Allowable emissions from the thermal oxidizer (for the emissions units specified in section A.I.2.b) shall not exceed the following:  2.75 lbs/hr of particulate emissions 12 tpy of particulate emissions  0.12 lb/hr of sulfur dioxide (SO <sub>2</sub> ) 0.53 tpy of SO <sub>2</sub>  6.0 lbs/hr of nitrogen oxides (NO <sub>x</sub> ) 26.3 tpy of NO <sub>x</sub>  40.2 lbs/hr of volatile organic compounds (VOC)  The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Recycle Line (P023)

See A.I.2.a through A.I.2.f and A.I.2.h below.

OAC rule 3745-31-05(D) 23.2 tons of VOC per rolling,  
SYNTHETIC MINOR TO AVOID 365-day period for emissions units  
PSD (THIS LIMITATION UPON P003, P022, P014, and P023,  
P003 AND P022 WAS PART OF combined  
AN EARLIER PTI TO AVOID  
PSD)

OAC rule 3745-17-07(A) See A.I.2.g below.

OAC rule 3745-17-11(B) See A.I.2.g below.

## 2. Additional Terms and Conditions

- 2.a** VOC vent emissions from this emissions unit shall not exceed 23.2 tpy, based upon a rolling, 365-day summation of the daily emissions.
- 2.b** The following emissions units are vented to the regenerative thermal oxidizer (RTO): P003 (performance foams line #1), P022 (performance foams line #2), P023 (performance foams recycle line), P014 (performance foams line #3), P017 (performance foams primary curing warehouse #1) and P018 (performance foams primary curing warehouse #2).
- 2.c** This emissions unit is also controlled by a baghouse. The outlet of the baghouse is vented to the RTO.
- 2.d** VOC emissions vented to the RTO shall be controlled by at least 98% at maximum operating capacity.
- 2.e** The shutdown of the RTO shall be accompanied by the shutdown of all the performance foam process units which are vented to it.
- 2.f** There shall be no visible emissions in excess of 10% opacity, as a 6-minute average, during any 60-minute observation period.
- 2.g** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Recycle Line (P023)

**2.h** The 17.0 lbs/hr VOC limitation for this emissions unit and the 40.2 lbs/hr VOC limitation for emissions units P003, P014, P017, P018, P022, and P023, combined, were established to reflect the hourly potential to emit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limits.

## **II Operational Restrictions**

1. The blowing agent (VOC) usage restriction on the performance foam lines (P003, P022, and P014) results in restricted annual emissions from this emissions unit.
2. A minimum temperature of 1425 degrees Fahrenheit shall be maintained in the combustion zone of the thermal oxidizer.
3. The thermal oxidizer, including any associated equipment and piping, shall be designed, operated, and maintained so as to prevent the emissions of objectionable odors.
4. The pressure drop across the baghouse shall be maintained within the range of 0 (zero) to 10 inches of water while the emissions unit is in operation.

## **III Monitoring and/or Recordkeeping**

1. The facility shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emission unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

- a. all 3-hr blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was less than 1425 degrees Fahrenheit; and
  - b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emission unit is in operation.
2. The permittee shall maintain daily records of the following information:
    - a. the amount of scrap products ground;
    - b. the concentration of blowing agent used in the recycle products from each of emissions units P003, P014, P022, and P023;

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Recycle Line (P023)

- c. the scrap cure factor;
- d. the daily scrap inventory, in lbs;
- e. the hole punching factor;
- f. the daily VOC vent emissions for emissions units P003, P014, P022, and P023, combined;
- g. the total VOC emissions for emissions units P003, P014, P022, and P023, calculated as a rolling, 365-day summation;
- h. the date and time of each thermal oxidizer shutdown; and
- i. the duration of time for each thermal oxidizer shutdown.

The daily vent emissions for emissions units P003, P014, P022 and P023 are calculated by multiplying the amount of blowing agent released in each process by the destruction efficiency of the control device. The blowing agent released in the process is calculated based on the quantity of product produced on each line (P003, P022, P014, P023) per day and the amount of blowing agent used on each product.

