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

10/29/04

CERTIFIED MAIL

RE: Final Title V Chapter 3745-77 permit

03-02-02-0015
BP Chemicals, Inc.
Nanette Smith
Fort Amanda and Adgate Roads
P.O. Box 628
Lima, OH 45802-0628

Dear Nanette Smith:

Enclosed is the Title V permit that allows you to operate the facility in the manner indicated in the permit. Because this permit may contain several conditions and restrictions, we urge you to read it carefully.

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action of the Director is final and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed with the Environmental Review Appeals Commission within thirty (30) days after notice of the Director's action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. It is also requested by the Director that a copy of the appeal be served upon the Environmental Enforcement Section of the Office of the Attorney General. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, Ohio 43215

If you have any questions, please contact Northwest District Office.

Sincerely,

Michael W. Ahern

Michael W. Ahern
Permit Issuance and Data Management Section
Division of Air Pollution Control

cc: Northwest District Office
File, DAPC PMU

State of Ohio Environmental Protection Agency

FINAL TITLE V PERMIT

Issue Date: 10/29/04	Effective Date:01/03/05	Expiration Date: 01/03/10

This document constitutes issuance of a Title V permit for Facility ID: 03-02-02-0015 to:
BP Chemicals, Inc.
Fort Amanda and Adgate Roads
P.O Box 628
Lima, OH 45802-0628

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

J001 (Butanediol Loading Facilities)
Butanediol loading facilities (1 truck and 2 railcar loading racks).

J002 (THF/water solution Loading)
Tetrahydrofuran/water solution loading facilities (1 truck and 1 railcar loading rack). Uses flare for loading and unloading of non-photochemically reactive material. Uses submerged fill. Authorized by PTI # 03-1250.

N006 (BDO Plant #1 SOGB)
Butanediol manufacturing plant no. 1 scrubber offgas boiler (SOGB)

P010 (Barex Reactor #2)
Barex Reactor #2 and associated equipment. Reaction of raw materials to produce nitrile copolymer resins. Refer to overall Barex process description and flow diagram. Installation authorized by Barex plant PTI dated 4/17/74 (no reference #).

P011 (Barex #1 Strand Dryer)
Barex Plant #1 Strand Dryer and associated equipment. Dries strands from #1 pasteline before transport to storage. Refer to overall Barex process description and flow diagram. Installation authorized by Barex plant PTI dated 4/17/74 (no reference #).

P035 (Acrylonitrile Reaction and Absorption Section)
The affected plant is the acrylonitrile unit. Acrylonitrile is produced by the vapor-phase catalytic reaction of ammonia, propylene, and air. This process produces the product acrylonitrile and co-products acetonitrile and hydrogen cyanide. This source refers to the reaction and product recovery (absorption) steps of this process. The subsequent recovery and purification steps for the product acrylonitrile and co-product HCN are addressed as emission unit P075. The subsequent recovery and purification steps for co-product acetonitrile are addressed as emission unit P074. Refer to the overall acrylonitrile plant process description and flow diagram.

P038 (Catalyst Spray Dryer and #2 Calciner)
Spray Dryer system, with venturi scrubber to control particulate emissions. #2 Calciner, dries/calcines metal powders, particulate emissions routed to venturi scrubber. Refer to overall Catalyst Plant process description and flow diagram.

P039 (Catalyst #1 Calciner)
#1 Calciner, dries/calcines metal powders, particulate emissions routed to cyclones and thermal oxidizer. Refer to overall Catalyst Plant process description and flow diagram.

P043 (Barex #1 Fines Dryer)
Barex Plant #1 Fines Dryer and associated equipment. Collects and dries fines from #1 Strand Dryer system and transports to strand storage. Refer to overall Barex process description and flow diagram.

P048 (Acetonitrile Reactor and Absorption Section)
The acetonitrile kill kettle (previously P048) and the acetonitrile batch still system (previously P015) are now incorporated into consolidated source P048, Acetonitrile Reaction and Absoprtion Section. Refer to the overall acetonitrile purification process description and flow diagram.

P050 (Nitriles Loading Rack)
Product loading rack system for loading acrylonitrile and acetonitrile into tank cars or trucks, controlled by scrubbers.

P051 (Nitriles Drum Loading System)
Equipment for loading acrylonitrile and acetonitrile into drums; controlled by carbon adsorption.

P052 (HCN Loading Rack)
Rack for loading HCN, controlled by vapor balance with the HCN tanks, flare scrubber, and flare.

P062 (Deepwell Pretreatment Area)
General equipment in the deepwell wastewater pretreatment area. Refer to the overall deepwell wastewater system process description and flow diagram. Installation authorized by PTI #03-3549.

P065 (Barex #2 Strand Dryer)
Barex Plant #2 Strand Dryer and associated equipment. Dries strands from #2 pasteline before transport to storage. Refer to overall Barex process description and flow diagram.

P067 (Barex Reactor #3)
Barex Reactor #3 and associated equipment. Reaction of raw materials to produce nitrile copolymer resins.

P068 (Barex #2 Pasteline)
Barex Plant #2 Pasteline and associated equipment. Combines Barex reactor batches, coagulates latex to make strands, washes strands.

P069 (Barex #2 Fines Dryer)
Barex Plant #2 Fines Dryer and associated equipment. Collects and dries fines from #2 Strand Dryer system and transports to strand storage.

P074 (Acetonitrile Recovery and Purification Section)
Acetonitrile recovery and purification section, includes the aceto purification column and drying column previously permitted as P012 and P074. Refer to overall Acetonitrile process description and flow diagram.

P075 The affected plant is the acrylonitrile unit. Acrylonitrile is produced by the vapor-phase catalytic reaction of ammonia, propylene, and air. This process produces the product acrylonitrile and co-produces acetonitrile and HCN. This source refers to the recovery and purification steps for product acrylonitrile and co-product HCN. The previous reaction and product recovery (absorption) steps of the process are addressed as emission unit P035. The subsequent purification steps for co-product acetonitrile are addressed as emission unit P012. This source includes equipment formerly permitted as P014, P019, and P037. Emissions from P075 are vented to either a vent scrubber followed by a flare or to a thermal oxidizer. Refinery emissions are also vented to this flare, but are not included or addressed in this application because the refinery is a separate facility. Refer to the overall acrylonitrile plant process description and flow diagram.

P076 (BDO Plant #1 Cooling Tower System)
Non-contact cooling tower system (Butanediol manufacturing plant no. 1)

P077 (Ammonia Recovery System)
The ammonia recovery system will remove ammonia from an aqueous co-product stream (supplied by a neighboring chemical plant) in order to utilize the recovered ammonia as part of the feed to the existing Acrylonitrile plant. This system is integrated with the steam generation and distribution system, will utilize the cooling water system, existing wastewater treatment systems, and raw material supply systems. Primary process equipment for the ammonia recovery system are the ammonia recovery column (C-102), feed drum (V-108) and ancillary equipment. Refer to Section 11 of this EU for a more detailed process description.

P078 (Barex Dust Collection system)
Dust collection system for the barex plastic resin extrusion and packaging process. Refer to Barex process description and flow diagram.

P080 (Cooling Tower #1)
Cooling Tower #1

P081 (Cooling Tower #2)
Cooling Tower #2

P801 (Butanediol Mfg Plant No. 1: Various)
Maleic anhydride reactor and recovery section, Maleic acid hydrogenation section, batanediol recovery and purification section, butane feedstock supply section

P905 (Catalyst Handling System)
Maleic anhydride reactor catalyst handling system; catalyst make-up transfers and catalyst drum handling

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. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, provided that a complete renewal application is submitted no earlier than eighteen (18) months and no later than one-hundred eighty (180) days prior to the expiration date.

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

Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402
(419) 352-8461

OHIO ENVIRONMENTAL PROTECTION AGENCY

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 <u>Federally Enforceable</u> 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. This section contains the regulatory text of select applicable regulations from the Ohio Administrative Code (OAC) and the Code of Federal Regulations (CFR). In the event of a conflict between the regulation text cited in this permit and the current text of the OAC or CFR, the text in the most recent OAC rule, Federal Register, or CFR publication related to the specific regulation shall be used as the governing regulatory requirement for compliance purposes.

2. **[OAC rule 3745-21-09(DD)] Leaks from Process Units that Produce Organic Chemicals**

The following emissions units are subject to this rule: J001, J002, N006, P035, P048, P050, P051, P052, P062, P074, P)75, P801**,** T015, T023, T024, T025, T026, T027, T028, T032, T033, T034, T065, T066, T067, T068, T069, T070, T079, T080, T081, T082, T084, T088, T092, T093, T094, T095, T096, T097, T099, T100, T101, T102, T113, T114, T115 and T116.

40 CFR, Part 60, Subpart VV regulations overlap with those of 40 CFR, Part 63, Subpart H. 40 CFR 63.160(b) and (c) address this overlap and state that equipment subject to 40 CFR, Part 60, Subpart VV is required to comply only with the provisions of 40 CFR, Part 63, Subpart H.

The requirements of the applicable standards in OAC rule 3745-21-09(DD), are equivalent to or less stringent than the alternative leak detection and repair (LDAR) monitoring plan submitted by the permittee, pursuant to 40 CFR Part 63, Subpart H.

The permittee shall include the appropriate process equipment and regulated components for emissions unit J001 in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall comply with the appropriate provisions (including operational restrictions, monitoring and recordkeeping, reporting, and testing)) 40 CFR 63 Subpart H (National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks.)

(1) Except where exempted under paragraph (DD)(17) of this rule, each owner or operator of a process unit that produces as an intermediate or final product one or more of the organic chemicals identified in appendix A of this rule shall comply with the requirements in paragraphs (DD)(2) to (DD)(6) of this rule no later than the date specified in paragraph (C)(38) of rule 3745-21-04 of the Administrative Code.

(2) Leak detection and repair program.

(a) A leak detection and repair program for equipment in the process unit shall be developed and implemented in accordance with the requirements specified in paragraphs (DD)(2)(b) to (DD)(2)(m) of this rule.

(b) Except as otherwise provided in paragraphs (DD)(2)(c) and (DD)(2)(d) of this rule, equipment shall be monitored for leaks in accordance with the method specified in paragraph (F) of rule 3745-21-10 of the Administrative Code, as follows:

(i) Any pump in light liquid service shall be monitored monthly.

(ii) Any valve in gas/vapor service or in light liquid service shall be monitored monthly, except that quarterly monitoring may be employed anytime after no leaks are detected during two consecutive months. The quarterly monitoring shall begin with the next calendar quarter following the two consecutive months of no detected leaks and shall be conducted in the first month of each calendar quarter. The quarterly monitoring may continue until a leak is detected, at which time monthly monitoring shall be employed again.

(iii) Any of the following equipment shall be monitored within five calendar days after evidence of a leak or potential leak from the equipment by visual, audible, olfactory, or other detection method:

(a) Any pump in heavy liquid service;

(b) Any valve in heavy liquid service;

(c) Any pressure relief device in light liquid service or in heavy liquid service; and

(d) Any flange or other connector.

(iv) Any equipment in which a leak is detected as described in paragraph (DD)(2)(g) of this rule shall be monitored within five working days after each attempt to repair, unless the owner or operator believes that the equipment was not successfully repaired.

(c) For any valve in gas/vapor service or in light liquid service, an alternative monitoring schedule may be employed in lieu of the monitoring schedule specified in paragraph (DD)(2)(b)(ii) of this rule as follows:

(i) The valve is designated as difficult to monitor and is monitored each calendar year, provided the following conditions are met:

(a) Construction of the process unit commenced prior to May 9, 1986.

(b) The owner or operator of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than six feet above a support surface.

(c) The owner or operator of the valve has a written plan that requires monitoring of the valve at least once per year.

(ii) The valve is designated as unsafe to monitor and is monitored as frequently as practical during safe to monitor times, provided the following conditions are met:

(a) The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of monitoring on a monthly basis.

(b) The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practical during safe to monitor times.

(iii) The valve is subject to an alternative monitoring schedule based on a skip period as specified in paragraph (DD)(12) of this rule.

(d) Excluded from the monitoring requirements of paragraph (DD)(2)(b) of this rule are the following equipment:

(i) Any pump that has no externally actuated shaft penetrating the pump housing and that is designated for no detectable emissions as provided in paragraph (DD)(7) of this rule;

(ii) Any pump that is equipped with a dual mechanical seal which has a barrier fluid system and sensor that comply with the requirements specified in paragraph (DD)(8) of this rule;

(iii) Any pump that is equipped with a closed vent system capable of capturing and transporting any leakage from the pump seal to control equipment, provided the closed vent system and the control equipment comply with the requirements specified in paragraphs (DD)(9) and (DD)(10) of this rule;

(iv) Any valve that has no externally actuated stem penetrating the valve and that is designated for no detectable emissions as provided in paragraph (DD)(7) of this rule; and

(v) Any valve that is subject to the alternative monitoring standard for valves based on the percentage of valves leaking as provided in paragraph (DD)(13) of this rule.

(e) Any pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal, unless the pump is equipped with a closed vent system capable of transporting any leakage from the pump seal to

control equipment, and the closed vent system and control equipment comply with the requirements specified in paragraphs (DD)(9) and (DD)(10) of this rule.

(f) Any sensor employed pursuant to paragraph (DD)(2)(d)(ii) or (DD)(3)(b) of this rule shall be checked daily, unless the sensor is equipped with an audible alarm.

(g) A leak is detected:

(i) When a concentration of ten thousand ppmv or greater is measured from a potential leak interface of any equipment that is monitored for leaks using the method in paragraph (F) of rule 3745-21-10 of the Administrative Code;

(ii) When there is an indication of liquids dripping from the seal of a pump in light liquid service; or

(iii) When a sensor employed pursuant to paragraph (DD)(2)(d)(ii) or (DD)(3)(b) of this rule indicates failure of the seal system, the barrier fluid system, or both.

(h) When a leak is detected as described in paragraph (DD)(2)(g) of this rule, the following procedures shall be followed:

(i) A weatherproof and readily visible identification tag, marked with the equipment identification number, is immediately attached to the leaking equipment.

(ii) A record of the leak and any attempt to repair the leak is entered into the leak repair log kept pursuant to paragraph (DD)(2)(k) of this rule.

(iii) The identification tag attached to the leaking equipment, other than a valve that is monitored pursuant to paragraph (DD)(2)(b)(ii) of this rule, may be removed after the leaking equipment is repaired.

(iv) The identification tag attached to a leaking valve that is monitored pursuant to paragraph (DD)(2)(b)(ii) of this rule may be removed after the leaking valve is repaired, monitored for leaks for two consecutive months as specified in paragraph (DD)(2)(b)(ii) of this rule, and found to have no detected leaks during those two consecutive months.

(i) When a leak is detected as described in paragraph (DD)(2)(g) of this rule, the leaking equipment shall be repaired as soon as practicable, but no later than fifteen calendar days after the leak is detected, except for a delay of repair as provided in paragraph (DD)(11) of this rule. Leaking equipment shall be deemed repaired if the maximum concentration measured pursuant to paragraph (DD)(2)(b)(iv) of this rule is less than ten thousand ppmv.

(j) When a leak is detected as described in paragraph (DD)(2)(g) of this rule, a first attempt at repair shall be made no later than five calendar days after the leak is detected; and the first attempts at repair shall include, but are not limited to, the following best practices where practicable:

(i) Tightening of bonnet bolts;

(ii) Replacement of bonnet bolts;

(iii) Tightening of packing gland nuts; and

(iv) Injection of lubricant into lubricated packing.

(k) When a leak is detected as described in paragraph (DD)(2)(g) of this rule, the following information shall be recorded in a leak repair log:

(i) The identification number of the leaking equipment and, for leaks based on monitoring, the identification numbers of the leak detection instrument and its operator;

(ii) The basis for the detection of the leak; for example, monitoring, visual inspection, or sensor;

(iii) The date on which the leak was detected and the date of each attempt to repair the leaking equipment;

(iv) The methods of repair applied in each attempt to repair the leaking equipment;

(v) One of the following entries within five working days after each attempt to repair the leaking equipment:

(a) "Not monitored," denoting the leaking equipment was presumed to still be leaking and it was not monitored; or

(b) If the leaking equipment was monitored with a leak detection instrument, the maximum concentration that was measured as follows:

(i) The actual reading in ppmv; or

(ii) "Below 10,000," denoting less than ten thousand ppmv; or

(iii) "Above 10,000," denoting not less than ten thousand ppmv;

(vi) If the leak is not repaired within fifteen calendar days after the date on which it was detected:

(a) "Repair delayed" and the reason for the delay;

(b) If repair is being delayed until the next process unit shutdown due to technical infeasibility of repair, the signature of the owner or operator whose decision it was that repair is technically infeasible without a process unit shutdown;

(c) The expected date of successful repair of the leak;

(d) The dates of process unit shutdowns that occur while the leaking equipment is unrepaired; and

(vii) The date on which the leak was successfully repaired.

(l) The leak repair log shall be retained by the owner or operator of the process unit in a readily accessible location for a minimum of two years after the date on which the record was made.

(m) Semiannual reports shall be submitted to the director by the first day of February and August and shall include the following information for the preceding semiannual periods:

(i) The process unit identification;

(ii) The number of pumps in light liquid service excluding those pumps designated for no detectable emissions under the provision of paragraph (DD)(2)(d)(i) of this rule and those pumps complying with paragraph (DD)(2)(d)(iii) of this rule;

(iii) The number of valves in gas/vapor service or in light liquid service excluding those valves designated for no detectable emission under the provision of paragraph (DD)(2)(d)(iv) of this rule and those valves subject to the alternative standard for monitoring under the provision of paragraph (DD)(2)(d)(v) of this rule;

(iv) The number of compressors excluding those compressors designated for no detectable emissions under the provision of paragraph (DD)(3)(c) of this rule and those compressors complying with paragraph (DD)(3)(d) or (DD)(3)(e) of this rule;

(v) For each month during the semiannual period:

(a) The number of pumps in light liquid service for which leaks were detected as described in paragraph (DD)(2)(g) of this rule;

(b) The number of pumps in light liquid service for which leaks were not repaired within fifteen calendar days after the date of leak detection;

(c) The number of valves in gas/vapor service or in light liquid service for which leaks were detected as described in paragraph (DD)(2)(g) of this rule;

(d) The number of valves in gas/vapor service or in light liquid service for which leaks were not repaired within fifteen calendar days after the date of leak detection;

(e) The number of compressors for which leaks were detected as described in paragraph (DD) of this rule;

(f) The number of compressors for which leaks were not repaired within fifteen calendar days after the date of leak detection; and

(g) The facts that explain each delay of repair allowed pursuant to paragraph (DD)(11) of this rule; and

(vi) The dates of process unit shutdowns that occurred within the semiannual period.

(3) Compressors.

(a) Except as otherwise provided in paragraphs (DD)(3)(c) to (DD)(3)(e) of this rule, any compressor in the process unit shall comply with the requirements specified in paragraph (DD)(3)(b) of this rule.

(b) The compressor shall be equipped with a seal that has a barrier fluid system and sensor which comply with the requirements specified in paragraph (DD)(8) of this rule.

(c) Excluded from the requirements of paragraph (DD)(3)(b) of this rule is any compressor that is designated for no detectable emissions as provided in paragraph (DD)(7) of this rule.

(d) Excluded from the requirements of paragraph (DD)(3)(b) of this rule is any compressor that is equipped with a closed vent system capable of capturing and transporting any leakage from the compressor seal to control equipment, provided the closed vent system and the control equipment comply with the requirements specified in paragraphs (DD)(9) and (DD)(10) of this rule.

(e) Excluded from the requirements of paragraph (DD)(3)(b) of this rule is any reciprocating compressor that meets the following conditions:

(i) The compressor was installed prior to May 9, 1986; and

(ii) The owner or operator of the compressor demonstrates to the satisfaction of the director that recasting the compressor distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the requirements of paragraph (DD)(3)(b) of this rule.

(4) Pressure relief devices in gas/vapor service.

(a) Except as otherwise provided in paragraph (DD)(4)(e) of this rule, any pressure relief device in gas/vapor service in the process unit shall comply with the requirements specified in paragraphs (DD)(4)(b) to (DD)(4)(d) of this rule.

(b) Except during pressure releases, the pressure relief device shall be operated with no detectable emissions, as indicated by an instrument reading of less than five hundred ppmv above background, as measured by the method specified in paragraph (F) of rule 3745-21-10 of the Administrative Code.

(c) No later than five calendar days after a pressure release, the pressure relief device shall be tested to confirm the condition of no detectable emissions in accordance with the method specified in paragraph (F) of rule 3745-21-10 of the Administrative Code.

(d) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions as soon as practicable, but no later than five calendar days after the pressure release, except for a delay of repair as provided in paragraph (DD)(11) of this rule.

(e) Excluded from the requirements of paragraphs (DD)(4)(b) to (DD)(4)(d) of this rule is any pressure relief device that is equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to control equipment, provided the closed vent system and control equipment comply with the requirements specified in paragraphs (DD)(9) and (DD)(10) of this rule.

(5) Sampling connection system.

(a) Except as otherwise provided in paragraph (DD)(5)(c) of this rule, any sampling connection system in the process unit shall comply with the requirements specified in paragraph (DD)(5)(b) of this rule.

(b) The sampling connection system shall be equipped with a closed purge system or a closed vent system that meets one of the following requirements:

(i) The purged process fluid is returned directly to the process line with zero VOC emissions to the ambient air;

(ii) The purged process fluid is collected and recycled with zero VOC emissions to the ambient air; or

(iii) The closed purge system or closed vent system is designed and operated to capture and transport all the purged process fluid to control equipment that meet the requirements specified in paragraph (DD)(10) of this rule.

(c) Excluded from the requirements of paragraph (DD)(5)(b) of this rule is any sampling connection system that is an in-situ sampling system.

(6) Open-ended valves or lines.

(a) Any open-ended valve or line in the process unit shall be equipped with a cap, blind flange, plug, or second valve and shall comply with the requirements specified in paragraphs (DD)(6)(b) to (DD)(6)(d) of this rule.