- 3. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on daily basis.
- 4. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emission from the RTO stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emissions incident; and
  - e. any corrective actions taken to eliminate the visible emissions.

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Recycle Line (P023)

If the weekly checks show emissions that are representative of normal operation for 1 operating quarter, the required frequency of visible emission checks may be reduced to bi-weekly (once every two weeks, when the emissions unit is in operation). If a subsequent check by the permittee or an Ohio EPA inspector indicates emissions that are not representative of normal operation, the frequency of emission checks shall revert back to weekly until such time as there is 1 operating quarter of normal visible emissions.

5. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install # 07-00494, issued on 05/30/02: A.III.1 through A.III.4. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

#### **IV Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 365-day combined emission and usage limitations for VOC.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all blocks of time during which the thermal oxidizer combustion zone temperature does not comply with the temperature limitation specified in section A.III.1.
3. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply the allowable range specified above.
4. The deviation reports shall be submitted in accordance with the requirements specified in Part 1 - General Term and Condition A.1.c of this permit.
5. The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Portsmouth local air agency by January 31 and July 31 of each year and shall cover the previous 6-month period.
6. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #07-00494, issued on 05/30/02: A.IV.1 through A.IV.5. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Recycle Line (P023)

## V Testing Requirements

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitations:

2.75 lbs/hr of particulates from the thermal oxidizer  
0.12 lb/hr of SO<sub>2</sub> from the thermal oxidizer  
6.0 lbs/hr of NO<sub>x</sub> from the thermal oxidizer

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon emission tests performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, using the following Test Methods: for particulates, Methods 1 through 5 of 40 CFR Part 60, Appendix A; for SO<sub>2</sub>, Methods 1 through 4 and Method 6 of 40 CFR Part 60, Appendix A; for NO<sub>x</sub>, Methods 1 through 4 and Method 7 of 40 CFR Part 60, Appendix A.

1.b Emission Limitations:

40.2 lbs/hr of VOC from the thermal oxidizer

VOC emissions vented to the thermal oxidizer shall be controlled by at least 98% at maximum operating capacity.

Applicable Compliance Method:

Compliance shall be demonstrated based upon emission tests performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, using the Test Methods as described in section A.V.2.

1.c Emission Limitations:

12 tpy of particulates from the thermal oxidizer  
0.53 tpy of SO<sub>2</sub> from the thermal oxidizer  
26.3 tpy of NO<sub>x</sub> from the thermal oxidizer

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the appropriate hourly allowable emission limitation by the actual annual hours of operation, and then dividing by 2000 lbs/hr.

1.d Emission Limitation:

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Recycle Line (P023)

VOC emissions from this emissions unit shall not exceed 17.0 lbs/hr.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the most recent version of the Ethafoam Emissions Tracking Procedure, approved by the Portsmouth local air agency, and used to calculate emissions from this emission unit. This procedure has been defined by The Dow Chemical Corporation as the "Ethafoam Product Database" and shall be retained on site. This program shall include calculations using monitoring and record keeping as described in section A.III.2 above and shall include calculations based on emission factors developed based on the product mix to calculate emission rates. This program shall be available to an OEPA representative at any time during normal business hours.

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Method 25 or 25A.

1.e Emission Limitation:

VOC vent emissions from this emissions unit shall not exceed 23.2 tpy, based upon a rolling, 365-day summation of the daily emissions.

Applicable Compliance Method:

Compliance with this emission limitation shall be demonstrated based upon the monitoring and record keeping specified in section A.III.2.

1.f Emission Limitation:

23.2 tons of VOC per rolling, 365-day period for emissions units P003, P022, P014, and P023, combined

Applicable Compliance Method:

Compliance with this emission limitation shall be demonstrated based upon the monitoring and record keeping as described in section A.III.2 using the summation of the emissions for emissions units P003, P022, P014, and P023, combined.

1.g Emission Limitation:

There shall be no visible emissions in excess of 10% opacity as a 6-minute average in any 60-minute observation period.

Applicable Compliance Method:

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Performance Foams Recycle Line (P023)

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9.

2. The following emissions units vent to the RTO: P003 (performance foams line #1), P022 (performance foams line #2), P014 (performance foams line #3), P023 (performance foams recycle line), P017 (curing warehouse), and P018 (curing warehouse).

The permittee shall conduct, or have conducted, emission testing for the RTO in accordance with the following requirements:

- a. The emission testing shall be conducted within 12 months prior to expiration of this permit.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for VOC and the control efficiency limitation for VOC.
- c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for VOC, Methods 1 through 4 and Method 25A of 40 CFR Part 60, Appendix A. The test method(s) which must be employed to demonstrate compliance with the control efficiency limitation for VOC is specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
- d. The test(s) shall be conducted while all the above-mentioned emissions unit are operating at or near their maximum capacities, unless otherwise specified or approved by the Portsmouth local air agency.
- e. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10(C). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Portsmouth local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Portsmouth local air agency's refusal to accept the results of the emission test(s).

Personnel from the Portsmouth local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of

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the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Portsmouth local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Portsmouth local air agency.

3. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #07-00494, issued on 05/30/02: A.V.1 and A.V.2. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

## **VI Miscellaneous Requirements**

None

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**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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performance foams recycle line  
controlled by a thermal oxidizer

**2. Additional Terms and Conditions**

None

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

1. The permit to install for this emissions unit (PTI 07-00494) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: VOC (blowing agent)  
TLV(ug/m3): 177055  
Maximum Hourly Emission Rate (lb/hr): 40.2\*  
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 224.64  
MAGLC (ug/m3): 42156

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\* This was modeled for emissions units P003, P022, P023, P014, P017, and P018, combined.

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
  - a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
  - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
  - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Acrylonitrile Storage Tank (T003)

**Part III - Terms and Conditions for Emissions Units**

Emissions Unit ID: Acrylonitrile Storage Tank (T003)  
 Activity Description: Acrylonitrile Storage Tank (Styron TM) - 110,000 gallons pressurized storage tank

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
acrylonitrile storage tank	_OAC rule 3745-31-05(A)(3) (PTI 07-063)	_none
	OAC rule 3745-21-07(D)(1)	See A.I.2.a below.
	40 CFR Part 63, Subpart JJJ	See A.I.2.b below.

**2. Additional Terms and Conditions**

- 2.a No person shall place, store, or hold in any stationary tank, reservoir or other container of more than sixty-five thousand gallons capacity any volatile photochemically reactive material unless such tank, reservoir, or other container is a pressure tank capable of maintaining working pressures sufficient at all times to prevent vapor or gas loss to the atmosphere.
- 2.b For each Group 1 storage vessel storing a liquid for which the maximum true vapor pressure of the total organic hazardous air pollutants in the liquid is less than 76.6 kilopascals, the permittee shall reduce hazardous air pollutants emissions to the atmosphere either by operating and maintaining a fixed roof and internal floating roof, an external floating roof, an external floating roof converted to an internal floating roof, or a closed vent system and control device, or routing the emissions to a process or a fuel gas system.

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- i. The permittee who elects to use a closed vent system and control device, shall comply with the requirements specified in A.I.2.b.i.(1) through A.I.2.b.i.(5).
  - (1) Except as provided in A.I.2.b.i.(2), the control device shall be designed and operated to reduce inlet emissions of total organic HAP by 95 percent or greater.
  - (2) If the permittee can demonstrate that a control device installed on a storage vessel on or before March 29, 1995 is designed to reduce inlet emissions of total organic HAP by greater than or equal to 90 percent but less than 95 percent, then the control device is required to be operated to reduce inlet emissions of total organic HAP by 90 percent or greater.
  - (3) Periods of planned routine maintenance of the control device, during which the control device does not meet the specifications of A.I.2.b.i.(1) or A.I.2.b.i.(2), as applicable, shall not exceed 240 hours per year.
  - (4) The specifications and requirements in A.I.2.b.i.(1) and A.I.2.b.i.(2) for control devices do not apply during periods of planned routine maintenance.
  - (5) The specifications and requirements in A.I.2.b.i.(1) and A.I.2.b.i.(2) for control devices do not apply during a control system malfunction.
  - (6) The permittee may use a combination of control devices to achieve the required reduction of total organic hazardous air pollutants specified in A.I.2.b.i.(1). The permittee may use a combination of control devices installed on a storage vessel on or before March 29, 1995 to achieve the required reduction of total organic hazardous air pollutants specified in A.I.2.b.i.(2).