(b) Except during operations requiring the flow of process fluid through the open-ended valve or line, the cap, blind flange, plug, or second valve shall seal the open end of the open-ended valve or line.

(c) If equipped with a second valve, the open-ended valve or line shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

(d) If a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves, but shall comply with paragraph (DD)(6)(b) of this rule at all other times.

(7) Equipment designated for no detectable emissions.

(a) Any equipment (pump, valve, or compressor) designated for no detectable emissions pursuant to paragraph (DD)(2)(d)(I), (DD)(2)(d)(iv) or (DD)(3)(c) of this rule shall comply with the requirements specified in paragraphs (DD)(7)(b) to (DD)(7)(d) of this rule.

(b) The equipment shall be operated with no detectable emissions as indicated by an instrument reading of less than five hundred ppmv above background as measured by paragraph (F) of rule 3745-21-10 of the Administrative Code.

(c) The equipment shall be tested for compliance with paragraph (DD)(7)(b) of this rule initially upon designation and annually.

(d) The designation of the equipment shall be signed by the owner or operator of the equipment in the log kept pursuant to paragraph (DD)(14)(b) of this rule.

(8) Barrier fluid systems and sensors for pumps and compressors.

(a) When a pump or compressor is equipped with a seal that has a barrier fluid system and sensor which are employed to meet the requirements of paragraph (DD)(2)(d)(ii) or (DD)(3)(a) of this rule, the requirements of paragraphs (DD)(8)(b) to (DD)(8)(d) of this rule shall be met.

(b) The barrier fluid system shall meet one of the following conditions:

(i) The barrier fluid system is operated with a barrier fluid at a pressure that is at all times greater than the stuffing box pressure of the pump or compressor.

(ii) The barrier fluid system is equipped with a barrier fluid degassing reservoir that is connected by a closed vent system to control equipment and the closed vent system and control equipment comply with the requirements specified in paragraphs (DD)(9) and (DD)(10) of this rule.

(iii) The barrier fluid system is equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the ambient air.

(c) The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.

(d) The barrier fluid system shall be equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both based on criteria determined by the owner or operator from design considerations and operating experience.

(9) Closed vent systems.

(a) Any closed vent system that is used to comply with the requirements of paragraph (DD)(2)(d)(iii), (DD)(3)(d), (DD)(4)(e), or (DD)(8)(b)(ii) of this rule shall comply with the requirements specified in paragraphs (DD)(9)(b) to (DD)(9)(d) of this rule.

(b) The closed vent system shall be designed and operated with no detectable emissions, as indicated by an instrument reading of less than five hundred ppmv above background, as measured by the method specified in paragraph (F) of rule 3745-21-10 of the Administrative Code.

(c) The closed vent system shall be tested for compliance with paragraph (DD)(9)(b) of this rule initially and annually.

(d) The closed vent system shall be operated at all times when emissions may be vented to it.

(10) Control equipment.

(a) Any control equipment that is used to comply with the requirements of paragraph (DD)(2)(d)(iii), (DD)(3)(d), (DD)(4)(e), (DD)(5)(b)(iii), (DD)(8)(b)(ii), or (DD)(11)(d)(ii) of this rule shall comply with the requirements specified in paragraphs (DD)(10)(b) to (DD)(10)(f) of this rule.

(b) If the control equipment is a vapor recovery system, it shall be designed and operated to recover VOC emissions vented to it with an efficiency of at least ninety-five per cent by weight.

(c) If the control equipment is an enclosed combustion device, it shall be designed and operated to reduce the VOC emissions vented to it with an efficiency of at least ninety-five per cent by weight, or to provide a minimum residence time of 0.75 second at a minimum temperature of fifteen hundred degrees Fahrenheit.

(d) If the control equipment is a flare, it shall meet the following requirements:

(i) The flare shall be designed for and operated with no visible emissions as determined by "Method 22, 40 CFR, Part 60, Appendix A," except for periods not to exceed a total of five minutes during any one hundred twenty consecutive minutes.

(ii) The flare shall be operated with either an electric arc ignition system or a pilot flame. If a pilot flame is employed, the flame shall be present at all times and shall be monitored with a thermocouple or any other equivalent device to detect the presence of the pilot flame. If an electric arc ignition system is employed, the arcing shall pulse continually and shall be monitored to detect any failure.

(iii) The flare shall be steam-assisted, air-assisted or nonassisted.

(iv) The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be three hundred Btu/scf or greater if the flare is steam-assisted or air-assisted, or shall be two hundred Btu/scf or greater if the flare is nonassisted.

(v) Except as provided in paragraph (DD)(10)(d)(vi) of this rule, the flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, less than sixty feet per second if the flare is steam-assisted or nonassisted, or less than

the maximum permitted velocity, as determined in paragraph (P)(4) of rule 3745-21-10 of the Administrative Code, if the flare is air-assisted.

(vi) Excluded from the requirements of paragraph (DD)(10)(d)(v) of this rule is any steam-assisted or nonassisted flare that meets both of the following requirements:

(a) The net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be greater than one thousand Btu/scf.

(b) The flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, less than four hundred feet per second.

(e) The owner or operator of the control equipment shall monitor the control equipment to ensure that it is operated and maintained in conformance with its design.

(f) The control equipment shall be operated at all times when emissions may be vented to it.

(11) Delay of repair.

(a) A delay of repair that is employed pursuant to paragraph (DD)(2)(I) or (DD)(4)(d) of this rule shall be allowed only as provided in paragraphs (DD)(11)(b) to (DD)(11)(f) of this rule.

(b) A delay of repair shall be allowed if the repair is technically infeasible without a process unit shutdown. However, the repair shall occur before the end of the next process unit shutdown.

(c) A delay of repair shall be allowed for a piece of equipment that is isolated from the process and that does not remain in VOC service (for example, isolated from the process and properly purged).

(d) A delay of repair for a valve shall be allowed if:

(i) The owner or operator of the valve demonstrates that the emission of purged material resulting from immediate repair is greater than the emission likely to result from delay of repair; and

(ii) When repair procedures are effected, the purged material is collected and destroyed or recovered in control equipment that meets the requirements specified in paragraph (DD)(10) of this rule.

(e) A delay of repair for a pump shall be allowed if:

(i) The repair requires the use of a dual mechanical seal system and associated barrier fluid system; and

(ii) The repair is completed as soon as practicable, but no later than six months after the leak was detected.

(f) A delay of repair beyond a process unit shutdown shall be allowed for a valve if a valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. A delay of repair beyond the next process unit shutdown shall not be allowed for that valve unless the next process unit shutdown occurs sooner than six months after the first process unit shutdown.

(12) Alternative monitoring schedule for valves based on a skip period.

(a) Any owner or operator of a process unit may elect to implement an alternative monitoring schedule in lieu of the monitoring requirements specified in paragraph (DD)(2)(b)(ii) of this rule, as provided in paragraph (DD)(2)(c)(iii) of this rule. The alternative monitoring schedule shall be based on skipping quarterly monitoring periods provided the percentage of valves leaking is no more than 2.0. Any owner or operator who elects to implement an alternative monitoring schedule shall comply with the requirements specified in paragraphs (DD)(12)(b) to (DD)(12)(h) of this rule.

(b) The owner or operator must notify the director prior to implementing this alternative monitoring schedule. Such notification must identify which valves will be subject to this alternative monitoring schedule and which work practice within paragraph (DD)(12)(e) of this rule will be implemented. Any valve in vacuum service, in heavy liquid service, or not in VOC service, shall be excluded from this alternative monitoring schedule.

(c) Any valve subject to this alternative monitoring schedule shall comply initially with the monitoring requirements specified in paragraph (DD)(2)(b)(ii) of this rule.

(d) Any valve subject to this alternative monitoring schedule shall continue to be subject to the requirements specified in paragraphs (DD)(2)(g) to (DD)(2)(m) of this rule.

(e) One of the following two alternative work practices for skipping monitoring periods may be implemented:

(i) After two consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than 2.0, a monitoring program may begin in which the first quarter of every two consecutive quarterly leak detection periods is skipped.

(ii) After five consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than 2.0, a monitoring program may begin in which the first three quarters of every four consecutive quarterly periods is skipped.

(f) If the percentage of valves leaking is greater than 2.0, the owner or operator shall comply with the monitoring requirements as specified in paragraph (DD)(2)(b)(ii) of this rule, but may again elect to use this alternative monitoring schedule.

(g) The percentage of valves leaking shall be determined for the valves subject to this alternative monitoring schedule as the sum of the number of those valves found leaking during any portion of the current monitoring period and the number of those valves found leaking during a previous monitoring period for which repair has been delayed during the current monitoring period, divided by the total number of valves, and multiplied by one hundred.

(h) The following information pertaining to valves subject to this alternative monitoring schedule shall be recorded in a log that is kept in a readily accessible location:

(i) A schedule of monitoring; and

(ii) The percentage of valves leaking during each monitoring period.

(13) Alternative monitoring standard for valves based on the allowable percentage of valves leaking.

(a) Any owner or operator of a process unit may elect to implement an alternative monitoring standard in lieu of the monitoring requirements specified in paragraph (DD)(2)(b)(ii) of this rule, as provided in paragraph (DD)(2)(d)(v) of this rule. The alternative monitoring standard shall be based on maintaining the percentage of valves leaking at 2.0 or less. Any owner or operator who elects to implement an alternative monitoring standard shall comply with the requirements specified in paragraphs (DD)(13)(b) to (DD)(13)(g) of this rule.

(b) The owner or operator must notify the director prior to implementing this alternative monitoring standard.

(c) All valves in gas/vapor service or in light liquid service in the process unit shall be subject to this alternative monitoring standard, except for those valves which are designated as unsafe to monitor as provided in paragraph (DD)(2)(c)(ii) of this rule, those valves not in VOC service, and those valves in vacuum service.

(d) The percentage of valves leaking, as determined in accordance with paragraph (DD)(13)(f) of this rule, shall not exceed 2.0. If the percentage of valves leaking is greater than 2.0, the owner or operator shall comply with the monitoring requirements as

specified in paragraph (DD)(2)(b)(ii) of this rule, but may again elect to use this alternative monitoring standard.

(e) All valves subject to this alternative monitoring standard shall be tested for compliance with paragraph (DD)(13)(d) of this rule initially upon implementation and annually.

(f) A compliance test shall be conducted in the following manner:

(i) All valves subject to this alternative monitoring standard shall be monitored for leaks within a one-week period by the method specified in paragraph (F) of rule 3745-21-10 of the Administrative Code.

(ii) If an instrument reading of ten thousand ppmv or greater is measured, a leak is detected.

(iii) The percentage of valves leaking shall be determined as the number of valves for which a leak is detected, divided by the number of valves monitored, and multiplied by one hundred.

(g) When a leak is detected as described in paragraph (DD)(13)(f)(ii) of this rule, the leaking valve shall be repaired in accordance with paragraphs (DD)(2)(h) and (DD)(2)(i) of this rule.

(14) Recordkeeping.

(a) Each owner or operator of a process unit as described in paragraph (DD)(1) of this rule shall comply with the recordkeeping requirements of paragraphs (DD)(14)(b) to (DD)(14)(g) of this rule. An owner or operator of more than one process unit may use one recordkeeping system to comply with the recordkeeping requirements, provided the system identifies each record by each process unit.

(b) The following information shall be recorded in a log that is kept in a readily accessible location:

(i) A list of identification numbers for equipment subject to the requirements of paragraphs (DD)(2) to (DD)(10) of this rule;

(ii) A list of identification numbers for equipment designated for no detectable emissions as provided in paragraph (DD)(7) of this rule, and a signature of the owner or operator authorizing such designation;

(iii) A list of identification numbers for pressure relief devices subject to paragraph (DD)(4) of this rule;

(iv) A list of identification numbers for closed vent systems subject to paragraph (DD)(9) of this rule; and

(v) For compliance tests required under paragraphs (DD)(4)(c), (DD)(7)(c), and (DD)(9)(c) of this rule:

(a) The date of each compliance test;

(b) The background level measured during each compliance test; and

(c) The maximum instrument reading measured at the equipment during each compliance test.

(c) The following information pertaining to valves subject to an alternative monitoring schedule, as provided in paragraph (DD)(2)(c) of this rule, shall be recorded in a log that is kept in a readily accessible location:

(i) A list of identification numbers for valves designated as unsafe to monitor, an explanation for each valve stating why the valve is unsafe to monitor, and the plan for monitoring each valve;

(ii) A list of identification numbers for valves designated as difficult to monitor, an explanation for each valve stating why the valve is difficult to monitor, and the schedule for monitoring each valve; and

(iii) A list of identification numbers for valves subject to the alternative monitoring schedule based on a skip period, a schedule for monitoring, and the percentage of valves leaking during each monitoring period.

(d) The following information pertaining to closed vent systems and control equipment described in paragraphs (DD)(9) and (DD)(10) of this rule shall be recorded and kept in a readily accessible location:

(i) Detailed schematics, design specifications, and piping and instrumentation diagrams;

(ii) The dates and descriptions of any changes in the design specifications;

(iii) A description of the parameter or parameters monitored, as required in paragraph (DD)(10)(d) of this rule, to ensure that the control equipment is operated and maintained in conformance with its design, and an explanation of the reason for selecting such parameter or parameters;

(iv) Periods when the closed vent systems and control equipment are not operated as designed, including periods when a flare pilot light does not have a flame; and

(v) Dates of startups and shutdowns of the closed vent systems and control equipment.

(e) The following information pertaining to barrier fluid systems and sensors described in paragraph (DD)(8) of this rule shall be recorded in a log that is kept in a readily accessible location:

(i) A list of identification numbers of pumps and compressors equipped with such barrier fluid systems and sensors;

(ii) The criteria that indicate failure of the seal system, the barrier fluid system, or both, as required in paragraph (DD)(8)(d) of this rule and an explanation of the criteria; and

(iii) Any changes to such criteria and the reasons for the changes.

(f) The following information for use in determining an exemption for the process unit as provided in paragraph (DD)(17)(a) of this rule shall be recorded in a log that is kept in a readily accessible location:

(i) An analysis demonstrating the design capacity of the process unit;

(ii) A statement listing the feed and raw materials and products from the process unit and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohols; or

(iii) An analysis demonstrating that no equipment is in VOC service.

(g) The following information pertaining to specific equipment that are exempt as provided in paragraph (DD)(17)(b) of this rule shall be recorded in a log that is kept in a readily accessible location:

(i) A list of identification numbers of equipment in vacuum service;

(ii) A list of identification numbers of equipment not in VOC service and the information or data used to demonstrate that the equipment is not in VOC service; and]

(iii) A list of equipment subject to an equivalent emission requirement that is approved by the director pursuant to paragraph (DD)(16) of this rule.

(15) Reporting.

(a) Each owner or operator of a process unit as described in paragraph (DD)(1) of this rule shall comply with the reporting requirements specified in paragraphs (DD)(15)(b) to (DD)(15)(d) of this rule.

(b) For compliance tests required under paragraphs (DD)(7)(c) and (DD)(9)(c) of this rule, the requirements of paragraphs (A)(3) and (A)(4) of rule 3745-21-10 of the Administrative Code (pertaining to notification of intent to test) shall be met. The results of such compliance tests shall be reported to the Ohio environmental protection agency district office or delegate agency within thirty days after the test date.

(c) The results of compliance tests required under paragraph (DD)(4)(c) of this rule shall be reported semiannually to the Ohio environmental protection agency district office or delegate agency. The semiannual reports shall be submitted by the first day of February and August and shall include information for the preceding semiannual period.

(d) Any semiannual reports required under paragraph (DD)(2)(m) of this rule may be sent to the Ohio environmental protection agency district office or delegate agency.

(16) Equivalent requirement.

(a) Any owner or operator of a process unit may apply to the director for determination of an equivalent requirement in lieu of the requirements specified in paragraphs (DD)(2)to (DD)(10) of this rule. The determination of equivalence will be evaluated by the guidelines specified in paragraphs (DD)(16)(b) to (DD)(16)(d) of this rule. If the director approves an equivalent requirement for a process unit, said requirement shall be specified in the special terms and conditions of the permit to operate or variance issued by the director for the process unit.

(b) The owner or operator applying for a determination of equivalency shall be responsible for collecting and verifying test data to demonstrate the proposed equivalence.

(c) The equivalent requirement shall achieve a reduction in emissions of VOC at least equivalent to the reduction in emissions of VOC that would be achieved by compliance with the applicable requirements of paragraph (DD) of this rule.

(d) The director may condition the approval of equivalence as necessary to ensure the same emission reduction as the applicable requirements of paragraph (DD) of this rule.

(17) Exemptions.

(a) Exempted from the requirements of paragraphs (DD)(2) to (DD)(6) of this rule are the following process units:

(i) Any process unit that has a design capacity to produce less than one thousand one hundred tons per year;

(ii) Any process unit that produces only heavy liquid chemicals from heavy liquid feed or raw materials;

(iii) Any process unit that produces beverage alcohol;

(iv) Any process unit that has no equipment in VOC service as determined in accordance with paragraph (O)(2) of rule 3745-21-10 of the Administrative Code; and

(v) Any process unit at a petroleum refinery, as defined in paragraph (E)(15) of rule 3745-21-01 of the Administrative Code.

(b) Exempted from the requirements of paragraphs (DD)(2) to (DD)(6) of this rule are the following equipment:

(i) Any equipment not in VOC service, as determined in accordance with paragraph (O)(2) of rule 3745-21-10 of the Administrative Code;

(ii) Any equipment in vacuum service; and

(iii) Any equipment subject to an equivalent emission limitation as provided in paragraph (DD)(16) of this rule.

3. [40 CFR, Part 60, Subpart Db] Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

The following emissions units are subject to this rule: N006 and P035.

§§ 60.40b Applicability and delegation of authority.

(a) The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 MW (100 million Btu/hour).

(b) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1984, but on or before June 19, 1986, is subject to the following standards:

(1) Coal-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 million Btu/hour), inclusive, are subject to the particulate matter and nitrogen oxides standards under this subpart.

(2) Coal-fired affected facilities having a heat input capacity greater than 73 MW (250 million Btu/hour) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; 40 CFR 60.40) are subject to the particulate matter and nitrogen oxides standards under this subpart and to the sulfur dioxide standards under subpart D (40 CFR 60.43).

(3) Oil-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 million Btu/hour), inclusive, are subject to the nitrogen oxides standards under this subpart.

(4) Oil-fired affected facilities having a heat input capacity greater than 73 MW (250 million Btu/hour) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; 40 CFR 60.40) are also subject to the nitrogen oxides standards under this subpart and the particulate matter and sulfur dioxide standards under subpart D (40 CFR 60.42 and 40 CFR 60.43).

(c) Affected facilities which also meet the applicability requirements under subpart J (Standards of performance for petroleum refineries; 40 CFR 60.104) are subject to the particulate matter and nitrogen oxides standards under this subpart and the sulfur dioxide standards under subpart J (40 CFR 60.104).

(d) Affected facilities which also meet the applicability requirements under subpart E (Standards of performance for incinerators; 40 CFR 60.50) are subject to the nitrogen oxides and particulate matter standards under this subpart.

(e) Steam generating units meeting the applicability requirements under subpart Da (Standards of performance for electric utility steam generating units; 40 CFR 60.40a) are not subject to this subpart.

(f) Any change to an existing steam generating unit for the sole purpose of combusting gases containing TRS as defined under 40 CFR 60.281 is not considered a modification under 40 CFR 60.14 and the steam generating unit is not subject to this subpart.

(g) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the following authorities shall be retained by the Administrator and not transferred to a State.

(1) Section 60.44b(f).

(2) Section 60.44b(g).

(3) Section 60.49b(a)(4).

(h) Affected facilities which meet the applicability requirements under subpart Eb (Standards of performance for municipal waste Combustors; 40 CFR 60.50b) are not subject to this subpart.

(i) Unless and until subpart GG of this part is revised to extend the applicability of subpart GG of this part to steam generator units subject to this subpart, this subpart will continue to apply to combined cycle gas turbines that are capable of combusting more than 29 MW (100 million Btu/hour) heat input of fossil fuel in the steam generator. Only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The gas turbine emissions are subject to subpart GG of this part.)

(j) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1986 is not subject to Subpart D (Standards of Performance for Fossil-Fuel-Fired Steam Generators, 40 CFR 60.40).

§§ 60.42b Standard for sulfur dioxide.

(a) Except as provided in paragraphs (b), (c), (d), or (j) of this section, on and after the date on which the performance test is completed or required to be completed under 40 CFR 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts coal or oil shall cause to be discharged into the atmosphere any gases that contain sulfur dioxide in excess of 10 percent (0.10) of the potential sulfur dioxide emission rate (90 percent reduction) and that contain sulfur dioxide in excess of the emission limit determined according to the following formula:

Es=(Ka Ha+Kb Hb)/(Ha+Hb) where:

Es is the sulfur dioxide emission limit, in ng/J or lb/million Btu heat input,

Ka is 520 ng/J (or 1.2 lb/million Btu),

Kb is 340 ng/J (or 0.80 lb/million Btu),

Ha is the heat input from the combustion of coal, in J (million Btu),

Hb is the heat input from the combustion of oil, in J (million Btu). Only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat input to the affected facility from exhaust gases from another source, such as gas turbines, internal combustion engines, kilns, etc.

(b) On and after the date on which the performance test is completed or required to be completed under 40 CFR 60.8 of this part, whichever comes first, no owner or operator of an affected facility that combusts coal refuse alone in a fluidized bed combustion steam generating unit shall cause to be discharged into the atmosphere any gases that contain sulfur dioxide in excess of 20 percent of the potential sulfur dioxide emission rate (80 percent reduction) and that contain sulfur dioxide in excess of 520 ng/J (1.2 lb/million Btu) heat input. If coal or oil is fired with coal refuse, the affected facility is subject to paragraph (a) or (d) of this section, as applicable.