**2.c** The permittee shall comply with the leak inspection provisions, as applicable, in A.VI.1 below.

## **II Operational Restrictions**

None

## **III Monitoring and/or Recordkeeping**

1. Each permittee of a Group 1 or Group 2 storage vessel shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept as long as the storage vessel retains Group 1 or Group 2 status and is in operation.

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2. The permittee who elects to comply with A.I.2.b.i.(1) or A.I.2.b.i.(2) shall keep in a readily accessible location the records specified in A.III.2.a and A.III.2.b.
  - a. A record of the measured values of the parameters monitored in accordance with A.III.3.a.v.
  - b. A record of the planned routine maintenance performed on the control device including the duration of each time the control device does not meet the specifications of A.I.2.b.i.(1) or A.I.2.b.i.(2), as applicable, due to the planned routine maintenance. Such a record shall include the information specified in A.III.2.b.i and A.III.2.b.ii.
    - i. The first time of day and date the requirements of A.I.2.b.i.(1) or A.I.2.b.i.(2), as applicable, were not met at the beginning of the planned routine maintenance; and
    - ii. The first time of day and date the requirements of A.I.2.b.i.(1) or A.I.2.b.i.(2), as applicable, were met at the conclusion of the planned routine maintenance.
3. To demonstrate compliance with the requirements of A.I.2.b.i for a storage vessel equipped with a closed vent system and control device using a control device other than a flare, the permittee shall comply with the requirements in A.III.3.a through A.III.3.g, except as provided in A.III.3.h.
  - a. The permittee shall either prepare a design evaluation, which includes the information specified in A.III.3.a.i, or submit the results of a performance test as described in A.III.3.a.ii.
    - i. The design evaluation shall include documentation demonstrating that the control device being used achieves the required control efficiency during reasonably expected maximum filling rate. This documentation is to include a description of the gas stream which enters the control device, including flow and organic HAP content under varying liquid level conditions, and the information specified in A.III.3.a.i.(1) through A.III.3.a.i.(5), as applicable.
      - (1) If the control device receives vapors, gases or liquids, other than fuels, from emission points other than storage vessels subject to 40 CFR Part 63, Subpart JJJ, the efficiency demonstration is to include consideration of all vapors, gases, and liquids, other than fuels, received by the control device.
      - (2) If an enclosed combustion device with a minimum residence time of 0.5 second and a minimum temperature of 760 degrees C is used to meet the emission reduction requirement specified in A.I.2.b.i.(1) or A.I.2.b.i.(2), as applicable, documentation that those conditions exist is sufficient to meet the requirements of A.III.3.a.i.

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- (3) Except as provided in A.III.3.a.i.(2) for thermal incinerators, the design evaluation shall include the auto ignition temperature of the organic HAP, the flow rate of the organic HAP emission stream, the combustion temperature, and the residence time at the combustion temperature.
  - (4) For carbon adsorbers, the design evaluation shall include the affinity of the organic HAP vapors for carbon, the amount of carbon in each bed, the number of beds, the humidity of the feed gases, the temperature of the feed gases, the flow rate of the organic HAP emission stream, the desorption schedule, the regeneration stream pressure or temperature, and the flow rate of the regeneration stream. For vacuum desorption, pressure drop shall be included.
  - (5) For condensers, the design evaluation shall include the final temperature of the organic HAP vapors, the type of condenser, and the design flow rate of the organic HAP emission stream.
- (ii) If the control device used to comply with the requirements is for another emission unit, the performance test required for those requirements is acceptable for demonstrating compliance with A.I.2.b.i. The permittee is not required to prepare a design evaluation for the control device as described in A.III.3.a.i if the performance test meets the criteria specified in A.III.3.a.ii.(1) below.
- (1) The performance test demonstrates that the control device achieves greater than or equal to the required control efficiency specified in of A.I.2.b.i.(1) or A.I.2.b.i.(2), as applicable; and
  - (2) The performance test shall be submitted as part of the Notification of Compliance Status.
- b. The permittee shall submit as part of the Notification of Compliance Status, a monitoring plan containing the information specified in A.III.3.b.i and either A.III.3.b.ii or A.III.3.b.iii.
- i. A description of the parameter to be monitored to ensure that the control device is being properly operated and maintained, an explanation of the criteria used for selection of the parameter, and the frequency with which monitoring will be performed; and either
  - ii. The documentation specified in A.III.3.a.i if the permittee elects to prepare a design evaluation; or
  - iii. The information specified in A.III.3.b.iii.(1) and A.III.3.b.iii.(2) if the permittee elects to submit the results of a performance test.

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- (1) Identification of the storage vessel and control device for which the performance test is being submitted, and
  - (2) Identification of the emission point that share the control device with the storage vessel and for which the performance test will be conducted.
- c. The permittee shall submit, as part of the Notification of Compliance Status, the information specified in A.III.3.c.i and, if applicable, A.III.3.c.ii.
- i. The level for each monitoring parameter identified in the monitoring plan. The specified level shall represent the conditions for which the control device is being properly operated and maintained.
  - ii. Results of the performance test described in A.III.3.a.ii.
- d. The permittee shall demonstrate compliance with the requirements of A.I.2.b.i.(1) or A.I.2.b.i.(2) (planned routine maintenance of a control device, during which the control device does not meet the specifications of A.I.2.b.i.(1) or A.I.2.b.i.(2), as applicable, shall not exceed 240 hours per year by including in each Periodic Report the information specified in A.IV.4.a.
- e. The permittee shall monitor the parameters specified in the Notification of Compliance Status and shall operate and maintain the control device such that the monitored parameters remain within the ranges specified in the Notification of Compliance Status.
- f. Except as provided in A.III.3.g, each closed vent system shall be inspected as specified in A.VI.1. The initial and annual inspections required by A.VI.1 shall be performed during filling of the storage vessel.
- g. For any fixed roof tank and closed vent system that are operated and maintained under negative pressure, the permittee is not required to comply with the requirements specified in A.VI.1.
- h. A design evaluation or performance test is not required, if the permittee uses a combustion device meeting the criteria in A.III.3.h.i through A.III.3.h.iv.
- i. A boiler or process heater with a design heat input capacity of 44 megawatts or greater.
  - ii. A boiler or process heater burning hazardous waste for which the permittee:
    - (1) Has been issued a final permit under 40 CFR Part 270 and complies with the requirements of 40 CFR Part 266, Subpart H; or

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- (2) Has certified compliance with the interim status requirements of 40 CFR Part 266, Subpart H.
- iii. A hazardous waste incinerator for which the permittee has been issued a final permit under 40 CFR Part 270 and complies with the requirements of 40 CFR Part 264, Subpart O or has certified compliance with the interim status requirements of 40 CFR Part 265, Subpart O.
- iv. A boiler or process heater into which the vent stream is introduced with the primary fuel.