(c) On and after the date on which the performance test is completed or is required to be completed under 40 CFR 60.8 of this part, whichever comes first, no owner or operator of an affected facility that combusts coal or oil, either alone or in combination with any other fuel, and that uses an emerging technology for the control of sulfur dioxide emissions, shall cause to be discharged into the atmosphere any gases that contain sulfur dioxide in excess of 50 percent of the potential sulfur dioxide emission rate (50 percent reduction) and that contain sulfur dioxide in excess of the emission limit determined according to the following formula:

Es=(Kc Hc+Kd Hd)/Hc+Hd) where:

Es is the sulfur dioxide emission limit, expressed in ng/J (lb/million Btu) heat input,

Kc is 260 ng/J (0.60 lb/million Btu),

Kd is 170 ng/J (0.40 lb/million Btu),

Hc is the heat input from the combustion of coal, J (million Btu),

Hd is the heat input from the combustion of oil, J (million Btu). Only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels, or from the heat input to the affected facility from exhaust gases from another source, such as gas turbines, internal combustion engines, kilns, etc.

(d) On and after the date on which the performance test is completed or required to be completed under 40 CFR 60.8 of this part, whichever comes first, no owner or operator of an affected facility listed in paragraphs (d) (1), (2), or (3) of this section shall cause to be discharged into the atmosphere any gases that contain sulfur dioxide in excess of 520 ng/J (1.2 lb/million Btu) heat input if the affected facility combusts coal, or 215 ng/J (0.5 lb/million Btu) heat input if the affected facility combusts oil other than very low sulfur oil. Percent reduction requirements are not applicable to affected facilities under paragraphs (d)(1), (2), or (3).

(1) Affected facilities that have an annual capacity factor for coal and oil of 30 percent (0.30) or less and are subject to a Federally enforceable permit limiting the operation of the affected facility to an annual capacity factor for coal and oil of 30 percent (0.30) or less;

(2) Affected facilities located in a noncontinental area; or

(3) Affected facilities combusting coal or oil, alone or in combination with any other fuel, in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat input to the steam generating unit is from combustion of coal and oil in the duct burner and 70 percent (0.70) or more of the heat input to the steam generating unit is from the exhaust gases entering the duct burner.

(e) Except as provided in paragraph (f) of this section, compliance with the emission limits, fuel oil sulfur limits, and/or percent reduction requirements under this section are determined on a 30-day rolling average basis.

(f) Except as provided in paragraph (j)(2) of this section, compliance with the emission limits or fuel oil sulfur limits under this section is determined on a 24-hour average basis for affected facilities that (1) have a Federally enforceable permit limiting the annual capacity factor for oil to 10% or less, (2) combust only very low sulfur oil, and (3) do not combust any other fuel.

(g) Except as provided in paragraph (i) of this section, the sulfur dioxide emission limits and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(h) Reductions in the potential sulfur dioxide emission rate through fuel pretreatment are not credited toward the percent reduction requirement under paragraph (c) of this section unless:

(1) Fuel pretreatment results in a 50 percent or greater reduction in potential sulfur dioxide emissions and

(2) Emissions from the pretreated fuel (without combustion or post combustion sulfur dioxide control) are equal to or less than the emission limits specified in paragraph (c) of this section.

(i) An affected facility subject to paragraph (a), (b), or (c) of this section may combust very low sulfur oil or natural gas when the sulfur dioxide control system is not being operated because of malfunction or maintenance of the sulfur dioxide control system.

(j) Percent reduction requirements are not applicable to affected facilities combusting only very low sulfur oil. The owner or operator of an affected facility combusting very low sulfur oil shall demonstrate that the oil meets the definition of very low sulfur oil by: (1) Following the performance testing procedures as described in 40 CFR 60.45b(c) or 60.45b(d), and following the monitoring procedures as described in 40 CFR 60.47b(a) or 60.47b(b) to determine sulfur dioxide emission rate or fuel oil sulfur content; or (2) maintaining fuel receipts as described in 40 CFR 60.49b(r).

§§ 60.43b Standard for particulate matter.

(a) On and after the date on which the initial performance test is completed or is required to be completed under 40 CFR 60.8 of this part, whichever comes first, no owner or operator of an affected facility which combusts coal or combusts mixtures of coal with other fuels, shall cause to be discharged into the atmosphere from that affected facility any gases that contain particulate matter in excess of the following emission limits:

(1) 22 ng/J (0.051 lb/million Btu) heat input,

(i) If the affected facility combusts only coal, or

(ii) If the affected facility combusts coal and other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/million Btu) heat input if the affected facility combusts coal and other fuels and has an annual capacity factor for the other fuels greater than 10 percent (0.10) and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(3) 86 ng/J (0.20 lb/million Btu) heat input if the affected facility combusts coal or coal and other fuels and

(i) Has an annual capacity factor for coal or coal and other fuels of 30 percent (0.30) or less,

(ii) Has a maximum heat input capacity of 73 MW (250 million Btu/hour) or less,

(iii) Has a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for coal or coal and other solid fuels, and

(iv) Construction of the affected facility commenced after June 19, 1984, and before November 25, 1986.

(b)On and after the date on which the performance test is completed or required to be completed under 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts oil (or mixtures of oil with other fuels) and uses a conventional or emerging technology to reduce sulfur dioxide emissions shall cause to be discharged into the atmosphere from that affected facility any gases that contain particulate matter in excess of 43 ng/J (0.10 lb/million Btu) heat input.

(c) On and after the date on which the initial performance test is completed or is required to be completed under 40 CFR 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts wood, or wood with other fuels, except coal, shall cause to be discharged from that affected facility any gases that contain particulate matter in excess of the following emission limits:

(1) 43 ng/J (0.10 lb/million Btu) heat input if the affected facility has an annual capacity factor greater than 30 percent (0.30) for wood.

(2) 86 ng/J (0.20 lb/million Btu) heat input if

(i) The affected facility has an annual capacity factor of 30 percent (0.30) or less for wood,

(ii) Is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for wood, and

(iii) Has a maximum heat input capacity of 73 MW (250 million Btu/hour) or less.

(d) On and after the date on which the initial performance test is completed or is required to be completed under 40 CFR 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts municipal-type solid waste or mixtures of municipal-type solid waste with other fuels, shall cause to be discharged into the atmosphere from that affected facility any gases that contain particulate matter in excess of the following emission limits:

(1) 43 ng/J (0.10 lb/million Btu) heat input,

(i) If the affected facility combusts only municipal-type solid waste, or

(ii) If the affected facility combusts municipal-type solid waste and other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 86 ng/J (0.20 lb/million Btu) heat input if the affected facility combusts municipal-type solid waste or municipal-type solid waste and other fuels; and

(i) Has an annual capacity factor for municipal-type solid waste and other fuels of 30 percent (0.30) or less,

(ii) Has a maximum heat input capacity of 73 MW (250 million Btu/hour) or less,

(iii) Has a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) for municipal-type solid waste, or municipal-type solid waste and other fuels, and

(iv) Construction of the affected facility commenced after June 19, 1984, but before November 25, 1986.

(e) For the purposes of this section, the annual capacity factor is determined by dividing the actual heat input to the steam generating unit during the calendar year from the combustion of coal, wood, or municipal-type solid waste, and other fuels, as applicable, by the potential heat input to the steam generating unit if the steam generating unit had been operated for 8,760 hours at the maximum design heat input capacity.

(f) On and after the date on which the initial performance test is completed or is required to be completed under 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, wood, or mixtures of these fuels with any other fuels shall cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

(g) The particulate matter and opacity standards apply at all times, except during periods of startup, shutdown or malfunction.

§§ 60.44b Standard for nitrogen oxides.

(a) Except as provided under paragraphs (k) and (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under 40 CFR 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that is subject to the provisions of this section and that combusts only coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides (expressed as NO2) in excess of the following emission limits: 0.1 lb/million Btu

(b) Except as provided under paragraphs (k) and (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under ? 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts mixtures of coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides in excess of a limit determined by the use of the following formula:

En=[(ELgo Hgo)+(ELro Hro)+(ELc Hc)]/(Hgo+Hro+Hc)

where:

En is the nitrogen oxides emission limit (expressed as NO2), ng/J (lb/million Btu)

ELgo is the appropriate emission limit from paragraph (a)(1) for combustion of natural gas or distillate oil, ng/J (lb/million Btu)

Hgo is the heat input from combustion of natural gas or distillate oil,

ELro is the appropriate emission limit from paragraph (a)(2) for combustion of residual oil,

Hro is the heat input from combustion of residual oil,

ELc is the appropriate emission limit from paragraph (a)(3) for combustion of coal, and

Hc is the heat input from combustion of coal.

(c) Except as provided under paragraph (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under 40 CFR 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts coal or oil, or a mixture of these fuels with natural gas, and wood, municipal-type solid waste, or any other fuel shall cause to be discharged into the atmosphere any gases that contain nitrogen oxides in excess of the emission limit for the coal or oil, or mixtures of these fuels with natural gas combusted in the affected facility, as determined pursuant to paragraph (a) or (b) of

this section, unless the affected facility has an annual capacity factor for coal or oil, or mixture of these fuels with natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less for coal, oil, or a mixture of these fuels with natural gas.

(d) On and after the date on which the initial performance test is completed or is required to be completed under 40 CFR 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts natural gas with wood, municipal-type solid waste, or other solid fuel, except coal, shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides in excess of 130 ng/J (0.30 lb/million Btu) heat input unless the affected facility has an annual capacity factor for natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less for natural gas.

(e) Except as provided under paragraph (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under 40 CFR 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts coal, oil, or natural gas with byproduct/waste shall cause to be discharged into the atmosphere any gases that contain nitrogen oxides in excess of the emission limit determined by the following formula unless the affected facility has an annual capacity factor for coal, oil, and natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less:

$$En=[(ELgo\ Hgo)+(ELro\ Hro)+ (ELc\ Hc)]/(Hgo+Hro+Hc)$$

where:

En is the nitrogen oxides emission limit (expressed as NO2), ng/J (lb/million Btu)

ELgo is the appropriate emission limit from paragraph (a)(1) for combustion of natural gas or distillate oil, ng/J (lb/million Btu).

Hgo is the heat input from combustion of natural gas, distillate oil and gaseous byproduct/waste, ng/J (lb/million Btu).

ELro is the appropriate emission limit from paragraph (a)(2) for combustion of residual oil, ng/J (lb/million Btu)

Hro is the heat input from combustion of residual oil and/or liquid byproduct/waste.

ELc is the appropriate emission limit from paragraph (a)(3) for combustion of coal, and

Hc is the heat input from combustion of coal.

(f) Any owner or operator of an affected facility that combusts byproduct/waste with either natural gas or oil may petition the Administrator within 180 days of the initial startup of the affected facility to establish a nitrogen oxides emission limit which shall apply specifically to that affected facility when the byproduct/waste is combusted. The petition shall include sufficient and appropriate data, as determined by the Administrator, such as nitrogen oxides emissions from the affected facility, waste composition (including nitrogen content), and combustion conditions to allow the Administrator to confirm that the affected facility is unable to comply with the emission limits in paragraph (e) of this section and to determine the appropriate emission limit for the affected facility.

(1) Any owner or operator of an affected facility petitioning for a facility-specific nitrogen oxides emission limit under this section shall:

(i) Demonstrate compliance with the emission limits for natural gas and distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) of this section, as appropriate, by conducting a 30-day performance test as provided in 40 CFR 60.46b(e). During the performance test only natural gas, distillate oil, or residual oil shall be combusted in the affected facility; and

(ii) Demonstrate that the affected facility is unable to comply with the emission limits for natural gas and distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) of this section, as appropriate, when gaseous or liquid byproduct/waste is combusted in the affected facility under the same conditions and using the same technological system of emission reduction applied when demonstrating compliance under paragraph (f)(1)(i) of this section.

(2) The nitrogen oxides emission limits for natural gas or distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) of this section, as appropriate, shall be applicable to the affected facility until and unless the petition is approved by the Administrator. If the petition is approved by the Administrator, a facility-specific nitrogen oxides emission limit will be established at the nitrogen oxides emission level achievable when the affected facility is combusting oil or natural gas and byproduct/waste in a manner that the Administrator determines to be consistent with minimizing nitrogen oxides emissions.

(g) Any owner or operator of an affected facility that combusts hazardous waste (as defined by 40 CFR part 261 or 40 CFR part 761) with natural gas or oil may petition the Administrator within 180 days of the initial startup of the affected facility for a waiver from compliance with the nitrogen oxides emission limit which applies specifically to that affected facility. The petition must include sufficient and appropriate data, as determined by the Administrator, on nitrogen oxides emissions from the affected facility, waste destruction efficiencies, waste composition (including nitrogen content), the quantity of specific wastes to be combusted and combustion conditions to allow the Administrator to determine if the affected facility is able to comply with the nitrogen oxides emission limits required by this section. The owner or operator of the affected facility shall demonstrate that when hazardous waste is combusted in the affected

facility, thermal destruction efficiency requirements for hazardous waste specified in an applicable federally enforceable requirement preclude compliance with the nitrogen oxides emission limits of this section. The nitrogen oxides emission limits for natural gas or distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) of this section, as appropriate, are applicable to the affected facility until and unless the petition is approved by the Administrator. (See 40 CFR 761.70 for regulations applicable to the incineration of materials containing polychlorinated biphenyls (PCB's).)

(h) For purposes of paragraph (i) of this section, the nitrogen oxide standards under this section apply at all times including periods of startup, shutdown, or malfunction.

(i) Except as provided under paragraph (j) of this section, compliance with the emission limits under this section is determined on a 30-day rolling average basis.

(j) Compliance with the emission limits under this section is determined on a 24-hour average basis for the initial performance test and on a 3-hour average basis for subsequent performance tests for any affected facilities that:

(1) Combust, alone or in combination, only natural gas, distillate oil, or residual oil with a nitrogen content of 0.30 weight percent or less;

(2) Have a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil with a nitrogen content of 0.30 weight percent or less; and

(3) Are subject to a Federally enforceable requirement limiting operation of the affected facility to the firing of natural gas, distillate oil, and/or residual oil with a nitrogen content of 0.30 weight percent or less and limiting operation of the affected facility to a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil and a nitrogen content of 0.30 weight percent or less.

(k) Affected facilities that meet the criteria described in paragraphs (j) (1), (2), and (3) of this section, and that have a heat input capacity of 73 MW (250 million Btu/hour) or less, are not subject to the nitrogen oxides emission limits under this section.

(l) On and after the date on which the initial performance test is completed or is required to be completed under ? 60.8, whichever date comes first, no owner or operator of an affected facility which commenced construction or reconstruction after July 9, 1997 shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides (expressed as NO2) in excess of the following limits:

(1) If the affected facility combusts coal, oil, or natural gas, or a mixture of these fuels, or with any other fuels: A limit of 86 ng/JI (0.20 lb/million Btu) heat input unless the affected facility has an annual capacity factor for coal, oil, and natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of

the facility to an annual capacity factor of 10 percent (0.10) or less for coal, oil, and natural gas; or

(2) If the affected facility has a low heat release rate and combusts natural gas or distillate oil in excess of 30 percent of the heat input from the combustion of all fuels, a limit determined by use of the following formula:

En = [(0.10 * Hgo) + (0.20 * Hr)]/(Hgo + Hr)

Where:

En is the NOX emission limit, (lb/million Btu),

Hgo is the heat input from combustion of natural gas or distillate oil, and

Hr is the heat input from combustion of any other fuel.

§§ 60.45b Compliance and performance test methods and procedures for sulfur dioxide.

(a) The sulfur dioxide emission standards under 40 CFR 60.42b apply at all times.

(b) In conducting the performance tests required under 40 CFR 60.8, the owner or operator shall use the methods and procedures in appendix A of this part or the methods and procedures as specified in this section, except as provided in 40 CFR 60.8(b). Section 60.8(f) does not apply to this section. The 30-day notice required in 40 CFR 60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(c) The owner or operator of an affected facility shall conduct performance tests to determine compliance with the percent of potential sulfur dioxide emission rate (% Ps) and the sulfur dioxide emission rate (Es) pursuant to 40 CFR 60.42b following the procedures listed below, except as provided under paragraph (d) of this section.

(1) The initial performance test shall be conducted over the first 30 consecutive operating days of the steam generating unit. Compliance with the sulfur dioxide standards shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility.

(2) If only coal or only oil is combusted, the following procedures are used:

(i) The procedures in Method 19 are used to determine the hourly sulfur dioxide emission rate (Eho) and the 30-day average emission rate (Eao). The hourly averages used to compute the 30-day averages are obtained from the continuous emission monitoring system of 40 CFR 60.47b (a) or (b).

(ii) The percent of potential sulfur dioxide emission rate (% Ps) emitted to the atmosphere is computed using the following formula:

% Ps=100 (1-% Rg/100)(1-% Rf/100)

where:

% Rg is the sulfur dioxide removal efficiency of the control device as determined by Method 19, in percent.

% Rf is the sulfur dioxide removal efficiency of fuel pretreatment as determined by Method 19, in percent.

(3) If coal or oil is combusted with other fuels, the same procedures required in paragraph (c)(2) of this section are used, except as provided in the following:

(i) An adjusted hourly sulfur dioxide emission rate (Ehoo) is used in Equation 19-19 of Method 19 to compute an adjusted 30-day average emission rate (Eaoo). The Eho is computed using the following formula:

Ehoo=[Eho-Ew(1-Xk)]/Xk

where:

Ehoo is the adjusted hourly sulfur dioxide emission rate, ng/J (lb/million Btu).

Eho is the hourly sulfur dioxide emission rate, ng/J (lb/million Btu).

Ew is the sulfur dioxide concentration in fuels other than coal and oil combusted in the affected facility, as determined by the fuel sampling and analysis procedures in Method 19, ng/J (lb/million Btu). The value Ew for each fuel lot is used for each hourly average during the time that the lot is being combusted.

Xk is the fraction of total heat input from fuel combustion derived from coal, oil, or coal and oil, as determined by applicable procedures in Method 19.

(ii) To compute the percent of potential sulfur dioxide emission rate (% Ps), an adjusted % Rg (% Rgo) is computed from the adjusted Eaoo from paragraph (b)(3)(i) of this section and an adjusted average sulfur dioxide inlet rate (Eaio) using the following formula:

% Rgo=100 (1.0-Eaoo/Eaio) To compute Eaio, an adjusted hourly sulfur dioxide inlet rate (Ehio) is used. The Ehio is computed using the following formula:

Ehio=[Ehi-Ew(1-Xk)]/Xk

where:

Ehio is the adjusted hourly sulfur dioxide inlet rate, ng/J (lb/million Btu).

Ehi is the hourly sulfur dioxide inlet rate, ng/J (lb/million Btu).

(4) The owner or operator of an affected facility subject to paragraph (b)(3) of this section does not have to measure parameters Ew or Xk if the owner or operator elects to assume that Xk=1.0. Owners or operators of affected facilities who assume Xk=1.0 shall

(i) Determine % Ps following the procedures in paragraph (c)(2) of this section, and

(ii) Sulfur dioxide emissions (Es) are considered to be in compliance with sulfur dioxide emission limits under ? 60.42b.

(5) The owner or operator of an affected facility that qualifies under the provisions of 40 CFR 60.42b(d) does not have to measure parameters Ew or Xk under paragraph (b)(3) of this section if the owner or operator of the affected facility elects to measure sulfur dioxide emission rates of the coal or oil following the fuel sampling and analysis procedures under Method 19.

(d) Except as provided in paragraph (j), the owner or operator of an affected facility that combusts only very low sulfur oil, has an annual capacity factor for oil of 10 percent (0.10) or less, and is subject to a Federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for oil of 10 percent (0.10) or less shall:

(1) Conduct the initial performance test over 24 consecutive steam generating unit operating hours at full load;

(2) Determine compliance with the standards after the initial performance test based on the arithmetic average of the hourly emissions data during each steam generating unit operating day if a continuous emission measurement system (CEMS) is used, or based on a daily average if Method 6B or fuel sampling and analysis procedures under Method 19 are used.

(e) The owner or operator of an affected facility subject to 40 CFR 60.42b(d)(1) shall demonstrate the maximum design capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. This demonstration will be made during the initial performance test and a subsequent demonstration may be requested at any other time. If the 24-hour average firing rate for the affected facility is less than the maximum design capacity provided by the manufacturer of the affected facility, the 24-hour average firing rate shall be used to determine the capacity utilization rate for the affected facility, otherwise the maximum design capacity provided by the manufacturer is used.

(f) For the initial performance test required under 40 CFR 60.8, compliance with the sulfur dioxide emission limits and percent reduction requirements under 40 CFR 60.42b is based on the average emission rates and the average percent reduction for sulfur dioxide for the first 30 consecutive steam generating unit operating days, except as provided under paragraph (d) of this section. The initial performance test is the only test for which at least 30 days prior notice is required unless otherwise specified by the Administrator. The initial performance test is to be scheduled so that the first steam generating unit operating day of the 30 successive steam generating unit operating days is completed within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility. The boiler load during the 30-day period does not have to be the maximum design load, but must be representative of future operating conditions and include at least one 24-hour period at full load.

(g) After the initial performance test required under 40 CFR 60.8, compliance with the sulfur dioxide emission limits and percent reduction requirements under 40 CFR 60.42b is based on the average emission rates and the average percent reduction for sulfur dioxide for 30 successive steam generating unit operating days, except as provided under paragraph (d). A separate performance test is completed at the end of each steam generating unit operating day after the initial performance test, and a new 30-day average emission rate and percent reduction for sulfur dioxide are calculated to show compliance with the standard.

(h) Except as provided under paragraph (i) of this section, the owner or operator of an affected facility shall use all valid sulfur dioxide emissions data in calculating % Ps and Eho under paragraph (c), of this section whether or not the minimum emissions data requirements under ? 60.46b are achieved. All valid emissions data, including valid sulfur dioxides emission data collected during periods of startup, shutdown and malfunction, shall be used in calculating % Ps and Eho pursuant to paragraph (c) of this section.

(i) During periods of malfunction or maintenance of the sulfur dioxide control systems when oil is combusted as provided under 40 CFR 60.42b(i), emission data are not used to calculate % Ps or Es under 40 CFR 60.42b (a), (b) or (c), however, the emissions data are used to determine compliance with the emission limit under 40 CFR 60.42b(i).