#### **IV Reporting Requirements**

1. For each Group 1 storage vessel, the permittee shall comply with the following:
  - a. The permittee shall submit a Notification of Compliance Status and shall submit as part of the Notification of Compliance Status the information specified in A.IV.3.
  - b. The permittee shall submit Periodic Reports and shall submit as part of the Periodic Reports the information specified in A.IV.4.
2. The permittee who elects to comply with A.I.2.b.i by using a closed vent system and a control device other than a flare shall submit, as part of the Monitoring Plan, the information specified in A.III.3.b.i and the information specified in either A.III.3.b.ii or A.III.3.b.iii.
3. The permittee who elects to comply with A.I.2.b.i by using a closed vent system and a control device shall submit, as part of the Notification of Compliance Status, the following:
  - a. If a control device other than a flare is used, the permittee shall submit the information specified in A.III.3.c.i.
4. The permittee who elects to comply with A.I.2.b.i by installing a closed vent system and control device shall submit, as part of the next Periodic Report, the information specified in A.IV.4.a and A.IV.4.b.
  - a. As required by A.III.3.d, the Periodic Report shall include the information specified in A.IV.4.a.i and A.IV.4.a.ii for those planned routine maintenance operations that would require the control device not to meet the requirements of A.I.2.b.i.(1) or A.I.2.b.i.(2), as applicable.
    - i. A description of the planned routine maintenance that is anticipated to be performed for the control device during the next 6 months. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods.

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- ii. A description of the planned routine maintenance that was performed for the control device during the previous 6 months. This description shall include the type of maintenance performed and the total number of hours during those 6 months that the control device did not meet the requirements of A.I.2.b.i.(1) or A.I.2.b.i.(2), as applicable, due to planned routine maintenance.
- b. If a control device other than a flare is used, the Periodic Report shall describe each occurrence when the monitored parameters were outside of the parameter ranges documented in the Notification of Compliance Status in accordance with A.III.3.c.i. The description shall include the information specified in A.IV.4.b.i and A.IV.4.b.ii.
  - i. identification of the control device for which the measured parameters were outside of the established ranges; and
  - ii. the cause for the measured parameters to be outside of the established ranges.

## **V Testing Requirements**

None

## **VI Miscellaneous Requirements**

1. The permittee shall comply with the requirements of A.VI.2 through A.VI.10 for each vapor collection system, closed-vent system, fixed roof, cover, or enclosure required to comply with this section.

If a closed-vent system is also subject to the requirements of another Organic Hazardous Leak Detection and Repair Program, the permittee shall comply with the provisions of that program and is exempt from the requirements of A.VI.1.

2. a. If the vapor collection system or closed vent system is constructed of hard-piping, the permittee shall:
  - i. conduct an initial inspection according to the procedures in A.VI.3; and
  - ii. conduct annual visual inspections for visible, audible, or olfactory indications of leaks.
- b. If the vapor collection system or closed vent system is constructed of ductwork, the permittee shall:
  - i. conduct an initial inspection according to the procedures in A.VI.3;
  - ii. conduct annual inspections according to the procedures in A.VI.3; and

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- iii. conduct annual visual inspections for visible, audible, or olfactory indications of leaks.
3. Each vapor collection system and closed vent system shall be inspected according to the procedures specified in A.VI.3.a through A.VI.3.f.
  - a. Inspections shall be conducted in accordance with Method 21 of 40 CFR Part 60, Appendix A.
  - b.
    - i. Except as provided in A.VI.3.b.ii, the detection instrument shall meet the performance criteria of Method 21 of 40 CFR Part 60, Appendix A, except the instrument response factor criteria in section 3.1.2.a of Method 21 shall be for the average composition of the process fluid not each individual volatile organic compound in the stream. For process streams that contain nitrogen, air, or other inerts which are not organic hazardous air pollutants or volatile organic compounds, the average stream response factor shall be calculated on an inert-free basis.
    - ii. If no instrument is available at the plant site that will meet the performance criteria specified in A.VI.3, the instrument readings may be adjusted by multiplying by the average response factor of the process fluid, calculated on an inert-free basis as described in A.VI.3.
  - c. The detection instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR Part 60, Appendix A.
  - d. Calibration gases shall be as follows:
    - i. Zero air (less than 10 parts per million hydrocarbon in air); and
    - ii. Mixtures of methane in air at a concentration less than 10,000 parts per million. A calibration gas other than methane in air may be used if the instrument does not respond to methane or if the instrument does not meet the performance criteria specified in section 3.1.2 of Method 21. In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air.
  - e. The permittee may elect to adjust or not adjust instrument readings for background. If the permittee elects to not adjust readings for background, all such instrument readings shall be compared directly to the applicable leak definition to determine whether there is a leak. If the permittee elects to adjust instrument readings for background, the permittee shall measure background concentration using the procedures in 40 CFR Part 63, Subpart H, section 180(b) and (c). The permittee shall subtract the background reading from the maximum concentration indicated by the instrument.