(j) The owner or operator of an affected facility that combusts very low sulfur oil is not subject to the compliance and performance testing requirements of this section if the owner or operator obtains fuel receipts as described in 40 CFR 60.49b(r).

§§ 60.46b Compliance and performance test methods and procedures for particulate matter and nitrogen oxides.

(a) The particulate matter emission standards and opacity limits under 40 CFR 60.43b apply at all times except during periods of startup, shutdown, or malfunction. The nitrogen oxides emission standards under 40 CFR 60.44b apply at all times.

(b) Compliance with the particulate matter emission standards under 40 CFR 60.43b shall be determined through performance testing as described in paragraph (d) of this section.

(c) Compliance with the nitrogen oxides emission standards under 40 CFR 60.44b shall be determined through performance testing under paragraph (e) or (f), or under paragraphs (g) and (h) of this section, as applicable.

(d) To determine compliance with the particulate matter emission limits and opacity limits under 40 CFR 60.43b, the owner or operator of an affected facility shall conduct an initial performance test as required under 40 CFR 60.8 using the following procedures and reference methods:

(1) Method 3B is used for gas analysis when applying Method 5 or Method 17.

(2) Method 5, Method 5B, or Method 17 shall be used to measure the concentration of particulate matter as follows:

(i) Method 5 shall be used at affected facilities without wet flue gas desulfurization (FGD) systems; and

(ii) Method 17 may be used at facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 degrees C (320 degrees F). The procedures of sections 2.1 and 2.3 of Method 5B may be used in Method 17 only if it is used after a wet FGD system. Do not use Method 17 after wet FGD systems if the effluent is saturated or laden with water droplets.

(iii) Method 5B is to be used only after wet FGD systems.

(3) Method 1 is used to select the sampling site and the number of traverse sampling points. The sampling time for each run is at least 120 minutes and the minimum sampling volume is 1.7 dscm (60 dscf) except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(4) For Method 5, the temperature of the sample gas in the probe and filter holder is monitored and is maintained at 160 +/-14 degrees C (320 +/-25 degrees F).

(5) For determination of particulate matter emissions, the oxygen or carbon dioxide sample is obtained simultaneously with each run of Method 5, Method 5B or Method 17 by traversing the duct at the same sampling location.

(6) For each run using Method 5, Method 5B or Method 17, the emission rate expressed in nanograms per joule heat input is determined using:

(i) The oxygen or carbon dioxide measurements and particulate matter measurements obtained under this section,

(ii) The dry basis F factor, and

(iii) The dry basis emission rate calculation procedure contained in Method 19.

(7) Method 9 is used for determining the opacity of stack emissions. [40 CFR 60.46b]

(e) To determine compliance with the emission limits for nitrogen oxides required under 40 CFR 60.44b, the owner or operator of an affected facility shall conduct the performance test as required under 40 CFR 60.8 using the continuous system for monitoring nitrogen oxides under ? 60.48(b).

(1) For the initial compliance test, nitrogen oxides from the steam generating unit are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the nitrogen oxides emission standards under 40 CFR 60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.

(2) Following the date on which the initial performance test is completed or is required to be completed under 40 CFR 60.8 of this part, whichever date comes first, the owner or operator of an affected facility which combusts coal or which combusts residual oil having a nitrogen content greater than 0.30 weight percent shall determine compliance with the nitrogen oxides emission standards under 40 CFR 60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.

(3) Following the date on which the initial performance test is completed or is required to be completed under 40 CFR 60.8 of this part, whichever date comes first, the owner or operator of an affected facility which has a heat input capacity greater than 73 MW (250 million Btu/hour) and which combusts natural gas, distillate oil, or residual oil having a nitrogen content of 0.30 weight percent or less shall determine compliance with the nitrogen oxides standards under 40 CFR 60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.

(4) Following the date on which the initial performance test is completed or required to be completed under 40 CFR 60.8 of this part, whichever date comes first, the owner or operator of an affected facility which has a heat input capacity of 73 MW (250 million Btu/hour) or less and which combusts natural gas, distillate oil, or residual oil having a nitrogen content of 0.30 weight percent or less shall upon request determine compliance with the nitrogen oxides standards under 40 CFR 60.44b through the use of a 30-day performance test. During periods when performance tests are not requested, nitrogen

oxides emissions data collected pursuant to 40 CFR 60.48b(g)(1) or 40 CFR 60.48b(g)(2) are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports, but will not be used to determine compliance with the nitrogen oxides emission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.

(5) If the owner or operator of an affected facility which combusts residual oil does not sample and analyze the residual oil for nitrogen content, as specified in 40 CFR 60.49b(e), the requirements of paragraph (iii) of this section apply and the provisions of paragraph (iv) of this section are inapplicable.

(f) To determine compliance with the emissions limits for NOX required by 40 CFR 60.44b(a)(4) or 40 CFR 60.44b(l) for duct burners used in combined cycle systems, either of the procedures described in paragraph (f)(1) or (2) of this section may be used:

(1) The owner or operator of an affected facility shall conduct the performance test required under 40 CFR 60.8 as follows:

(i) The emissions rate (E) of NOX shall be computed using Equation of 1 this section:

E = Esg + (Hg /Hb)(Esg - Eg) (Eq. 1) Where:

E = emissions rate of NOX from the duct burner, ng/J (lb/million Btu) heat input

Esg = combined effluent emissions rate, in ng/J (lb/million Btu) heat input using appropriate F-Factor as described in Method 19

Hg = heat input rate to the combustion turbine, in Joules/hour (million Btu/hour)

Hb = heat input rate to the duct burner, in Joules/hour (million Btu/hour)

Eg = emissions rate from the combustion turbine, in ng/J (lb/million Btu) heat input calculated using appropriate F-Factor as described in Method 19.

(ii) Method 7E of appendix A of this part shall be used to determine the NOX concentrations. Method 3A or 3B of appendix A of this part shall be used to determine oxygen concentration.

(iii) The owner or operator shall identify and demonstrate to the Administrator's satisfaction suitable methods to determine the average hourly heat input rate to the combustion turbine and the average hourly heat input rate to the affected duct burner.

(iv) Compliance with the emissions limits under 40 CFR 60.44b (a)(4) or ? 60.44b(l) is determined by the three-run average (nominal 1-hour runs) for the initial and subsequent performance tests; or

(2) The owner or operator of an affected facility may elect to determine compliance on a 30-day rolling average basis by using the continuous emission monitoring system specified under 40 CFR 60.48b for measuring NOX and oxygen and meet the requirements of 40 CFR 60.48b. The sampling site shall be located at the outlet from the steam generating unit. The NOX emissions rate at the outlet from the steam generating unit shall constitute the NOX emissions rate from the duct burner of the combined cycle system.

(g) The owner or operator of an affected facility described in 40 CFR 60.44b(j) or 40 CFR 60.44b(k) shall demonstrate the maximum heat input capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. The owner or operator of an affected facility shall determine the maximum heat input capacity using the heat loss method described in sections 5 and 7.3 of the ASME Power Test Codes 4.1 (see IBR 40 CFR 60.17(h)). This demonstration of maximum heat input capacity shall be made during the initial performance test for affected facilities that meet the criteria of 40 CFR 60.44b(j). It shall be made within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of each facility, for affected facilities meeting the criteria of 40 CFR 60.44b(k). Subsequent demonstrations may be required by the Administrator at any other time. If this demonstration indicates that the maximum heat input capacity of the affected facility is less than that stated by the manufacturer of the affected facility, the maximum heat input capacity determined during this demonstration shall be used to determine the capacity utilization rate for the affected facility. Otherwise, the maximum heat input capacity provided by the manufacturer is used.

(h) The owner or operator of an affected facility described in 40 CFR 60.44b(j) that has a heat input capacity greater than 73 MW (250 million Btu/hour) shall:

(1) Conduct an initial performance test as required under 40 CFR 60.8 over a minimum of 24 consecutive steam generating unit operating hours at maximum heat input capacity to demonstrate compliance with the nitrogen oxides emission standards under 40 CFR 60.44b using Method 7, 7A, 7E, or other approved reference methods; and

(2) Conduct subsequent performance tests once per calendar year or every 400 hours of operation (whichever comes first) to demonstrate compliance with the nitrogen oxides emission standards under 40 CFR 60.44b over a minimum of 3 consecutive steam generating unit operating hours at maximum heat input capacity using Method 7, 7A, 7E, or other approved reference methods.

§§ 60.47b Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (b) and (f) of this section, the owner or operator of an affected facility subject to the sulfur dioxide standards under 40 CFR 60.42b shall install, calibrate, maintain, and operate continuous emission monitoring systems (CEMS) for measuring sulfur dioxide concentrations and either oxygen (O2) or carbon dioxide (CO2) concentrations and shall record the output of the systems. The sulfur dioxide and either oxygen or carbon dioxide concentrations shall both be monitored at the inlet and outlet of the sulfur dioxide control device.

(b) As an alternative to operating CEMS as required under paragraph (a) of this section, an owner or operator may elect to determine the average sulfur dioxide emissions and percent reduction by:

(1) Collecting coal or oil samples in an as-fired condition at the inlet to the steam generating unit and analyzing them for sulfur and heat content according to Method 19. Method 19 provides procedures for converting these measurements into the format to be used in calculating the average sulfur dioxide input rate, or

(2) Measuring sulfur dioxide according to Method 6B at the inlet or outlet to the sulfur dioxide control system. An initial stratification test is required to verify the adequacy of the Method 6B sampling location. The stratification test shall consist of three paired runs of a suitable sulfur dioxide and carbon dioxide measurement train operated at the candidate location and a second similar train operated according to the procedures in section 3.2 and the applicable procedures in section 7 of Performance Specification 2. Method 6B, Method 6A, or a combination of Methods 6 and 3 or 3B or Methods 6C and 3A are suitable measurement techniques. If Method 6B is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent.

(3) A daily sulfur dioxide emission rate, ED, shall be determined using the procedure described in Method 6A, section 7.6.2 (Equation 6A-8) and stated in ng/J (lb/million Btu) heat input.

(4) The mean 30-day emission rate is calculated using the daily measured values in ng/J (lb/million Btu) for 30 successive steam generating unit operating days using equation 19-20 of Method 19.

(c) The owner or operator of an affected facility shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive boiler operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator or the reference methods and procedures as described in paragraph (b) of this section.

(d) The 1-hour average sulfur dioxide emission rates measured by the CEMS required by paragraph (a) of this section and required under ? 60.13(h) is expressed in ng/J or lb/million Btu heat input and is used to calculate the average emission rates under ? 60.42b. Each 1-hour average sulfur dioxide emission rate must be based on more than 30 minutes of steam generating unit operation and include at least 2 data points with each representing a 15-minute period. Hourly sulfur dioxide emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(e) The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 (appendix B).

(2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 (appendix F).

(3) For affected facilities combusting coal or oil, alone or in combination with other fuels, the span value of the sulfur dioxide CEMS at the inlet to the sulfur dioxide control device is 125 percent of the maximum estimated hourly potential sulfur dioxide emissions of the fuel combusted, and the span value of the CEMS at the outlet to the sulfur dioxide control device is 50 percent of the maximum estimated hourly potential sulfur dioxide emissions of the fuel combusted.

(f) The owner or operator of an affected facility that combusts very low sulfur oil is not subject to the emission monitoring requirements of this section if the owner or operator obtains fuel receipts as described in 40 CFR 60.49b(r).

§§ 60.48b Emission monitoring for particulate matter and nitrogen oxides.

(a) The owner or operator of an affected facility subject to the opacity standard under 40 CFR 60.43b shall install, calibrate, maintain, and operate a continuous monitoring system for measuring the opacity of emissions discharged to the atmosphere and record the output of the system.

(b) Except as provided under paragraphs (g), (h), and (i) of this section, the owner or operator of an affected facility shall comply with either paragraphs (b)(1) or (b)(2) of this section.

(1) Install, calibrate, maintain, and operate a continuous monitoring system, and record the output of the system, for measuring nitrogen oxides emissions discharged to the atmosphere; or

(2) If the owner or operator has installed a nitrogen oxides emission rate continuous emission monitoring system (CEMS) to meet the requirements of part 75 of this chapter and is

continuing to meet the ongoing requirements of part 75 of this chapter, that CEMS may be used to meet the requirements of this section, except that the owner or operator shall also meet the requirements of 40 CFR 60.49b. Data reported to meet the requirements of 40 CFR 60.49b shall not include data substituted using the missing data procedures in subpart D of part 75 of this chapter, nor shall the data have been bias adjusted according to the procedures of part 75 of this chapter.

(c) The continuous monitoring systems required under paragraph (b) of this section shall be operated and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(d) The 1-hour average nitrogen oxides emission rates measured by the continuous nitrogen oxides monitor required by paragraph (b) of this section and required under 40 CFR 60.13(h) shall be expressed in ng/J or lb/million Btu heat input and shall be used to calculate the average emission rates under 40 CFR 60.44b. The 1-hour averages shall be calculated using the data points required under 40 CFR 60.13(b). At least 2 data points must be used to calculate each 1-hour average.

(e) The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems.

(1) For affected facilities combusting coal, wood or municipal-type solid waste, the span value for a continuous monitoring system for measuring opacity shall be between 60 and 80 percent.

(2) For affected facilities combusting coal, oil, or natural gas, the span value for nitrogen oxides is determined as follows:

Fuel	Span values for nitrogen oxides (ppm)
natural gas	500
oil	500
coal	1000
mixtures	500(x+y)+1,000z

where:
x is the fraction of total heat input derived from natural gas,

y is the fraction of total heat input derived from oil, and

z is the fraction of total heat input derived from coal.

(3) All span values computed under paragraph (e)(2) of this section for combusting mixtures of regulated fuels are rounded to the nearest 500 ppm.

(f) When nitrogen oxides emission data are not obtained because of continuous monitoring system breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7, Method 7A, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

(g) The owner or operator of an affected facility that has a heat input capacity of 73 MW (250 million Btu/hour) or less, and which has an annual capacity factor for residual oil having a nitrogen content of 0.30 weight percent or less, natural gas, distillate oil, or any mixture of these fuels, greater than 10 percent (0.10) shall:

(1) Comply with the provisions of paragraphs (b), (c), (d), (e)(2), (e)(3), and (f) of this section, or

(2) Monitor steam generating unit operating conditions and predict nitrogen oxides emission rates as specified in a plan submitted pursuant to 40 CFR 60.49b(c).

(h) The owner or operator of a duct burner, as described in 40 CFR 60.41b, which is subject to the NOX standards of40 CFR 60.44b(a)(4) or 40 CFR 60.44b(l) is not required to install or operate a continuous emissions monitoring system to measure NOX emissions.

(i) The owner or operator of an affected facility described in 40 CFR 60.44b(j) or 40 CFR 60.44b(k) is not required to install or operate a continuous monitoring system for measuring nitrogen oxides emissions.

§§ 60.49b Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of initial startup, as provided by 40 CFR 60.7. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility,

(2) If applicable, a copy of any Federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under 40 CFR 60.42b(d)(1), 60.43b(a)(2), (a)(3)(iii), (c)(2)(ii), (d)(2)(iii), 60.44b(c), (d), (e), (i), (j), (k), 60.45b(d), (g), 60.46b(h), or 60.48b(i),

(3) The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired, and,

(4) Notification that an emerging technology will be used for controlling emissions of sulfur dioxide. The Administrator will examine the description of the emerging technology and will determine whether the technology qualifies as an emerging technology. In making

this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of 40 CFR 60.42b(a) unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the sulfur dioxide, particulate matter, and/or nitrogen oxides emission limits under 40 CFR 60.42b, 60.43b, and 60.44b shall submit to the Administrator the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in appendix B. The owner or operator of each affected facility described in 40 C 60.44b(j) or 40 60.44b(k) shall submit to the Administrator the maximum heat input capacity data from the demonstration of the maximum heat input capacity of the affected facility.

(c) The owner or operator of each affected facility subject to the nitrogen oxides standard of 40 CFR 60.44b who seeks to demonstrate compliance with those standards through the monitoring of steam generating unit operating conditions under the provisions of ? 60.48b(g)(2) shall submit to the Administrator for approval a plan that identifies the operating conditions to be monitored under 40 CFR 60.48b(g)(2) and the records to be maintained under 40 CFR 60.49b(j). This plan shall be submitted to the Administrator for approval within 360 days of the initial startup of the affected facility. The plan shall:

(1) Identify the specific operating conditions to be monitored and the relationship between these operating conditions and nitrogen oxides emission rates (i.e., ng/J or lbs/million Btu heat input). Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion (i.e., the ratio of primary air to secondary and/or tertiary air) and the level of excess air (i.e., flue gas oxygen level);

(2) Include the data and information that the owner or operator used to identify the relationship between nitrogen oxides emission rates and these operating conditions;

(3) Identify how these operating conditions, including steam generating unit load, will be monitored under 40 CFR 60.48b(g) on an hourly basis by the owner or operator during the period of operation of the affected facility; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the owner or operator under 40 CFR 60.49b(j). If the plan is approved, the owner or operator shall maintain records of predicted nitrogen oxide emission rates and the monitored operating conditions, including steam generating unit load, identified in the plan.

(d) The owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for the

reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

(e) For an affected facility that combusts residual oil and meets the criteria under 40 CFR 60.46b(e)(4), 60.44b (j), or (k), the owner or operator shall maintain records of the nitrogen content of the residual oil combusted in the affected facility and calculate the average fuel nitrogen content for the reporting period. The nitrogen content shall be determined using ASTM Method D3431-80, Test Method for Trace Nitrogen in Liquid Petroleum Hydrocarbons (IBR-see 40 CFR 60.17), or fuel suppliers. If residual oil blends are being combusted, fuel nitrogen specifications may be prorated based on the ratio of residual oils of different nitrogen content in the fuel blend.

(f) For facilities subject to the opacity standard under 40 CFR 60.43b, the owner or operator shall maintain records of opacity.

(g) Except as provided under paragraph (p) of this section, the owner or operator of an affected facility subject to the nitrogen oxides standards under 40 CFR 60.44b shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date.

(2) The average hourly nitrogen oxides emission rates (expressed as NO2) (ng/J or lb/million Btu heat input) measured or predicted.

(3) The 30-day average nitrogen oxides emission rates (ng/J or lb/million Btu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.

(4) Identification of the steam generating unit operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the nitrogen oxides emissions standards under 40 CFR 60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken.

(5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken.

(6) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data.

(7) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

(8) Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system.

(9) Description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specification 2 or 3.

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

(h) The owner or operator of any affected facility in any category listed in paragraphs (h) (1) or (2) of this section is required to submit excess emission reports for any excess emissions which occurred during the reporting period.

(1) Any affected facility subject to the opacity standards under 40 CFR 60.43b(e) or to the operating parameter monitoring requirements under 40 CFR 60.13(i)(1).

(2) Any affected facility that is subject to the nitrogen oxides standard of 40 CFR 60.44b, and that

(i) Combusts natural gas, distillate oil, or residual oil with a nitrogen content of 0.3 weight percent or less, or

(ii) Has a heat input capacity of 73 MW (250 million Btu/hour) or less and is required to monitor nitrogen oxides emissions on a continuous basis under 40 CFR 60.48b(g)(1) or steam generating unit operating conditions under 40 CFR 60.48b(g)(2).

(3) For the purpose of 40 CFR 60.43b, excess emissions are defined as all 6-minute periods during which the average opacity exceeds the opacity standards under 40 CFR 60.43b(f).

(4) For purposes of 40 CFR 60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average nitrogen oxides emission rate, as determined under 40 CFR 60.46b(e), which exceeds the applicable emission limits in 40 CFR 60.44b.

(i) The owner or operator of any affected facility subject to the continuous monitoring requirements for nitrogen oxides under 40 CFR 60.48(b) shall submit reports containing the information recorded under paragraph (g) of this section.

(j) The owner or operator of any affected facility subject to the sulfur dioxide standards under 40 CFR 60.42b shall submit reports.

(k) For each affected facility subject to the compliance and performance testing requirements of 40 CFR 60.45b and the reporting requirement in paragraph (j) of this section, the following information shall be reported to the Administrator:

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average sulfur dioxide emission rate (ng/J or 1b/million Btu heat input) measured during the reporting period, ending with the last 30-day period; reasons for noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent reduction in sulfur dioxide emissions calculated during the reporting period, ending with the last 30-day period; reasons for noncompliance with the emission standards; and a description of corrective actions taken.

(4) Identification of the steam generating unit operating days that coal or oil was combusted and for which sulfur dioxide or diluent (oxygen or carbon dioxide) data have not been obtained by an approved method for at least 75 percent of the operating hours in the steam generating unit operating day; justification for not obtaining sufficient data; and description of corrective action taken.

(5) Identification of the times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and description of corrective action taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

(7) Identification of times when hourly averages have been obtained based on manual sampling methods.

(8) Identification of the times when the pollutant concentration exceeded full span of the CEMS.

(9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3.

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

(11) The annual capacity factor of each fired as provided under paragraph (d) of this section.

(l) For each affected facility subject to the compliance and performance testing requirements of 40 CFR 60.45b(d) and the reporting requirements of paragraph (j) of this section, the following information shall be reported to the Administrator:

(1) Calendar dates when the facility was in operation during the reporting period;

(2) The 24-hour average sulfur dioxide emission rate measured for each steam generating unit operating day during the reporting period that coal or oil was combusted, ending in the last 24-hour period in the quarter; reasons for noncompliance with the emission standards; and a description of corrective actions taken;

(3) Identification of the steam generating unit operating days that coal or oil was combusted for which sulfur dioxide or diluent (oxygen or carbon dioxide) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and description of corrective action taken.

(4) Identification of the times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and description of corrective action taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(5) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

(6) Identification of times when hourly averages have been obtained based on manual sampling methods.

(7) Identification of the times when the pollutant concentration exceeded full span of the CEMS.

(8) Description of any modifications to the CEMS which could affect the ability of the CEMS to comply with Performance Specification 2 or 3.

(9) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

(m) For each affected facility subject to the sulfur dioxide standards under 40 CFR 60.42(b) for which the minimum amount of data required under 40 CFR 60.47b(f) were not obtained during the reporting period, the following information is reported to the Administrator in addition to that required under paragraph (k) of this section:

(1) The number of hourly averages available for outlet emission rates and inlet emission rates.

(2) The standard deviation of hourly averages for outlet emission rates and inlet emission rates, as determined in Method 19, section 7.

(3) The lower confidence limit for the mean outlet emission rate and the upper confidence limit for the mean inlet emission rate, as calculated in Method 19, section 7.

(4) The ratio of the lower confidence limit for the mean outlet emission rate and the allowable emission rate, as determined in Method 19, section 7.

(n) If a percent removal efficiency by fuel pretreatment (i.e., % Rf) is used to determine the overall percent reduction (i.e., % Ro) under 40 CFR 60.45b, the owner or operator of the affected facility shall submit a signed statement with the report.

(1) Indicating what removal efficiency by fuel pretreatment (i.e., % Rf) was credited during the reporting period;

(2) Listing the quantity, heat content, and date each pre-treated fuel shipment was received during the reporting period, the name and location of the fuel pretreatment facility; and the total quantity and total heat content of all fuels received at the affected facility during the reporting period.

(3) Documenting the transport of the fuel from the fuel pretreatment facility to the steam generating unit.

(4) Including a signed statement from the owner or operator of the fuel pretreatment facility certifying that the percent removal efficiency achieved by fuel pretreatment was determined in accordance with the provisions of Method 19 (appendix A) and listing the heat content and sulfur content of each fuel before and after fuel pretreatment.

(o) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of 2 years following the date of such record.

(p) The owner or operator of an affected facility described in 40 CFR 60.44b(j) or (k) shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date,

(2) The number of hours of operation, and

(3) A record of the hourly steam load.

(q) The owner or operator of an affected facility described in 40 CFR 60.44b(j) or 40 CFR 60.44b(k) shall submit to the Administrator a report containing:

(1) The annual capacity factor over the previous 12 months;

(2) The average fuel nitrogen content during the reporting period, if residual oil was fired; and

(3) If the affected facility meets the criteria described in 40 CFR 60.44b(j), the results of any nitrogen oxides emission tests required during the reporting period, the hours of operation

during the reporting period, and the hours of operation since the last nitrogen oxides emission test.

(r) The owner or operator of an affected facility who elects to demonstrate that the affected facility combusts only very low sulfur oil under 40 CFR 60.42b(j)(2) shall obtain and maintain at the affected facility fuel receipts from the fuel supplier which certify that the oil meets the definition of distillate oil as defined in 40 CFR 60.41b. For the purposes of this section, the oil need not meet the fuel nitrogen content specification in the definition of distillate oil. Reports shall be submitted to the Administrator certifying that only very low sulfur oil meeting this definition was combusted in the affected facility during the reporting period.

(s) Facility specific nitrogen oxides standard for Cytec Industries Fortier Plant's C.AOG incinerator located in Westwego, Louisiana:

(1) Definitions.

Oxidation zone is defined as the portion of the C.AOG incinerator that extends from the inlet of the oxidizing zone combustion air to the outlet gas stack.

Reducing zone is defined as the portion of the C.AOG incinerator that extends from the burner section to the inlet of the oxidizing zone combustion air.

Total inlet air is defined as the total amount of air introduced into the C.AOG incinerator for combustion of natural gas and chemical by-product waste and is equal to the sum of the air flow into the reducing zone and the air flow into the oxidation zone.

(2) Standard for nitrogen oxides. (i) When fossil fuel alone is combusted, the nitrogen oxides emission limit for fossil fuel in ? 60.44b(a) applies.

(i) When natural gas and chemical by-product waste are simultaneously combusted, the nitrogen oxides emission limit is 289 ng/J (0.67 lb/million Btu) and a maximum of 81 percent of the total inlet air provided for combustion shall be provided to the reducing zone of the C.AOG incinerator.

(3) Emission monitoring. (i) The percent of total inlet air provided to the reducing zone shall be determined at least every 15 minutes by measuring the air flow of all the air entering the reducing zone and the air flow of all the air entering the oxidation zone, and compliance with the percentage of total inlet air that is provided to the reducing zone shall be determined on a 3-hour average basis.

(i) The nitrogen oxides emission limit shall be determined by the compliance and performance test methods and procedures for nitrogen oxides in 40 CFR 60.46b(i).

(ii) The monitoring of the nitrogen oxides emission limit shall be performed in accordance with 40 CFR 60.48b.

(4) Reporting and recordkeeping requirements. (i) The owner or operator of the C.AOG incinerator shall submit a report on any excursions from the limits required by paragraph (a)(2) of this section to the Administrator with the quarterly report required by paragraph (i) of this section.

(i) The owner or operator of the C.AOG incinerator shall keep records of the monitoring required by paragraph (a)(3) of this section for a period of 2 years following the date of such record.

(ii) The owner of operator of the C.AOG incinerator shall perform all the applicable reporting and recordkeeping requirements of this section.

(t) Facility-specific nitrogen oxides standard for Rohm and Haas Kentucky Incorporated's Boiler No. 100 located in Louisville, Kentucky:

(1) Definitions.

Air ratio control damper is defined as the part of the low nitrogen oxides burner that is adjusted to control the split of total combustion air delivered to the reducing and oxidation portions of the combustion flame.

Flue gas recirculation line is defined as the part of Boiler No. 100 that recirculates a portion of the boiler flue gas back into the combustion air.

(2) Standard for nitrogen oxides. (i) When fossil fuel alone is combusted, the nitrogen oxides emission limit for fossil fuel in 40 CFR 60.44b(a) applies.

(i) When fossil fuel and chemical by-product waste are simultaneously combusted, the nitrogen oxides emission limit is 473 ng/J (1.1 lb/million Btu), and the air ratio control damper tee handle shall be at a minimum of 5 inches (12.7 centimeters) out of the boiler, and the flue gas recirculation line shall be operated at a minimum of 10 percent open as indicated by its valve opening position indicator.

(3) Emission monitoring for nitrogen oxides. (i) The air ratio control damper tee handle setting and the flue gas recirculation line valve opening position indicator setting shall be recorded during each 8-hour operating shift.

(i) The nitrogen oxides emission limit shall be determined by the compliance and performance test methods and procedures for nitrogen oxides in 40 CFR 60.46b.

(ii) The monitoring of the nitrogen oxides emission limit shall be performed in accordance with 40 CFR 60.48b.

(4) Reporting and recordkeeping requirements. (i) The owner or operator of Boiler No. 100 shall submit a report on any excursions from the limits required by paragraph (b)(2) of this section to the Administrator with the quarterly report required by 40 CFR 60.49b(i).

(i) The owner or operator of Boiler No. 100 shall keep records of the monitoring required by paragraph (b)(3) of this section for a period of 2 years following the date of such record.

(ii) The owner of operator of Boiler No. 100 shall perform all the applicable reporting and recordkeeping requirements of 40 CFR 60.49b.

(u)Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia. (1) This paragraph applies only to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, in Elkton, Virginia ("site") and only to the natural gas-fired boilers installed as part of the powerhouse conversion required pursuant to 40 CFR 52.2454(g). The requirements of this paragraph shall apply, and the requirements of 40 CFR 60.40b through 60.49b(t) shall not apply, to the natural gas-fired boilers installed pursuant to 40 CFR 52.2454(g).

(i) The site shall equip the natural gas-fired boilers with low nitrogen oxide (NOX) technology.

(ii) The site shall install, calibrate, maintain, and operate a continuous monitoring and recording system for measuring NOX emissions discharged to the atmosphere and opacity using a continuous emissions monitoring system or a predictive emissions monitoring system.

(iii) Within 180 days of the completion of the powerhouse conversion, as required by 40 CFR 52.2454, the site shall perform a stack test to quantify criteria pollutant emissions.

(2) [Reserved]

(v) The owner or operator of an affected facility may submit electronic quarterly reports for SO2 and/or NOX and/or opacity in lieu of submitting the written reports required under paragraphs (h), (i), (j), (k) or (l) of this section. The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of this subpart was achieved during the reporting period. Before submitting reports in the electronic format, the owner or operator shall coordinate with the permitting authority to obtain their agreement to submit reports in this alternative format.

(w) The reporting period for the reports required under this subpart is each 6 month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

4. [40 CFR 60, Subpart VV] Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry

The following emissions units are subject to this rule: J001, J002, N006, P035, P048, P062, P074, P075, P801, T065, T066, T067, T068, T069, T070, T079, T080, T081, T082, T084, T088, T093, T094, T095, T096, T097, , T099, T100, T101, T102, T113, T114, and T115.

§§ 60.482-1 Standards: General.

(a) Each owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of §§§§ 60.482-1 through 60.482-10 or §§ 60.480(e) for all equipment within 180 days of initial startup.

(b) Compliance with §§§§ 60.482-1 to 60.482-10 will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in §§ 60.485.

(c)(1) An owner or operator may request a determination of equivalence of a means of emission limitation to the requirements of §§§§ 60.482-2, 60.482-3, 60.482-5, 60.482-6, 60.482-7, 60.482-8, and 60.482-10 as provided in §§ 60.484.

(2) If the Administrator makes a determination that a means of emission limitation is at least equivalent to the requirements of §§§§ 60.482-2, 60.482-3, 60.482-5, 60.482-6, 60.482-7, 60.482-8, or 60.482-10, an owner or operator shall comply with the requirements of that determination.

(d) Equipment that is in vacuum service is excluded from the requirements of §§§§ 60.482-2 to 60.482-10 if it is identified as required in §§ 60.486(e)(5).

§§ 60.482-2 Standards: Pumps in light liquid service.

(a)(1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in §§60.485(b), except as provided in §§ 60.482-1(c) and paragraphs (d), (e), and (f) of this section.

(2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

(b)(1) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(2) If there are indications of liquids dripping from the pump seal, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §§ 60.482-9.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (a), *Provided* the following requirements are met:

(1) Each dual mechanical seal system is --

(i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or

(ii) Equipment with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of §§ 60.482-10; or

(iii) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

(2) The barrier fluid system is in heavy liquid service or is not in VOC service.

(3) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4) Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

(5)(i) Each sensor as described in paragraph (d)(3) is checked daily or is equipped with an audible alarm, and

(ii) The owner or operator determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(6)(i) If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined in paragraph (d)(5)(ii), a leak is detected.

(ii) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §§ 60.482-9.

(iii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) Any pump that is designated, as described in §§ 60.486(e)(1) and (2), for no detectable emission, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a), (c), and (d) of this section if the pump:

(1) Has no externally actuated shaft penetrating the pump housing,

(2) Is demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in §§ 60.485(c), and

(3) Is tested for compliance with paragraph (e)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.

(f) If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or to a control device that complies with the requirements of §§ 60.482-10, it is exempt from paragraphs (a) through (e) of this section.

(g) Any pump that is designated, as described in §§ 60.486(f)(1), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of paragraphs (a) and (d)(4) through (6) of this section if:

(1) The owner or operator of the pump demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a) of this section; and

(2) The owner or operator of the pump has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in paragraph (c) of this section if a leak is detected.

(h) Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (a)(2) and (d)(4) of this section, and the daily requirements of paragraph (d)(5) of this section, provided that each pump is visually inspected as often as practicable and at least monthly.

§§ 60.482-3 Standards: Compressors.

(a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in §§ 60.482-1(c) and paragraph (h) and (i) of this section.

(b) Each compressor seal system as required in paragraph (a) shall be:

(1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or

(2) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of §§ 60.482-10; or

(3) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

(c) The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.

(d) Each barrier fluid system as described in paragraph (a) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(e)(1) Each sensor as required in paragraph (d) shall be checked daily or shall be equipped with an audible alarm.

(2) The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(f) If the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined under paragraph (e)(2), a leak is detected.

(g)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §§ 60.482-9.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(h) A compressor is exempt from the requirements of paragraphs (a) and (b) of this section, if it is equipped with a closed vent system to capture and transport leakage from the compressor drive shaft back to a process or fuel gas system or to a control device that complies with the requirements of §§ 60.482-10, except as provided in paragraph (i) of this section.

(i) Any compressor that is designated, as described in §§ 60.486(e) (1) and (2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a)-(h) if the compressor:

(1) Is demonstrated to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the methods specified in §§ 60.485(c); and

(2) Is tested for compliance with paragraph (i)(1) of this section initially upon designation, annually, and at other times requested by the Administrator.

(j) Any existing reciprocating compressor in a process unit which becomes an affected facility under provisions of §§ 60.14 or §§ 60.15 is exempt from §§ 60.482(a), (b), (c), (d), (e), and (h), provided the owner or operator demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of paragraphs (a) through (e) and (h) of this section.

§§ 60.482-4 Standards: Pressure relief devices in gas/vapor service.

(a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in §§ 60.485(c).

(b)(1) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above

background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in §§ 60.482-9.

(2) No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in §§ 60.485(c).

(c) Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in §§ 60.482-10 is exempted from the requirements of paragraphs (a) and (b) of this section.

(d)(1) Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of paragraphs (a) and (b) of this section, provided the owner or operator complies with the requirements in paragraph (d)(2) of this section.

(2) After each pressure release, a new rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in §§ 60.482-9.

§§ 60.482-5 Standards: Sampling connection systems.

(a) Each sampling connection system shall be equipped with a closed-purged, closed-loop, or closed-vent system, except as provided in §§ 60.482-1(c). Gases displaced during filling of the sample container are not required to be collected or captured.

(b) Each closed-purge, closed-loop, or closed-vent system as required in paragraph (a) of this section shall comply with the requirements specified in paragraphs (b)(1) through (4) of this section:

(1) Return the purged process fluid directly to the process line; or

(2) Collect and recycle the purged process fluid to a process; or

(3) Be designed and operated to capture and transport all the purged process fluid to a control device that complies with the requirements of §§ 60.482-10; or

(4) Collect, store, and transport the purged process fluid to any of the following systems or facilities:

(i) A waste management unit as defined in 40 CFR 63.111, if the waste management unit is subject to, and operated in compliance with the provisions of 40 CFR part 63, subpart G, applicable to Group 1 wastewater streams;

(ii) A treatment, storage, or disposal facility subject to regulation under 40 CFR part 262, 264, 265, or 266; or

(iii) A facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR part 261.

(c) In situ sampling systems and sampling systems without purges are exempt from the requirements of paragraphs (a) and (b) of this section.

§§ 60.482-6 Standards: Open-ended valves or lines.

(a)(1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §§ 60.482-1(c).

(2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.

(b) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

(c) When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (a) at all other times.

(d) Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs (a), (b) and (c) of this section.

(e) Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in paragraphs (a) through (c) of this section are exempt from the requirements of paragraphs (a) through (c) of this section.

§§ 60.482-7 Standards: Valves in gas/vapor service and in light liquid service.

(a) Each valve shall be monitored monthly to detect leaks by the methods specified in §§ 60.485(b) and shall comply with paragraphs (b) through (e), except as provided in paragraphs (f), (g), and (h), §§ 60.483-1, 2, and §§ 60.482-1(c).

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c)(1) Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected.

(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.

(d)(1) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in §§ 60.482-9.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) First attempts at repair include, but are not limited to, the following best practices where practicable:

(1) Tightening of bonnet bolts;

(2) Replacement of bonnet bolts;

(3) Tightening of packing gland nuts;

(4) Injection of lubricant into lubricated packing.

(f) Any valve that is designated, as described in §§ 60.486(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraph (a) if the valve:

(1) Has no external actuating mechanism in contact with the process fluid,

(2) Is operated with emissions less than 500 ppm above background as determined by the method specified in §§ 60.485(c), and

(3) Is tested for compliance with paragraph (f)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.

(g) Any valve that is designated, as described in §§ 60.486(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of paragraph (a) if:

(1) The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a), and

(2) The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

(h) Any valve that is designated, as described in §§ 60.486(f)(2), as a difficult-to-monitor valve is exempt from the requirements of paragraph (a) if:

(1) The owner or operator of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.

(2) The process unit within which the valve is located either becomes an affected facility through §§ 60.14 or §§ 60.15 or the owner or operator designates less than 3.0 percent of the total number of valves as difficult-to-monitor, and

(3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

§§ 60.482-8 Standards: Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors.

(a) If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors, the owner or operator shall follow either one of the following procedures:

(1) The owner or operator shall monitor the equipment within 5 days by the method specified in §§ 60.485(b) and shall comply with the requirements of paragraphs (b) through (d) of this section.

(2) The owner or operator shall eliminate the visual, audible, olfactory, or other indication of a potential leak.

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §§ 60.482-9.

(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) First attempts at repair include, but are not limited to, the best practices described under §§ 60.482-7(e).

§§ 60.482-9 Standards: Delay of repair.

(a) Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.

(b) Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.

(c) Delay of repair for valves will be allowed if:

(1) The owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and

(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with §§ 60.482-10.

(d) Delay of repair for pumps will be allowed if:

(1) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and

(2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

(e) Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

§§ 60.482-10 Standards: Closed vent systems and control devices.

(a) Owners or operators of closed vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of this section.

(b) Vapor recovery systems (for example, condensers and absorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, whichever is less stringent.

(c) Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816 °°C.

(d) Flares used to comply with this subpart shall comply with the requirements of §§60.18.

(e) Owners or operators of control devices used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs.

(f) Except as provided in paragraphs (i) through (k) of this section, each closed vent system shall be inspected according to the procedures and schedule specified in paragraphs (f)(1) and (f)(2) of this section.

(1) If the vapor collection system or closed vent system is constructed of hard-piping, the owner or operator shall comply with the requirements specified in paragraphs (f)(1)(i) and (f)(1)(ii) of this section:

(i) Conduct an initial inspection according to the procedures in §§ 60.485(b); and

(ii) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

(2) If the vapor collection system or closed vent system is constructed of ductwork, the owner or operator shall:

(i) Conduct an initial inspection according to the procedures in §§ 60.485(b); and

(ii) Conduct annual inspections according to the procedures in §§ 60.485(b).

(g) Leaks, as indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspections, shall be repaired as soon as practicable except as provided in paragraph (h) of this section.

(1) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(2) Repair shall be completed no later than 15 calendar days after the leak is detected.

(h) Delay of repair of a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the owner or operator 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 process unit shutdown.

(i) If a vapor collection system or closed vent system is operated under a vacuum, it is exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section.

(j) Any parts of the closed vent system that are designated, as described in paragraph (l)(1) of this section, as unsafe to inspect are exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section if they comply with the requirements specified in paragraphs (j)(1) and (j)(2) of this section:

(1) The owner or operator 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 paragraphs (f)(1)(i) or (f)(2) of this section; and

(2) The owner or operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

(k) Any parts of the closed vent system that are designated, as described in paragraph (l)(2) of this section, as difficult to inspect are exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section if they comply with the requirements specified in paragraphs (k)(1) through (k)(3) of this section:

(1) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

(2) The process unit within which the closed vent system is located becomes an affected facility through §§§§ 60.14 or 60.15, or the owner or operator designates less than 3.0 percent of the total number of closed vent system equipment as difficult to inspect; and

(3) The owner or operator has a written plan that requires inspection of the equipment at least once every 5 years. A closed vent system is exempt from inspection if it is operated under a vacuum.

(l) The owner or operator shall record the information specified in paragraphs (l)(1) through (l)(5) of this section.

(1) Identification of all parts of the closed vent system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.

(2) Identification of all parts of the closed vent system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.

(3) For each inspection during which a leak is detected, a record of the information specified in §§ 60.486(c).

(4) For each inspection conducted in accordance with §§ 60.485(b) 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.

(5) For each visual inspection conducted in accordance with paragraph (f)(1)(ii) of this section 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.

(m) Closed vent systems and control devices used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

5. [40 CFR 63, Subpart F] National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry

The following emissions units are subject to this rule: P035, P048, P050, P062, P074, P075, P076, P079, P080, P081, P801, ,

, P806, , T015, , T023, T024, T025, T026, T027, T028, T032, T033, T065, T066, T067, T068, T069, T070, , T073, T079, T080, T081, T082, T092, T093, T113, T114, T115 and T116.

§§ 63.100 Applicability and designation of source.

(a) This subpart provides applicability provisions, definitions, and other general provisions that are applicable to subparts G and H of this part.

(b) Except as provided in paragraphs (b)(4) and (c) of this section, the provisions of subparts F, G, and H of this part apply to chemical manufacturing process units that meet all the criteria specified in paragraphs (b)(1), (b)(2), and (b)(3) of this section:

(1) Manufacture as a primary product one or more of the chemicals listed in paragraphs (b)(1)(i) or (b)(1)(ii) of this section.

(i) One or more of the chemicals listed in table 1 of this subpart; or

(ii) One or more of the chemicals listed in paragraphs (b)(1)(ii)(A) or (b)(1)(ii)(B) of this section:

(A) Tetrahydrobenzaldehyde (CAS Number 100-50-5); or

(B) Crotonaldehyde (CAS Number 123-73-9

(2) Use as a reactant or manufacture as a product, or co-product, one or more of the organic hazardous air pollutants listed in table 2 of this subpart;

(3) Are located at a plant site that is a major source as defined in section 112(a) of the Act.

(4) The owner or operator of a chemical manufacturing processing unit is exempt from all requirements of subparts F, G, and H of this part until not later than April 22, 1997 if the owner or operator certifies, in a notification to the appropriate EPA Regional Office, not later than May 14, 1996, that the plant site at which the chemical manufacturing processing unit is located emits, and will continue to emit, during any 12-month period, less than 10 tons per year of any individual hazardous air pollutants (HAP), and less than 25 tons per year of any combination of HAP.