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- f. The arithmetic difference between the maximum concentration indicated by the instrument and the background level shall be compared with 500 parts per million for determining compliance.
4. Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in A.VI.5.
  - a. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.
  - b. Repair shall be completed no later than 15 calendar days after the leak is detected, except as provided in A.VI.4.c.
  - c. For leaks found in vapor collection systems used for transfer operations, repairs shall be completed no later than 15 calendar days after the leak is detected or at the beginning of the next transfer loading operation, whichever is later.
5. Delay of repair of a vapor collection system, closed vent system, fixed roof, cover, or enclosure for which leaks have been detected is allowed if the repair is technically infeasible without a shutdown, or if the permittee determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next shutdown.
6. For each vapor collection system or closed vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the permittee shall comply with either A.VI.6.a. or A.VI.6.b, except as provided in A.VI.6.c.
  - a. Install, calibrate, maintain, and operate a flow indicator that determines whether vent stream flow is present at least once every 15 minutes. The flow indicator shall be installed at the entrance to any bypass line.; or
  - b. Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure the valve is maintained in the closed position and the vent stream is not diverted through the bypass line.
  - c. Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to this paragraph.
7. Any parts of the vapor collection system, closed vent system, fixed roof, cover, or enclosure that are designated, as described in A.VI.9, as unsafe to inspect are exempt from the inspection requirements of A.VI.1 if:

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- a. the permittee determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with A.VI.1; and
  - b. the permittee has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.
8. Any parts of the vapor collection system or closed vent system that are designated, as described in A.VI.9, as difficult to inspect are exempt from the inspection requirements of A.VI.1 if:
- a. the permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and
  - b. the permittee has a written plan that requires inspection of the equipment at least once every 5 years.
9. The permittee shall record the information specified in A.VI.9.a through A.VI.9.f.
- a. Identification of all parts of the vapor collection system, closed vent system, fixed roof, cover, or enclosure that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.
  - b. Identification of all parts of the vapor collection system, closed vent system, fixed roof, cover, or enclosure that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.
  - c. For each vapor collection system or closed vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the permittee shall keep a record of the information specified in either A.VI.9.c.i or A.VI.9.c.ii.
    - i. Hourly records of whether the flow indicator specified under A.VI.6.a was operating and whether a diversion was detected at any time during the hour, as well as records of the times of all periods when the vent stream is diverted from the control device or the flow indicator is not operating.
    - ii. Where a seal mechanism is used to comply with A.VI.6.b, hourly records of flow are not required. In such cases, the permittee shall record whether the monthly visual inspection of the seals or closure mechanisms has been done, and shall record the occurrence of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type configuration has been checked out, and records of any car-seal that has broken.

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**Facility ID:** 0744000029  
**Emissions Unit:** Acrylonitrile Storage Tank (T003)