(i) If such a determination is based on limitations and conditions that are not federally enforceable (as defined in subpart A of this part), the owner or operator shall document the basis for the determination as specified in paragraphs (b)(4)(i)(A) through (b)(4)(i)(C) and comply with the recordkeeping requirement in 63.103(f). 4003. [40 CFR 63.100(b)]

(A) The owner or operator shall identify all HAP emission points at the plant site, including those emission points subject to and emission points not subject to subparts F, G, and H;

(B) The owner or operator shall calculate the amount of annual HAP emissions released from each emission point at the plant site, using acceptable measurement or estimating techniques for maximum expected operating conditions at the plant site. Examples of estimating procedures that are considered acceptable include the calculation procedures in ? 63.150 of subpart G, the early reduction demonstration procedures specified in ?? 63.74 (c)(2), (c)(3), (d)(2), (d)(3), and (g), or accepted engineering practices. If the total annual HAP emissions for the plant site are annually reported under Emergency Planning and Community Right-to-Know Act (EPCRA) section 313, then such reported annual emissions may be used to satisfy the requirements of ? 63.100(b)(4)(i)(B).

(C) The owner or operator shall sum the amount of annual HAP emissions from all emission points on the plant site. If the total emissions of any one HAP are less than 10 tons per year and the total emissions of any combination of HAP are less than 25 tons per year, the plant site qualifies for the exemption described in paragraph (b)(4) of this section, provided that emissions are kept below these thresholds.

(i) If such a determination is based on limitations and conditions that are federally enforceable (as defined in subpart A of this part), the owner or operator is not subject to the provisions of paragraph (b)(4) of this section.

(c) The owner or operator of a chemical manufacturing process unit that meets the criteria specified in paragraphs (b)(1) and (b)(3) of this section but does not use as a reactant or manufacture as a product or co-product, any organic hazardous air pollutant listed in table 2 of this subpart shall comply only with the requirements of ? 63.103(e) of this subpart. To comply with this subpart, such chemical manufacturing process units shall not be required to comply with the provisions of subpart A of this part.

(d) The primary product of a chemical manufacturing process unit shall be determined according to the procedures specified in paragraphs (d)(1), (d)(2), (d)(3), and (d)(4) of this section.

(1) If a chemical manufacturing process unit produces more than one intended chemical product, the product with the greatest annual design capacity on a mass basis determines the primary product of the process.

(2) If a chemical manufacturing process unit has two or more products that have the same maximum annual design capacity on a mass basis and if one of those chemicals is listed in table 1 of this subpart, then the listed chemical is considered the primary product and the chemical manufacturing process unit is subject to this subpart. If more than one of the products is listed in table 1 of this subpart, then the owner or operator may designate as the primary product any of the listed chemicals and the chemical manufacturing process unit is subject to this subpart.

(3) For chemical manufacturing process units that are designed and operated as flexible operation units producing one or more chemicals listed in table 1 of this subpart, the primary product shall be determined for existing sources based on the expected utilization for the five years following April 22, 1994 and for new sources based on the expected utilization for the first five years after initial start-up.

(i) If the predominant use of the flexible operation unit, as described in paragraphs (d)(3)(i)(A) and (d)(3)(i)(B) of this section, is to produce one or more chemicals listed in table 1 of this subpart, then the flexible operation unit shall be subject to the provisions of subparts F, G, and H of this part.

(A) If the flexible operation unit produces one product for the greatest annual operating time, then that product shall represent the primary product of the flexible operation unit.

(B) If the flexible operation unit produces multiple chemicals equally based on operating time, then the product with the greatest annual production on a mass basis shall represent the primary product of the flexible operation unit.

(ii) The determination of applicability of this subpart to chemical manufacturing process units that are designed and operated as flexible operation units shall be reported as part of an operating permit application or as otherwise specified by the permitting authority.

(4) Notwithstanding the provisions of paragraph (d)(3) of this section, for chemical manufacturing process units that are designed and operated as flexible operation units producing a chemical listed in paragraph (b)(1)(ii) of this section, the primary product shall be determined for existing sources based on the expected utilization for the five years following May 12, 1998 and for new sources based on the expected utilization for the first five years after initial start-up.

(i) The predominant use of the flexible operation unit shall be determined according to paragraphs (d)(3)(i)(A) and (d)(3)(i)(B) of this section. If the predominant use is to produce one of the chemicals listed in paragraph (b)(1)(ii) of this section, then the flexible operation unit shall be subject to the provisions of this subpart and subparts G and H of this part.

(ii) The determination of applicability of this subpart to chemical manufacturing process units that are designed and operated as flexible operation units shall be reported as part of an operating permit application or as otherwise specified by the permitting authority.

(e) The source to which this subpart applies is the collection of all chemical manufacturing process units and the associated equipment at a major source that meet the criteria specified in paragraphs (b)(1) through (3) of this section. The source includes the process vents; storage vessels; transfer racks; waste management units; maintenance wastewater; heat exchange systems; equipment identified in 40 CFR 63.149; and pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, surge control vessels, and bottoms receivers that are associated with that collection of chemical manufacturing process units. The source also includes equipment required by, or utilized as a method of compliance with, subparts F, G, or H of this part which may include control devices and recovery devices.

(1) This subpart applies to maintenance wastewater and heat exchange systems within a source that is subject to this subpart.

(2) This subpart F and subpart G of this part apply to process vents, storage vessels, transfer racks, equipment identified in 40 CFR 63.149 of subpart G of this part, and wastewater streams and associated treatment residuals within a source that is subject to this subpart.

(3) This subpart F and subpart H of this part apply to pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, surge control vessels, and bottoms receivers within a source that is subject to this subpart. If specific items of equipment, comprising part of a chemical manufacturing 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 chemical manufacturing process unit within the source for all purposes under subpart H of this part, providing there is no delay in the applicable compliance date in 40 CFR 63.100(k).

(f) The source includes the emission points listed in paragraphs (f)(1) through (f)(11) of this section, but those emission points are not subject to the requirements of this subpart F and subparts G and H of this part. This subpart does not require emission points that are listed in paragraphs (f)(1) through (f)(11) of this section to comply with the provisions of subpart A of this part.

(1) Equipment that is located within a chemical manufacturing process unit that is subject to this subpart but the equipment does not contain organic hazardous air pollutants.

(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 storing organic liquids that contain organic hazardous air pollutants only as impurities;

(9) Loading racks, loading arms, or loading hoses that only transfer liquids containing organic hazardous air pollutants as impurities;

(10) Loading racks, loading arms, or loading hoses that vapor balance during all loading operations; and

(11) Equipment that is intended to operate in organic hazardous air pollutant service, as defined in 40 CFR 63.161 of subpart H of this part, for less than 300 hours during the calendar year.

(g) The owner or operator shall follow the procedures specified in paragraphs (g)(1) through (g)(4) of this section to determine whether a storage vessel is part of the source to which this subpart applies.

(1) Where a storage vessel is dedicated to a chemical manufacturing process unit, the storage vessel shall be considered part of that chemical manufacturing process unit.

(i) If the chemical manufacturing process unit is subject to this subpart according to the criteria specified in paragraph (b) of this section, then the storage vessel is part of the source to which this subpart applies.

(ii) If the chemical manufacturing process unit is not subject to this subpart according to the criteria specified in paragraph (b) of this section, then the storage vessel is not part of the source to which this subpart applies.

(2) If a storage vessel is not dedicated to a single chemical manufacturing process unit, then the applicability of this subpart F and subpart G of this part shall be determined according to the provisions in paragraphs (g)(2)(i) through (g)(2)(iii) of this section.

(i) If a storage vessel is shared among chemical manufacturing process units and one of the process units has the predominant use, as determined by paragraph (g)(2)(i)(A) and (g)(2)(i)(B) of this section, then the storage vessel is part of that chemical manufacturing process unit.

(A) If the greatest input into the storage vessel is from a chemical manufacturing process unit that is located on the same plant site, then that chemical manufacturing process unit has the predominant use.

(B) If the greatest input into the storage vessel is provided from a chemical manufacturing process unit that is not located on the same plant site, then the predominant use is the chemical manufacturing process unit on the same plant site that receives the greatest amount of material from the storage vessel.

(ii) If a storage vessel is shared among chemical manufacturing process units so that there is no single predominant use, and at least one of those chemical manufacturing process units is subject to this subpart, the storage vessel shall be considered to be part of the chemical manufacturing process unit that is subject to this subpart. If more than one chemical

manufacturing process unit is subject to this subpart, the owner or operator may assign the storage vessel to any of the chemical manufacturing process units subject to this subpart.

(iii) If the predominant use of a storage vessel varies from year to year, then the applicability of this subpart shall be determined according to the criteria in paragraphs (g)(2)(iii)(A) and (g)(2)(iii)(B) of this section, as applicable. This determination shall be reported as part of an operating permit application or as otherwise specified by the permitting authority.

(A) For chemical manufacturing process units that produce one or more of the chemicals listed in table 1 of this subpart and meet the criteria in paragraphs (b)(2) and (b)(3) of this section, the applicability shall be based on the utilization that occurred during the 12-month period preceding April 22, 1994.

(B) For chemical manufacturing process units that produce one or more of the chemicals listed in paragraph (b)(1)(ii) of this section and meet the criteria in paragraphs (b)(2) and (b)(3) of this section, the applicability shall be based on the utilization that occurred during the 12-month period preceding May 12, 1998.

(iv) If there is a change in the material stored in the storage vessel, the owner or operator shall reevaluate the applicability of this subpart to the vessel.

(3) Where a storage vessel is located at a major source that includes one or more chemical manufacturing 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 F and subpart G of this part shall be determined according to the provisions in paragraphs (g)(3)(i) through (g)(3)(iv) of this section.

(i) The storage vessel may only be assigned to a chemical manufacturing 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 chemical manufacturing process unit, an intervening storage vessel means a storage vessel connected by hard-piping to the chemical manufacturing process unit and to the storage vessel in the tank farm so that product or raw material entering or leaving the chemical manufacturing 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 chemical manufacturing process unit at the major source that meets the criteria of paragraph (g)(3)(i) of this section with respect to a storage vessel, this subpart F and subpart G of this part do not apply to the storage vessel.

(iii) If there is only one chemical manufacturing process unit at the major source that meets the criteria of paragraph (g)(3)(i) of this section with respect to a storage vessel, the storage vessel shall be assigned to that chemical manufacturing process unit. Applicability of this subpart F and subpart G to this part to the storage vessel shall then be determined according to the provisions of paragraph (b) of this section.

(iv) If there are two or more chemical manufacturing process units at the major source that meet the criteria of paragraph (g)(3)(i) of this section with respect to a storage vessel, the storage vessel shall be assigned to one of those chemical manufacturing process units

according to the provisions of paragraph (g)(2) of this section. The predominant use shall be determined among only those chemical manufacturing process units that meet the criteria of paragraph (g)(3)(i) of this section. Applicability of this subpart F and subpart G of this part to the storage vessel shall then be determined according to the provisions of paragraph (b) of this section.

(4) If the storage vessel begins receiving material from (or sending material to) another chemical manufacturing process unit, or ceases to receive material from (or send material to) a chemical manufacturing process unit, or if the applicability of this subpart F and subpart G of this part to a storage vessel has been determined according to the provisions of paragraphs (g)(2)(i) and (g)(2)(ii) of this section and there is a change so that the predominant use may reasonably have changed, the owner or operator shall reevaluate the applicability of this subpart to the storage vessel.

(h) The owner or operator shall follow the procedures specified in paragraphs (h)(1) and (h)(2) of this section to determine whether the arms and hoses in a loading rack are part of the source to which this subpart applies.

(1) Where a loading rack is dedicated to a chemical manufacturing process unit, the loading rack shall be considered part of that specific chemical manufacturing process unit.

(i) If the chemical manufacturing process unit is subject to this subpart according to the criteria specified in paragraph (b) of this section and the loading rack does not meet the criteria specified in paragraphs (f)(9) and (f)(10) of this section, then the loading rack is considered a transfer rack (as defined in ? 63.101 of this subpart) and is part of the source to which this subpart applies.

(ii) If the chemical manufacturing process unit is not subject to this subpart according to the criteria specified in paragraph (b) of this section, then the loading rack is not considered a transfer rack (as defined in ? 63.101 of this subpart) and is not a part of the source to which this subpart applies.

(2) If a loading rack is shared among chemical manufacturing process units, then the applicability of this subpart F and subpart G of this part shall be determined at each loading arm or loading hose according to the provisions in paragraphs (h)(2)(i) through (h)(2)(iv) of this section.

(i) Each loading arm or loading hose that is dedicated to the transfer of liquid organic hazardous air pollutants listed in table 2 of this subpart from a chemical manufacturing process unit to which this subpart applies is part of that chemical manufacturing process unit and is part of the source to which this subpart applies unless the loading arm or loading hose meets the criteria specified in paragraphs (f)(9) or (f)(10) of this section.

(ii) If a loading arm or loading hose is shared among chemical manufacturing process units, and one of the chemical manufacturing process units provides the greatest amount of the material that is loaded by the loading arm or loading hose, then the loading arm or loading hose is part of that chemical manufacturing process unit.

(A) If the chemical manufacturing process unit is subject to this subpart according to the criteria specified in paragraph (b) of this section, then the loading arm or loading hose is

part of the source to which this subpart applies unless the loading arm or loading hose meets the criteria specified in paragraphs (f)(9) or (f)(10) of this section.

(B) If the chemical manufacturing process unit is not subject to this subpart according to the criteria specified in paragraph (b) of this section, then the loading arm or loading hose is not part of the source to which this subpart applies.

(iii) If a loading arm or loading hose is shared among chemical manufacturing process units so that there is no single predominant use as described in paragraph (h)(2)(ii) of this section and at least one of those chemical manufacturing process units is subject to this subpart, then the loading arm or hose is part of the chemical manufacturing process unit that is subject to this subpart. If more than one of the chemical manufacturing process units is subject to this subpart, the owner or operator may assign the loading arm or loading hose to any of the chemical manufacturing process units subject to this subpart.

(iv) If the predominant use of a loading arm or loading hose varies from year to year, then the applicability of this subpart shall be determined according to the criteria in paragraphs (h)(2)(iv)(A) and (h)(2)(iv)(B) of this section, as applicable. This determination shall be reported as part of an operating permit application or as otherwise specified by the permitting authority.

(3) If a loading rack that was dedicated to a single chemical manufacturing process unit begins to serve another chemical manufacturing process unit, or if applicability was determined under the provisions of paragraphs (h)(2)(i) through (h)(2)(iii) of this section and there is a change so that the predominant use may reasonably have changed, the owner or operator shall reevaluate the applicability of this subpart to the loading rack, loading arm, or loading hose.

(i) Except as provided in paragraph (i)(4) of this section, the owner or operator shall follow the procedures specified in paragraphs (i)(1) through (i)(3) and (i)(5) of this section to determine whether the vent(s) from a distillation unit is part of the source to which this subpart applies.

(1) Where a distillation unit is dedicated to a chemical manufacturing process unit, the distillation column shall be considered part of that chemical manufacturing process unit.

(i) If the chemical manufacturing process unit is subject to this subpart according to the criteria specified in paragraph (b) of this section, then the distillation unit is part of the source to which this subpart applies.

(ii) If the chemical manufacturing process unit is not subject to this subpart according to the criteria specified in paragraph (b) of this section, then the distillation unit is not part of the source to which this subpart applies.

(2) If a distillation unit is not dedicated to a single chemical manufacturing process unit, then the applicability of this subpart and subpart G of this part shall be determined according to the provisions in paragraphs (i)(2)(i) through (i)(2)(iv) of this section.

(i) If the greatest input to the distillation unit is from a chemical manufacturing process unit located on the same plant site, then the distillation unit shall be assigned to that chemical manufacturing process unit.

(ii) If the greatest input to the distillation unit is provided from a chemical manufacturing process unit that is not located on the same plant site, then the distillation unit shall be assigned to the chemical manufacturing process unit located at the same plant site that receives the greatest amount of material from the distillation unit.

(iii) If a distillation unit is shared among chemical manufacturing process units so that there is no single predominant use as described in paragraphs (i)(2)(i) and (i)(2)(ii) of this section, and at least one of those chemical manufacturing process units is subject to this subpart, the distillation unit shall be assigned to the chemical manufacturing process unit that is subject to this subpart. If more than one chemical manufacturing process unit is subject to this subpart, the owner or operator may assign the distillation unit to any of the chemical manufacturing process units subject to this subpart.

(iv) If the predominant use of a distillation unit varies from year to year, then the applicability of this subpart shall be determined according to the criteria in paragraphs (i)(2)(iv)(A) and (i)(2)(iv)(B), as applicable. This determination shall be included as part of an operating permit application or as otherwise specified by the permitting authority.

(A) For chemical manufacturing process units that produce one or more of the chemicals listed in table 1 of this subpart and meet the criteria in paragraphs (b)(2) and (b)(3) of this section, the applicability shall be based on the utilization that occurred during the year preceding April 22, 1994.

(B) For chemical manufacturing process units that produce one or more of the chemicals listed in paragraph (b)(1)(ii) of this section and meet the criteria in paragraphs (b)(2) and (b)(3) of this section, the applicability shall be based on the utilization that occurred during the year preceding May 12, 1998.

(3) If the chemical manufacturing process unit to which the distillation unit is assigned is subject to this subpart, then each vent from the individual distillation unit shall be considered separately to determine whether it is a process vent (as defined in 40 CFR 63.101 of this subpart). Each vent that is a process vent is part of the source to which this subpart applies.

(4) If the distillation unit is part of one of the chemical manufacturing process units listed in paragraphs (i)(4)(i) through (i)(4)(iii) of this section, then each vent from the individual

distillation unit shall be considered separately to determine whether it is a process vent (as defined in 40 CFR 63.101 of this subpart). Each vent that is a process vent is part of the source to which this subpart applies:

(i) The Aromex unit that produces benzene, toluene, and xylene;

(ii) The unit that produces hexane; or

(iii) The unit that produces cyclohexane.

(5) If a distillation unit that was dedicated to a single chemical manufacturing process unit, or that was part of a chemical manufacturing unit identified in paragraphs (i)(4)(i) through (i)(4)(iii) of this section, begins to serve another chemical manufacturing process unit, or if applicability was determined under the provisions of paragraphs (i)(2)(i) through (i)(2)(iii) of this section and there is a change so that the predominant use may reasonably

have changed, the owner or operator shall reevaluate the applicability of this subpart to the distillation unit.

(j) The provisions of subparts F, G, and H of this part do not apply to the processes specified in paragraphs (j)(1) through (j)(6) of this section. Subparts F, G, and H do not require processes specified in paragraphs (j)(1) through (j)(6) to comply with the provisions of subpart A of this part.

(1) Research and development facilities, regardless of whether the facilities are located at the same plant site as a chemical manufacturing process unit that is subject to the provisions of subparts F, G, or H of this part.

(2) Petroleum refining process units, regardless of whether the units supply feedstocks that include chemicals listed in table 1 of this subpart to chemical manufacturing process units that are subject to the provisions of subparts F, G, or H of this part.

(3) Ethylene process units, regardless of whether the units supply feedstocks that include chemicals listed in table 1 of this subpart to chemical manufacturing process units that are subject to the provisions of subpart F, G, or H of this part.

(4) Batch process vents within a chemical manufacturing process unit.

(5) Chemical manufacturing process units that are located in coke by-product recovery plants.

(6) Solvent reclamation, recovery, or recycling operations at hazardous waste TSDF facilities requiring a permit under 40 CFR part 270 that are separate entities and not part of a SOCMI chemical manufacturing process unit.

(k) Except as provided in paragraphs (l), (m), and (p) of this section, sources subject to subparts F, G, or H of this part are required to achieve compliance on or before the dates specified in paragraphs (k)(1) through (k)(8) of this section.

(1)(i) New sources that commence construction or reconstruction after December 31, 1992, but before August 27, 1996 shall be in compliance with this subpart F, subparts G and H of this part upon initial start-up or by April 22, 1994, whichever is later, as provided in §§ 63.6(b) of subpart A of this part, and further, where start-up occurs before January 17, 1997 shall also be in compliance with this subpart F and subparts G and H of this part (as amended on January 17, 1997) by January 17, 1997, except that, with respect to all new sources that commenced construction or reconstruction after December 31, 1992, and before August 27, 1996:

(A) Heat exchange systems and maintenance wastewater, that are part of a new source on which construction or reconstruction commenced after December 31, 1992, but before August 27, 1996, shall be in compliance with this subpart F no later than initial start-up or 180 days after January 17, 1997, whichever is later;

(B) Process wastewater streams and equipment subject to §§ 63.149, that are part of a new source on which construction or reconstruction commenced after December 31, 1992, but before August 27, 1996, shall be in compliance with this subpart F and subpart G of this part no later than initial start-up or 180 days after January 17, 1997, whichever is later; and

(ii) New sources that commence construction after August 26, 1996 shall be in compliance with this subpart F, subparts G and H of this part upon initial start-up or by January 17, 1997, whichever is later.

(2) Existing sources shall be in compliance with this subpart F and subpart G of this part no later than the dates specified in paragraphs (k)(2)(i) and (k)(2)(ii) of this section, unless an extension has been granted by the Administrator as provided in §§ 63.151(a)(6) of subpart G of this part or granted by the permitting authority as provided in §§ 63.6(i) of subpart A of this part.

(i) Process vents, storage vessels, and transfer racks at an existing source shall be in compliance with the applicable sections of this subpart and subpart G of this part no later than April 22, 1997.

(ii) Heat exchange systems and maintenance wastewater shall be in compliance with the applicable sections of this subpart, and equipment subject to §§ 63.149 and process wastewater streams shall be in compliance with the applicable sections of this subpart and subpart G of this part no later than April 22, 1999, except as provided in paragraphs (k)(2)(ii)(A) and (k)(2)(ii)(B) of this section.

(A) If a process wastewater stream or equipment subject to §§ 63.149 is subject to the control requirements of subpart G of this part due to the contribution of nitrobenzene to the total annual average concentration (as determined according to the procedures in §§ 63.144(b) of subpart G of this part), the wastewater stream shall be in compliance no later than January 18, 2000.

(B) If a process wastewater stream is used to generate credits in an emissions average in accordance with §§ 63.150 of subpart G of this part, the process wastewater stream shall be in compliance with the applicable sections of subpart G of this part no later than April 22, 1997.

(3) Existing sources shall be in compliance with subpart H of this part no later than the dates specified in paragraphs (k)(3)(i) through (k)(3)(v) of this section, except as provided for in paragraphs (k)(4) through (k)(8) of this section, unless an extension has been granted by the Administrator as provided in §§ 63.182(a)(6) of this part or granted by the permitting authority as provided in §§ 63.6(i) of subpart A of this part. The group designation for each process unit is indicated in table 1 of this subpart.

(i) Group I: October 24, 1994.

(ii) Group II: January 23, 1995.

(iii) Group III: April 24, 1995.

(iv) Group IV: July 24, 1995.

(v) Group V: October 23, 1995.

(4) Existing chemical manufacturing process units in Groups I and II as identified in table 1 of this subpart shall be in compliance with the requirements of §§ 63.164 of subpart H no later than May 10, 1995, for any compressor meeting one or more of the criteria in paragraphs (k)(4)(i)

through (k)(4)(iv) of this section, if the work can be accomplished without a process unit shutdown, as defined in §§ 63.161 in subpart H.

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

(5) Existing chemical manufacturing process units shall be in compliance with the requirements of §§ 63.164 in subpart H no later than 1 year after the applicable compliance date specified in paragraph (k)(3) of this section, for any compressor meeting the criteria in paragraphs (k)(5)(i) through (k)(5)(iv) of this section.

(i) The compressor meets one or more of the criteria specified in paragraphs (k)(4) (i) through (iv) of this section;

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

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

(iv) The owner or operator submits a request to the appropriate EPA Regional Office at the addresses listed in §§ 63.13 of subpart A of this part no later than 45 days before the applicable compliance date in paragraph (k)(3) of this section, but in no event earlier than May 10, 1995. The request shall include the information specified in paragraphs (k)(5)(iv)(A) through (k)(5)(iv)(E) of this section. Unless the EPA Regional Office objects to the request within 30 days after receipt, the request shall be deemed approved.

(A) The name and address of the owner or operator and the address of the existing source if it differs from the address of the owner or operator;

(B) The name, address, and telephone number of a contact person for further information;

(C) An identification of the chemical manufacturing process unit, and of the specific equipment for which additional compliance time is required;

(D) The reason compliance can not reasonably be achieved by the applicable date specified in paragraphs (k)(3)(i) through (k)(3)(v) of this section; and

(E) The date by which the owner or operator expects to achieve compliance.

(6)(i) If compliance with the compressor provisions of §§ 63.164 of subpart H of this part can not reasonably be achieved without a process unit shutdown, as defined in §§ 63.161 of subpart H,

the owner or operator shall achieve compliance no later than April 22, 1996, except as provided for in paragraph (k)(6)(ii) of this section. The owner or operator who elects to use this provision shall comply with the requirements of §§ 63.103(g) of this subpart.

(ii) If compliance with the compressor provisions of §§ 63.164 of subpart H of this part can not be achieved without replacing the compressor or recasting the distance piece, the owner or operator shall achieve compliance no later than April 22, 1997. The owner or operator who elects to use this provision shall also comply with the requirements of §§ 63.103(g) of this subpart.

(7) Existing sources shall be in compliance with the provisions of §§ 63.170 of subpart H no later than April 22, 1997.

(8) If an owner or operator of a chemical manufacturing process unit subject to the provisions of subparts F, G, and H of part 63 plans to implement pollution prevention measures to eliminate the use or production of HAP listed in table 2 of this subpart by October 23, 1995, the provisions of subpart H do not apply regardless of the compliance dates specified in paragraph (k)(3) of this section. The owner or operator who elects to use this provision shall comply with the requirements of §§ 63.103(h) of this subpart.

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

(i) Notwithstanding time periods specified in this subpart F or subpart G of this part 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.

(ii) Where the period specified for compliance is a standard calendar period, if the initial compliance date occurs after the beginning of the period, compliance shall be required according to the schedule specified in paragraphs (k)(9)(ii)(A) or (k)(9)(ii)(B) of this section, as appropriate.

(A) 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

(B) 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.

(iii) In all instances where a provision of this subpart F or subpart G of this part 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 the task is conducted at a reasonable interval after completion of the task during the previous period.

(l) If an additional chemical manufacturing process unit meeting the criteria specified in paragraph (b) of this section is added to a plant site that is a major source as defined in section 112(a) of the Act, the addition shall be subject to the requirements for a new source in subparts F, G, and H of this part if:

(i) It is an addition that meets the definition of construction in 40 CFR 63.2 of subpart A of this part;

(ii)(A) Such construction commenced after December 31, 1992 for chemical manufacturing process units that produce as a primary product one or more of the chemicals listed in table 1 of this subpart;

(B) Such construction commenced after August 22, 1997 for chemical manufacturing process units that produce as a primary product one or more of the chemicals listed in paragraph (b)(1)(ii) of this section; and

(iii) The addition has the potential to emit 10 tons per year or more of any HAP or 25 tons per year or more of any combination of HAP's, unless the Administrator establishes a lesser quantity.

(2) If any change is made to a chemical manufacturing process unit subject to this subpart, the change shall be subject to the requirements of a new source in subparts F, G, and H of this part if:

(i) It is a change that meets the definition of reconstruction in 40 CFR 63.2 of subpart A of this part; and

(ii)(A) Such reconstruction commenced after December 31, 1992 for chemical manufacturing process units that produce as a primary product one or more of the chemicals listed in table 1 of this subpart; and

(B) Such construction commenced after August 22, 1997 for chemical manufacturing process units that produce as a primary product one or more of the chemicals listed in paragraph (b)(1)(ii) of this section.

(3) If an additional chemical manufacturing process unit is added to a plant site or a change is made to a chemical manufacturing process unit and the addition or change is determined to be subject to the new source requirements according to paragraph (l)(1) or (l)(2) of this section:

(i) The new or reconstructed source shall be in compliance with the new source requirements of subparts F, G, and H of this part upon initial start-up of the new or reconstructed source or by April 22, 1994, whichever is later; and

(ii) The owner or operator of the new or reconstructed source shall comply with the reporting and recordkeeping requirements in subparts F, G, and H of this part that are applicable to new sources. The applicable reports include, but are not limited to:

(A) The application for approval of construction or reconstruction which shall be submitted by the date specified in 40 CFR 63.151(b)(2)(ii) of subpart G of this part, or an Initial Notification as specified in 40 CFR 63.151(b)(2)(iii) of subpart G of this part;

(B) Changes that meet the criteria in 40 CFR 63.151(j) of subpart G of this part, unless the information has been submitted in an operating permit application or amendment;

(C) The Notification of Compliance Status as required by 40 CFR 63.152(b) of subpart G of this part for the new or reconstructed source;

(D) Periodic Reports and Other Reports as required by 40 CFR 63.152(c) and (d) of subpart G of this part;

(E) Reports required by 40 CFR 63.182 of subpart H of this part; and

(F) Reports and notifications required by sections of subpart A of this part that are applicable to subparts F, G, and H of this part, as identified in table 3 of this subpart.

(4) If an additional chemical manufacturing process unit is added to a plant site, or if an emission point is added to an existing chemical manufacturing process unit, or if another deliberate operational process change creating an additional Group 1 emission point(s) is made to an existing chemical manufacturing process unit, or if a surge control vessel or bottoms receiver becomes subject to 40 CFR 63.170 of subpart H, or if a compressor becomes subject to 40 CFR 63.164 of subpart H, and if the addition or change is not subject to the new source requirements as determined according to paragraph (l)(1) or (l)(2) of this section, the requirements in paragraphs (l)(4)(i) through (l)(4)(iii) of this section shall apply. Examples of process changes include, but are not limited to, changes in production capacity, feedstock type, or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. For purposes of this paragraph and paragraph (m) of this section, process changes do not include: Process upsets, unintentional temporary process changes, and changes that are within the equipment configuration and operating conditions documented in the Notification of Compliance Status required by 40 CFR 63.152(b) of subpart G of this part.

(i) The added emission point(s) and any emission point(s) within the added or changed chemical manufacturing process unit are subject to the requirements of subparts F, G, and H of this part for an existing source;

(ii) The added emission point(s) and any emission point(s) within the added or changed chemical manufacturing process unit shall be in compliance with subparts F, G, and H of

this part by the dates specified in paragraph (l)(4)(ii) (A) or (B) of this section, as applicable.

(A) If a chemical manufacturing process unit is added to a plant site or an emission point(s) is added to an existing chemical manufacturing process unit, the added emission point(s) shall be in compliance upon initial start-up of the added chemical manufacturing process unit or emission point(s) or by 3 years after April 22, 1994, whichever is later.

(B) If a deliberate operational process change to an existing chemical manufacturing process unit causes a Group 2 emission point to become a Group 1 emission point, if a surge control vessel or bottoms receiver becomes subject to 40 CFR 63.170 of subpart H, or if a compressor becomes subject to 40 CFR 63.164 of subpart H, the owner or operator shall be in compliance upon initial start-up or by 3 years after April 22, 1994, whichever is later, unless the owner or operator demonstrates to the Administrator that achieving compliance will take longer than making the change. If this demonstration is made to the Administrator's satisfaction, the owner or operator shall follow the procedures in paragraphs (m)(1) through (m)(3) of this section to establish a compliance date.

(iii) The owner or operator of a chemical manufacturing process unit or emission point that is added to a plant site and is subject to the requirements for existing sources shall comply with the reporting and recordkeeping requirements of subparts F, G, and H of this part that are applicable to existing sources, including, but not limited to, the reports listed in paragraphs (l)(4)(iii) (A) through (E) of this section. A change to an existing chemical manufacturing process unit shall be subject to the reporting requirements for existing sources, including but not limited to, the reports listed in paragraphs (l)(4)(iii)(A) through (E) of this section if the change meets the criteria specified in 40 CFR 63.118(g), (h), (i), or (j) of subpart G of this part for process vents or the criteria in 40 CFR 63.155(i) or (j) of subpart G of this part. The applicable reports include, but are not limited to:

(A) Reports specified in 40 CFR 63.151(i) and (j) of subpart G of this part, unless the information has been submitted in an operating permit application or amendment;

(B) The Notification of Compliance Status as required by 40 CFR 63.152(b) of subpart G of this part for the emission points that were added or changed;

(C) Periodic Reports and other reports as required by 40 CFR 63.152 (c) and (d) of subpart G of this part;

(D) Reports required by 40 CFR 63.182 of subpart H of this part; and

(E) Reports and notifications required by sections of subpart A of this part that are applicable to subparts F, G, and H of this part, as identified in table 3 of this subpart.

(m) If a change that does not meet the criteria in paragraph (l)(4) of this section is made to a chemical manufacturing process unit subject to subparts F and G of this part, and the change

causes a Group 2 emission point to become a Group 1 emission point (as defined in 40 CFR 63.111 of subpart G of this part), then the owner or operator shall comply with the requirements of subpart G of this part for the Group 1 emission point as expeditiously as practicable, but in no event later than 3 years after the emission point becomes Group 1.

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

(2) The compliance schedule shall be submitted with the report required in ? 63.151(i)(2) of subpart G of this part for emission points included in an emissions average or 40 CFR 63.151(j)(1) or subpart G of this part for emission points not in an emissions average, unless the compliance schedule has been submitted in an operating permit application or amendment.

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

(n) Rules stayed for reconsideration: Notwithstanding any other provision of this subpart, the effectiveness of subpart F is stayed from October 24, 1994, to April 24, 1995, only as applied to those sources for which the owner or operator makes a representation in writing to the Administrator that the resolution of the area source definition issues could have an effect on the compliance status of the source with respect to subpart F.

(o) Sections stayed for reconsideration: Notwithstanding any other provision of this subpart, the effectiveness of 40 CFR 63.164 and 63.170 of subpart H is stayed from October 28, 1994, to April 24, 1995, only as applied to those sources subject to 40 CFR 63.100(k)(3) (i) and (ii).

(p) Compliance dates for chemical manufacturing process units that produce crotonaldehyde or tetrahydrobenzaldehyde: Notwithstanding the provisions of paragraph (k) of this section, chemical manufacturing process units that meet the criteria in paragraphs (b)(1)(ii), (b)(2), and (b)(3) of this section shall be in compliance with this subpart and subparts G and H of this part by the dates specified in paragraphs (p)(1) and (p)(2) of this section, as applicable.

(1) If the source consists only of chemical manufacturing process units that produce as a primary product one or more of the chemicals listed in paragraph (b)(1)(ii) of this section, new sources shall comply by the date specified in paragraph (p)(1)(i) of this section and existing sources shall comply by the dates specified in paragraphs (p)(1)(ii) and (p)(1)(iii) of this section.

(i) Upon initial start-up or May 12, 1998, whichever is later.

(ii) This subpart and subpart G of this part by May 14, 2001, unless an extension has been granted by the Administrator as provided in 40 CFR 63.151(a)(6) or granted by the permitting authority as provided in 40 CFR 63.6(i) of subpart A of this part. When April 22, 1994 is referred to in this subpart and subpart G of this part, May 12, 1998 shall be

used as the applicable date for that provision. When December 31, 1992 is referred to in this subpart and subpart G of this part, August 22, 1997 shall be used as the applicable date for that provision.

(iii) Subpart H of this part by May 12, 1999, unless an extension has been granted by the Administrator as provided in 40 CFR 63.151(a)(6) or granted by the permitting authority as provided in 40 CFR 63.6(i) of subpart A of this part. When April 22, 1994 is referred to in subpart H of this part, May 12, 1998 shall be used as the applicable date for that provision. When December 31, 1992 is referred to in subpart H of this part, August 22, 1997 shall be used as the applicable date for that provision.

(2) If the source consists of a combination of chemical manufacturing process units that produce as a primary product one or more of the chemicals listed in paragraphs (b)(1)(i) and (b)(1)(ii) of this section, new chemical manufacturing process units that meet the criteria in paragraph (b)(1)(ii) of this section shall comply by the date specified in paragraph (p)(1)(i) of this section and existing chemical manufacturing process units producing crotonaldehyde and/or tetrahydrobenzaldehyde shall comply by the dates specified in paragraphs (p)(1)(ii) and (p)(1)(iii) of this section.

(q) If the owner or operator of a process vent, or of a gas stream transferred subject to 40 CFR 63.113(i), is unable to comply with the provisions of 40 CFR 63.113 through 63.118 by the applicable compliance date specified in paragraph (k),(l), or (m) of this section for the reasons stated in paragraph (q)(1),(3), or (5) of this section, the owner or operator shall comply with the applicable provisions in 40 CFR 63.113 through 63.118 as expeditiously as practicable, but in no event later than the date approved by the Administrator pursuant to paragraph (q)(2), (4), or (6) of this section, respectively. For requests under paragraph (q)(1) or (3) of this section, the date approved by the Administrator may be earlier than, and shall not be later than, the later of January 22, 2004 or 3 years after the transferee's refusal to accept the stream for disposal. For requests submitted under paragraph (q)(5) of this section, the date approved by the Administrator may be earlier than, and shall not be later than, 3 years after the date of publication of the amendments to this subpart or to subpart G of this part which created the need for an extension of the compliance.

(1) If the owner or operator has been sending a gas stream for disposal as described in 40 CFR 63.113(i) prior to January 22, 2001, and the transferee does not submit a written certification as described in 40 CFR 63.113(i)(2) and ceases to accept the gas stream for disposal, the owner or operator shall comply with paragraph (q)(2) of this section.

(2) (i) An owner or operator directed to comply with paragraph (q)(2) of this section shall submit to the Administrator for approval a compliance schedule, along with a justification for the schedule.

(ii) The compliance schedule and justification shall be submitted no later than 90 days after the transferee ceases to accept the gas stream for disposal.

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

(3) If the owner or operator has been sending the gas stream for disposal as described in 40 CFR 63.113(i) to a transferee who had submitted a written certification as described in 40 CFR 63.113(i)(2), and the transferee revokes its written certification, the owner or operator shall comply with paragraph (q)(4) of this section. During the period between the date when the owner or operator receives notice of revocation of the transferee's written certification and the compliance date established under paragraph (q)(4) 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 (q)(3), the term "excess emissions" means emissions in excess of those that would have occurred if the transferee had continued managing the gas stream in compliance with the requirements in 40 CFR 63.113 through 63.118. The measures to be taken shall be identified in the applicable startup, shutdown, and malfunction plan. If the measures that can be reasonably taken will change over time, so that a more effective measure which could not reasonably be taken initially would be reasonable at a later date, the Administrator may require the more effective measure by a specified date (in addition to or instead of any other measures taken sooner or later than that date) as a condition of approval of the compliance schedule.

(4)(i) An owner or operator directed to comply with this paragraph (q)(4) shall submit to the Administrator for approval the documents specified in paragraphs (q)(4)(i)(A) through (E) of this section no later than 90 days after the owner or operator receives notice of revocation of the transferee's written certification.

(A) A request for determination of a compliance date.

(B) A justification for the request for determination of a compliance date.

(C) A compliance schedule.

(D) A justification for the compliance schedule.

(E) A description of the measures that will be taken to minimize excess emissions until the new compliance date, and the date when each measure will first be implemented. The owner or operator shall describe how, and to what extent, each measure will minimize excess emissions, and shall justify any period of time when measures are not in place.

(ii) The Administrator shall approve or disapprove the request for determination of a compliance date and the compliance schedule, or request changes, within 120 days after receipt of the documents specified in paragraphs (q)(4)(i)(A) through (E) of this section. Upon approving the request for determination and compliance schedule, the Administrator shall specify a reasonable compliance date consistent with the introductory text in paragraph (q) of this section.

(5) If the owner's or operator's inability to meet otherwise applicable compliance deadlines is due to amendments of this subpart or of subpart G of this part published on or after January 22, 2001 and neither condition specified in paragraph (q)(1) or (3) of this section is applicable, the owner or operator shall comply with paragraph (q)(6) of this section.

(6)(i) An owner or operator directed to comply with this paragraph (6)(i) shall submit to the Administrator for approval, a request for determination of a compliance date, a compliance schedule, a justification for the determination of a compliance date, and a justification for the compliance schedule.

(ii) The documents required to be submitted under paragraph (q)(6)(i) of this section shall be submitted no later than 120 days after publication of the amendments of this subpart or of subpart G of this part which necessitate the request for an extension.

(iii) The Administrator shall approve or disapprove the request for a determination of a compliance date, or request changes, within 120 days after receipt of the request for determination of a compliance date, the compliance schedule, and the two justifications. If the request for determination of a compliance date is disapproved, the compliance schedule is disapproved and the owner or operator shall comply by the applicable date specified in paragraph (k),(l), or (m) of this section. If the request for the determination of a compliance date is approved, the Administrator shall specify, at the time of approval, a reasonable compliance date consistent with the introductory text in paragraph (q) of this section.

§§ 63.102 General standards.

(a) Owners and operators of sources subject to this subpart shall comply with the requirements of subparts G and H of this part.

(1) The provisions set forth in this subpart F and subpart G of this part shall apply at all times except during periods of start-up or shutdown (as defined in 40 CFR 63.101 of this subpart), malfunction, or non-operation of the chemical manufacturing process unit (or specific portion thereof) resulting in cessation of the emissions to which this subpart F and subpart G of this part apply. However, if a start-up, shutdown, malfunction or period of non-operation of one portion of a chemical manufacturing process unit does not affect the ability of a particular emission point to comply with the specific provisions to which it is subject, then that emission point shall still be required to comply with the applicable provisions of this subpart F and subpart G of this part 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 in the chemical manufacturing process unit would still be required to be controlled in accordance with 40 CFR 63.119 of subpart G of the part. Similarly, the degassing of a storage vessel would not affect the ability of a process vent to meet the requirements of 40 CFR 63.113 of subpart G of this part.

(2) The provisions set forth in subpart H of this part shall apply at all times except during periods of start-up or shutdown, as defined in 40 CFR 63.101(b) of this subpart, malfunction, process unit shutdown (as defined in 40 CFR 63.161 of subpart H of this part), or non-operation of the chemical manufacturing process unit (or specific portion thereof) in which the lines are drained and depressurized resulting in cessation of the emissions to which subpart H of this part applies.

(3) The owner or operator shall not shut down items of equipment that are required or utilized for compliance with the provisions of this subpart F, subpart G or H of this part 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 F, subpart G or H of this part applicable to such items of equipment. This paragraph does not apply if the item of equipment is malfunctioning, or if the owner or operator must shut down the equipment to avoid damage due to a contemporaneous start-up, shutdown, or malfunction of the chemical manufacturing process unit or portion thereof.

(4) During start-ups, shutdowns, and malfunctions when the requirements of this subpart F, subparts G and/or H of this part do not apply pursuant to paragraphs (a)(1) through (a)(3) of this section, the owner or operator shall implement, to the extent reasonably available, measures to prevent or minimize excess emissions to the extent practical. For purposes of this paragraph, the term "excess emissions" means emissions in excess of those that would have occurred if there were no start-up, shutdown, or malfunction and the owner or operator complied with the relevant provisions of this subpart F, subparts G and/or H of this part. 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 source. Back-up control devices are not required, but may be used if available.

(b) If, in the judgment of the Administrator, an alternative means of emission limitation will achieve a reduction in organic HAP emissions at least equivalent to the reduction in organic HAP emissions from that source achieved under any design, equipment, work practice, or operational standards in subpart G or H of this part, the Administrator will publish in the Federal Register a notice permitting the use of the alternative means for purposes of compliance with that requirement.

(1) The notice may condition the permission on requirements related to the operation and maintenance of the alternative means.

(2) Any notice under paragraph (b) of this section shall be published only after public notice and an opportunity for a hearing.

(3) Any person seeking permission to use an alternative means of compliance under this section shall collect, verify, and submit to the Administrator information showing that the alternative means achieves equivalent emission reductions.

(c) Each owner or operator of a source subject to this subpart shall obtain a permit under 40 CFR part 70 or part 71 from the appropriate permitting authority by the date determined by 40 CFR part 70 or part 71, as appropriate.

(1) If the EPA has approved a State operating permit program under 40 CFR Part 70, the permit shall be obtained from the State authority. If the State operating permit program has not been approved, the source shall apply to the EPA Regional Office.