- d. For each inspection during which a leak is detected, a record of the information specified in A.VI.9.d.i through A.VI.9.d.viii:
    - i. the instrument identification numbers; operator name or initials; and identification of the equipment;
    - ii. the date the leak was detected and the date of the first attempt to repair the leak;
    - iii. maximum instrument reading measured by the method specified in A.VI.4 after the leak is successfully repaired or determined to be nonrepairable;
    - iv. "repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak;
    - v. the name, initials, or other form of identification of the permittee whose decision it was that repair could not be effected without a shutdown;
    - vi. the expected date of successful repair of the leak if a leak is not repaired within 15 calendar days;
    - vii. dates of shutdowns that occur while the equipment is unrepaired; and
    - viii. the date of successful repair of the leak.
  - e. For each inspection conducted in accordance with A.VI.3 during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.
  - f. For each visual inspection conducted in accordance with A.VI.2.a.i during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.
10. The permittee shall submit with the Periodic reports required by this permit, the information specified in A.VI.10.a through A.VI.10.c:
- a. the information specified in A.VI.9.d;
  - b. reports of the times of all periods recorded under A.VI.9.c.i when the vent stream is diverted from the control device through a bypass line; and
  - c. reports of all periods recorded under A.VI.9.c.ii in which the seal mechanism is broken, the bypass line valve position has changed, or the key to unlock the bypass line valve was checked out.

Facility Name: The Dow Chemical Company - Hanging Rock  
Facility ID: 0744000029  
Emissions Unit: Acrylonitrile Storage Tank (T003)

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

None

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Marine Styrene Storage Tank B-1 (T004)

**Part III - Terms and Conditions for Emissions Units**

Emissions Unit ID: Marine Styrene Storage Tank B-1 (T004)  
 Activity Description: Marine Styrene Storage Tank B-1(StyronTM) - 750,000 gallons fixed roof storage tank

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
marine styrene storage tank B-1	none	none  See A.I.2.a and A.I.2.b below.

2. **Additional Terms and Conditions**

- 2.a The provisions of 40 CFR Part 63, Subpart JJJ do not apply to storage vessels containing styrene at existing affected sources as stated in 40 CFR 63.1314(d).
- 2.b This facility is not located in a Priority I area as defined in OAC rule 3745-21-06 and this emissions unit is not a "new source" as defined in OAC rule 3745-15-01; therefore, the emission limitations and/or control measures in OAC rule 3745-21-07 do not apply to this emissions unit.

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

None

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**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Marine Styrene Storage Tank B-1 (T004)

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None

Facility Name: The Dow Chemical Company - Hanging Rock  
Facility ID: 0744000029  
Emissions Unit: Marine Styrene Storage Tank B-1 (T004)

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. **Additional Terms and Conditions**

None

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

None

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Marine Styrene Storage Tank B-2 (T005)

**Part III - Terms and Conditions for Emissions Units**

Emissions Unit ID: Marine Styrene Storage Tank B-2 (T005)  
 Activity Description: Marine Styrene Storage Tank B-2 (StyronTM) - 750,000 gallons fixed roof storage tank

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
marine styrene storage tank B-2	none	none
		See A.I.2.a and A.I.2.b below.

2. **Additional Terms and Conditions**

- 2.a The provisions of 40 CFR Part 63, Subpart JJJ do not apply to storage vessels containing styrene at existing affected sources as stated in 40 CFR 63.1314(d).
- 2.b This facility is not located in a Priority I area as defined in OAC rule 3745-21-06 and this emissions unit is not a "new source" as defined in OAC rule 3745-15-01; therefore, the emission limitations and/or control measures in OAC rule 3745-21-07 do not apply to this emissions unit.

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

None

**Facility Name:** The Dow Chemical Company - Hanging Rock  
**Facility ID:** 0744000029  
**Emissions Unit:** Marine Styrene Storage Tank B-2 (T005)

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None\_

Facility Name: The Dow Chemical Company - Hanging Rock  
Facility ID: 0744000029  
Emissions Unit: Marine Styrene Storage Tank B-2 (T005)

**B. State Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<b><u>Operations, Property, and/or Equipment</u></b>	<b>Applicable Rules/Requirements</b>	<b>Applicable Emissions Limitations/Control Measures</b>
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**2. Additional Terms and Conditions**

None

**II Operational Restrictions**

None

**III Monitoring and/or Recordkeeping**

None

**IV Reporting Requirements**

None

**V Testing Requirements**

None

**VI Miscellaneous Requirements**

None