(2) [Reserved]

(d) The requirements in subparts F, G, and H of this part are Federally enforceable under section 112 of the Act on and after the dates specified in 40 CFR 63.100(k) of this subpart.

§§ 63.103 General compliance, reporting, and recordkeeping provisions.

(a) Table 3 of this subpart specifies the provisions of subpart A that apply and those that do not apply to owners and operators of sources subject to subparts F, G, and H of this part.

(b) Initial performance tests and initial compliance determinations shall be required only as specified in subparts G and H of this part.

(1) Performance tests and compliance determinations shall be conducted according to the schedule and procedures in 40 CFR 63.7(a) of subpart A of this part and the applicable sections of subparts G and H of this part.

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

(3) Performance tests shall be conducted according to the provisions of ? 63.7(e) of subpart A of this part, except that performance tests shall be conducted at maximum representative operating conditions for the process. During the performance test, an owner or operator may operate the control or recovery device at maximum or minimum representative operating conditions for monitored control or recovery device parameters, whichever results in lower emission reduction.

(4) 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.

(5) Performance tests may be waived with approval of the Administrator as specified in 40 CFR 63.7(h)(2) of subpart A of this part. Owners or operators of sources subject to subparts F, G, and H of this part who apply for a waiver of a performance test shall submit the application by the dates specified in paragraph (b)(5)(i) of this section rather than the dates specified in 40 CFR 63.7(h)(3) of subpart A of this part.

(i) If a request is made for an extension of compliance under 40 CFR 63.151(a)(6) of subpart G or 40 CFR 63.6(i) of subpart A of this part, the application for a waiver of an initial performance test shall accompany the information required for the request for an extension of compliance. If no extension of compliance is requested, the application for a waiver of an initial performance test shall be submitted no later than 90 calendar days before the Notification of Compliance Status required in 40 CFR 63.152(b) of subpart G of this part is due to be submitted.

(ii) Any application for a waiver of a performance test shall include information justifying the owner or operator's request for a waiver, such as the technical or economic infeasibility, or the impracticality, of the source performing the required test.

(6) The owner or operator of a flexible operation unit shall conduct all required compliance demonstrations during production of the primary product. The owner or operator is not required to conduct compliance demonstrations for operating conditions during production of a product other than the primary product. Except as otherwise provided in this subpart or in subpart G or subpart H of this part, as applicable, the owner or operator shall operate each control device, recovery device, and/or recapture device that is required or used for compliance, and associated monitoring systems, without regard for whether the product that is being produced is the primary product or a different product. Except as otherwise provided in this subpart, subpart G and/or subpart H of this part, as applicable, operation of a control device, recapture device and/or recovery device required or used for compliance such that the daily average of monitored parameter values is outside the parameter range established pursuant to 40 CFR 63.152(b)(2), or such that the monitoring data show operation inconsistent with the monitoring plan established pursuant to 40 CFR 63.120(d)(2) or 40 CFR 63.181(g)(1)(iv), shall constitute a violation of the required operating conditions.

(c) Each owner or operator of a source subject to subparts F, G, and H of this part shall keep copies of all applicable reports and records required by subparts F, G, and H of this part for at least 5 years; except that, if subparts G or H require records to be maintained for a time period different than 5 years, those records shall be maintained for the time specified in subpart G or H of this part. If an owner or operator submits copies of reports to the applicable EPA Regional Office, the owner or operator is not required to maintain copies of reports. If the EPA Regional Office has waived the requirement of 40 CFR 63.10(a)(4)(ii) for submittal of copies of reports, the owner or operator is not required to maintain copies of reports.

(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 four 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) The owner or operator subject to subparts F, G, and H of this part shall keep the records specified in this paragraph, as well as records specified in subparts G and H.

(i) Records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment or of air pollution control equipment or continuous monitoring systems used to comply with this subpart F, subpart G, or H of this part during which excess emissions (as defined in 40 CFR 63.102(a)(4)) occur.

(ii) For each start-up, shutdown, and malfunction during which excess emissions (as defined in 40 CFR 63.102(a)(4)) occur, records that the procedures specified in the 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 (e.g., the incinerator for a halogenated stream could be routed to a flare during periods when the primary control device is out of service), records must be kept of whether the plan was followed. These records may take the form of a "checklist," or other form of recordkeeping that confirms conformance with the start-up, shutdown, and malfunction plan for the event.

(iii) For continuous monitoring systems used to comply with subpart G of this part, records documenting the completion of calibration checks and maintenance of continuous monitoring systems that are specified in the manufacturer's instructions or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(3) Records of start-up, shutdown and malfunction and continuous monitoring system calibration and maintenance are not required if they pertain solely to Group 2 emission points, as defined in 40 CFR 63.111 of subpart G of this part, that are not included in an emissions average.

(d) All reports required under subparts F, G, and H of this part shall be sent to the Administrator at the addresses listed in 40 CFR 63.13 of subpart A of this part, except that requests for permission to use an alternative means of compliance as provided for in 40 CFR 63.102(b) of this subpart and application for approval of a nominal efficiency as provided for in 40 CFR 63.150 (i)(1) through (i)(6) of subpart G of this part shall be submitted to the Director of the EPA Office of Air Quality Planning and Standards rather than to the Administrator or delegated authority.

(1) Wherever subpart A of this part specifies "postmark" dates, submittals may be sent by methods other than the U.S. Mail (e.g., by fax or courier). Submittals shall be sent on or before the specified date.

(2) If acceptable to both the Administrator and the owner or operator of a source, reports may be submitted on electronic media.

(e) The owner or operator of a chemical manufacturing process unit which meets the criteria of 40 CFR 63.100(b)(1) and 40 CFR 63.100(b)(3), but not the criteria of 40 CFR 63.100(b)(2), shall comply with the requirements of either paragraph (e)(1) or (e)(2) of this section.

(1) Retain information, data, and analysis used to determine that the chemical manufacturing process unit does not use as a reactant or manufacture as a product or co-product any organic hazardous air pollutant. Examples of information that could document this include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations, or process knowledge.

(2) When requested by the Administrator, demonstrate that the chemical manufacturing process unit does not use as a reactant or manufacture as a product or co-product any organic hazardous air pollutant.

(f) To qualify for the exemption specified in 40 CFR 63.100(b)(4) of this subpart, the owner or operator shall maintain the documentation of the information required pursuant to 40 CFR 63.100(b)(4)(i), and documentation of any update of this information requested by the EPA Regional Office, and shall provide the documentation to the EPA Regional Office upon request. The EPA Regional Office will notify the owner or operator, after reviewing such documentation, if the source does not qualify for the exemption specified in 40 CFR 63.100(b)(4) of this section. In such cases, compliance with subpart H shall be required no later than 90 days after expiration of the applicable compliance date in 40 CFR 63.100(k)(3), but in no event earlier than 90 days after the date of such notification by the EPA Regional Office. Compliance with this subpart F and subpart G of this part shall be no later than April 22, 1997, or as otherwise specified in 40 CFR 63.100(k)(2)(ii) of this subpart, unless an extension has been granted by the EPA Regional Office or permitting authority as provided in 40 CFR 63.6(i) of subpart A of this part.

(g) An owner or operator who elects to use the compliance extension provisions of 40 CFR 63.100(k)(6)(i) or (ii) shall submit a compliance extension request to the appropriate EPA Regional Office no later than 45 days before the applicable compliance date in 40 CFR 63.100(k)(3), but in no event is submittal required earlier than May 10, 1995. The request shall contain the information specified in 40 CFR 63.100(k)(5)(iv) and the reason compliance can not reasonably be achieved without a process unit shutdown, as defined in 40 CFR 63.161 or without replacement of the compressor or recasting of the distance piece.

(h) An owner or operator who elects to use the compliance extension provisions of 40 CFR 63.100(k)(8) shall submit to the appropriate EPA Regional Office a brief description of the process change, identify the HAP eliminated, and the expected date of cessation of use or

production of HAP. The description shall be submitted no later than May 10, 1995, or with the Notice of Compliance Status as required in 40 CFR 63.182(c) of subpart H, whichever is later.

§§ 63.104 Heat exchange system requirements.

(a) Unless one or more of the conditions specified in paragraphs (a)(1) through (a)(6) of this section are met, owners and operators of sources subject to this subpart shall monitor each heat exchange system used to cool process equipment in a chemical manufacturing process unit meeting the conditions of 40 CFR 63.100 (b)(1) through (b)(3) of this subpart, except for chemical manufacturing process units meeting the condition specified in 40 CFR 63.100(c) of this subpart, according to the provisions in either paragraph (b) or (c) of this section. Whenever a leak is detected, the owner or operator shall comply with the requirements in paragraph (d) of this section.

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

(2) There is an intervening cooling fluid, containing less than 5 percent by weight of total hazardous air pollutants listed in table 4 of this subpart, between the process and the cooling water. This intervening fluid serves to isolate the cooling water from the process fluid and the intervening fluid is not sent through a cooling tower or discharged. For purposes of this section, discharge does not include emptying for maintenance purposes.

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

(4) The once-through heat exchange system is subject to an NPDES permit that:

(i) Requires monitoring of a parameter(s) or condition(s) to detect a leak of process fluids into cooling water;

(ii) Specifies or includes the normal range of the parameter or condition;

(iii) Requires monitoring for the parameters selected as leak indicators no less frequently than monthly for the first six months and quarterly thereafter; and

(iv) Requires the owner or operator to report and correct leaks to the cooling water when the parameter or condition exceeds the normal range.

(5) The recirculating heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutants listed in table 4 of this subpart.

(6) The once-through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutants listed in table 9 of subpart G of this part.

(b) The owner or operator who elects to comply with the requirements of paragraph (a) of this section by monitoring the cooling water for the presence of one or more organic hazardous air pollutants or other representative substances whose presence in cooling water indicates a leak shall comply with the requirements specified in paragraphs (b)(1) through (b)(6) of this section. The cooling water shall be monitored for total hazardous air pollutants, total volatile organic compounds, total organic carbon, one or more speciated HAP compounds, or other representative substances that would indicate the presence of a leak in the heat exchange system.

(1) The cooling water shall be monitored monthly for the first 6 months and quarterly thereafter to detect leaks.

(2)(i) For recirculating heat exchange systems (cooling tower systems), the monitoring of speciated hazardous air pollutants or total hazardous air pollutants refers to the hazardous air pollutants listed in table 4 of this subpart.

(ii) For once-through heat exchange systems, the monitoring of speciated hazardous air pollutants or total hazardous air pollutants refers to the hazardous air pollutants listed in table 9 of subpart G of this part.

(3) The concentration of the monitored substance(s) in the cooling water shall be determined using any EPA-approved method listed in part 136 of this chapter as long as the method is sensitive to concentrations as low as 10 parts per million and the same method is used for both entrance and exit samples. Alternative methods may be used upon approval by the Administrator.

(4) The samples shall be collected either at the entrance and exit of each heat exchange system or at locations where the cooling water enters and exits each heat exchanger or any combination of heat exchangers.

(i) For samples taken at the entrance and exit of recirculating heat exchange systems, the entrance is the point at which the cooling water leaves the cooling tower prior to being returned to the process equipment and the exit is the point at which the cooling water is introduced to the cooling tower after being used to cool the process fluid.

(ii) For samples taken at the entrance and exit of once-through heat exchange systems, the entrance is the point at which the cooling water enters and the exit is the point at which the cooling water exits the plant site or chemical manufacturing process units.

(iii) For samples taken at the entrance and exit of each heat exchanger or any combination of heat exchangers in chemical manufacturing process units, the entrance is the point at which the cooling water enters the individual heat exchanger or group of heat exchangers

and the exit is the point at which the cooling water exits the heat exchanger or group of heat exchangers.

(5) A minimum of three sets of samples shall be taken at each entrance and exit as defined in paragraph (b)(4) of this section. The average entrance and exit concentrations shall then be calculated. The concentration shall be corrected for the addition of any makeup water or for any evaporative losses, as applicable.

(6) A leak is detected if the exit mean concentration is found to be greater than the entrance mean using a one-sided statistical procedure at the 0.05 level of significance and the amount by which it is greater is at least 1 part per million or 10 percent of the entrance mean, whichever is greater.

(c) The owner or operator who elects to comply with the requirement of paragraph (a) of this section by monitoring using a surrogate indicator of heat exchange system leaks shall comply with the requirements specified in paragraphs (c)(1) through (c)(3) of this section. Surrogate indicators that could be used to develop an acceptable monitoring program are ion specific electrode monitoring, pH, conductivity or other representative indicators.

(1) The owner or operator shall prepare and implement a monitoring plan that documents the procedures that will be used to detect leaks of process fluids into cooling water. The plan shall require monitoring of one or more surrogate indicators or monitoring of one or more process parameters or other conditions that indicate a leak. Monitoring that is already being conducted for other purposes may be used to satisfy the requirements of this section. The plan shall include the information specified in paragraphs (c)(1)(i) and (c)(1)(ii) of this section.

(i) A description of the parameter or condition to be monitored and an explanation of how the selected parameter or condition will reliably indicate the presence of a leak.

(ii) The parameter level(s) or conditions(s) that shall constitute a leak. This shall be documented by data or calculations showing that the selected levels or conditions will reliably identify leaks. The monitoring must be sufficiently sensitive to determine the range of parameter levels or conditions when the system is not leaking. When the selected parameter level or condition is outside that range, a leak is indicated.

(iii) The monitoring frequency which shall be no less frequent than monthly for the first 6 months and quarterly thereafter to detect leaks.

(iv) The records that will be maintained to document compliance with the requirements of this section.

(2) If a substantial leak is identified by methods other than those described in the monitoring plan and the method(s) specified in the plan could not detect the leak, the owner or operator shall revise the plan and document the basis for the changes. The owner or

operator shall complete the revisions to the plan no later than 180 days after discovery of the leak.

(3) The owner or operator shall maintain, at all times, the monitoring plan that is currently in use. The current plan shall be maintained on-site, or shall be accessible from a central location by computer or other means that provides access within 2 hours after a request. If the monitoring plan is superseded, the owner or operator shall retain the most recent superseded plan at least until 5 years from the date of its creation. The superseded plan shall be retained on-site (or accessible from a central location by computer or other means that provides access within two hours after a request) for at least 6 months after its creation.

(d) If a leak is detected according to the criteria of paragraph (b) or (c) of this section, the owner or operator shall comply with the requirements in paragraphs (d)(1) and (d)(2) of this section, except as provided in paragraph (e) of this section.

(1) The leak shall be repaired as soon as practical but not later than 45 calendar days after the owner or operator receives results of monitoring tests indicating a leak. The leak shall be repaired unless the owner or operator demonstrates that the results are due to a condition other than a leak.

(2) Once the leak has been repaired, the owner or operator shall confirm that the heat exchange system has been repaired within 7 calendar days of the repair or startup, whichever is later.

(e) Delay of repair of heat exchange systems for which leaks have been detected is allowed if the equipment is isolated from the process. Delay of repair is also allowed if repair is technically infeasible without a shutdown and any one of the conditions in paragraph (e)(1) or (e)(2) of this section is met. All time periods in paragraphs (e)(1) and (e)(2) of this section shall be determined from the date when the owner or operator determines that delay of repair is necessary.

(1) If a shutdown is expected within the next 2 months, a special shutdown before that planned shutdown is not required.

(2) If a shutdown is not expected within the next 2 months, the owner or operator may delay repair as provided in paragraph (e)(2)(i) or (e)(2)(ii) of this section. Documentation of a decision to delay repair shall state the reasons repair was delayed and shall specify a schedule for completing the repair as soon as practical.

(i) If a shutdown for repair would cause greater emissions than the potential emissions from delaying repair, the owner or operator may delay repair until the next shutdown of the process equipment associated with the leaking heat exchanger. The owner or operator shall document the basis for the determination that a shutdown for repair would cause greater emissions than the emissions likely to result from delaying repair as specified in paragraphs (e)(2)(i)(A) and (e)(2)(i)(B) of this section.

(A) The owner or operator shall calculate the potential emissions from the leaking heat exchanger by multiplying the concentration of total hazardous air pollutants listed in table 4 of this subpart in the cooling water from the leaking heat exchanger by the flowrate of the cooling water from the leaking heat exchanger by the expected duration of the delay. The owner or operator may calculate potential emissions using total organic carbon concentration instead of total hazardous air pollutants listed in table 4 of this subpart.

(B) The owner or operator shall determine emissions from purging and depressurizing the equipment that will result from the unscheduled shutdown for the repair.

(ii) If repair is delayed for reasons other than those specified in paragraph (e)(2)(i) of this section, the owner or operator may delay repair up to a maximum of 120 calendar days. The owner shall demonstrate that the necessary parts or personnel were not available.

(f)(1) Required records. The owner or operator shall retain the records identified in paragraphs (f)(1)(i) through (f)(1)(iv) of this section as specified in 40 CFR 63.103(c)(1).

(i) Monitoring data required by this section indicating a leak and the date when the leak was detected, and if demonstrated not to be a leak, the basis for that determination;

(ii) Records of any leaks detected by procedures subject to paragraph (c)(2) of this section and the date the leak was discovered;

(iii) The dates of efforts to repair leaks; and

(iv) The method or procedure used to confirm repair of a leak and the date repair was confirmed.

(2) Reports. If an owner or operator invokes the delay of repair provisions for a heat exchange system, the following information shall be submitted in the next semi-annual periodic report required by 40 CFR 63.152(c) of subpart G of this part. If the leak remains unrepaired, the information shall also be submitted in each subsequent periodic report, until repair of the leak is reported.

(i) The owner or operator shall report the presence of the leak and the date that the leak was detected.

(ii) The owner or operator shall report whether or not the leak has been repaired.

(iii) The owner or operator shall report the reason(s) for delay of repair. If delay of repair is invoked due to the reasons described in paragraph (e)(2) of this section, documentation of emissions estimates must also be submitted.

(iv) If the leak remains unrepaired, the owner or operator shall report the expected date of repair.

(v) If the leak is repaired, the owner or operator shall report the date the leak was successfully repaired.

§§ 63.105 Maintenance wastewater requirements.

(a) Each owner or operator of a source subject to this subpart shall comply with the requirements of paragraphs (b) through (e) of this section for maintenance wastewaters containing those organic HAP's listed in table 9 of subpart G of this part.

(b) The owner or operator shall prepare a description of maintenance procedures for management of wastewaters generated from the emptying and purging of equipment in the process during temporary shutdowns for inspections, maintenance, and repair (i.e., a maintenance-turnaround) and during periods which are not shutdowns (i.e., routine maintenance). The descriptions shall:

(1) Specify the process equipment or maintenance tasks that are anticipated to create wastewater during maintenance activities.

(2) Specify the procedures that will be followed to properly manage the wastewater and control organic HAP emissions to the atmosphere; and

(3) Specify the procedures to be followed when clearing materials from process equipment.

(c) The owner or operator shall modify and update the information required by paragraph (b) of this section as needed following each maintenance procedure based on the actions taken and the wastewaters generated in the preceding maintenance procedure.

(d) The owner or operator shall implement the procedures described in paragraphs (b) and (c) of this section as part of the start-up, shutdown, and malfunction plan required under 40 CFR 63.6(e)(3) of subpart A of this part.

(e) The owner or operator shall maintain a record of the information required by paragraphs (b) and (c) of this section as part of the start-up, shutdown, and malfunction plan required under 40 CFR 63.6(e)(3) of subpart A of this part.

§§ 63.106 Implementation and enforcement.

(a) In delegating implementation and enforcement authority to a State under Section 112(l) of the CAA, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States: 40 CFR 63.102(b) of this subpart, 40 CFR 63.150(i)(1) through (i)(4) of subpart G of this part, and 40 CFR 63.177 of subpart H of this part.

§§ 63.107 Identification of process vents subject to this subpart.

(a) The owner or operator shall use the criteria specified in this 40 CFR 63.107 to determine whether there are any process vents associated with an air oxidation reactor, distillation unit, or reactor that is in a source subject to this subpart. A process vent is the point of discharge to the atmosphere (or the point of entry into a control device, if any) of a gas stream if the gas stream has the characteristics specified in paragraphs (b) through (h) of this section, or meets the criteria specified in paragraph (i) of this section.

(b) Some, or all, of the gas stream originates as a continuous flow from an air oxidation reactor, distillation unit, or reactor during operation of the chemical manufacturing process unit.

(c) The discharge to the atmosphere (with or without passing through a control device) meets at least one of the conditions specified in paragraphs (c)(1) through (3) of this section.

(1) Is directly from an air oxidation reactor, distillation unit, or reactor; or

(2) Is from an air oxidation reactor, distillation unit, or reactor after passing solely (i.e., without passing through any other unit operation for a process purpose) through one or more recovery devices within the chemical manufacturing process unit; or

(3) Is from a device recovering only mechanical energy from a gas stream that comes either directly from an air oxidation reactor, distillation unit, or reactor, or from an air oxidation reactor, distillation unit, or reactor after passing solely (i.e., without passing through any other unit operation for a process purpose) through one or more recovery devices within the chemical manufacturing process unit.

(d) The gas stream contains greater than 0.005 weight percent total organic HAP at the point of discharge to the atmosphere (or at the point of entry into a control device, if any).

(e) The air oxidation reactor, distillation unit, or reactor is part of a chemical manufacturing process unit that meets the criteria of 40 CFR 63.100(b).

(f) The gas stream is in the gas phase from the point of origin at the air oxidation reactor, distillation unit, or reactor to the point of discharge to the atmosphere (or to the point of entry into a control device, if any).

(g) The gas stream is discharged to the atmosphere either on-site, off-site, or both.

(h) The gas stream is not any of the items identified in paragraphs (h)(1) through (9) of this section.

(1) A relief valve discharge.

(2) A leak from equipment subject to subpart H of this part.

(3) A gas stream going to a fuel gas system as defined in 40 CFR 63.101.

(4) A gas stream exiting a control device used to comply with 40 CFR 63.113.

(5) A gas stream transferred to other processes (on-site or off-site) for reaction or other use in another process (i.e., for chemical value as a product, isolated intermediate, byproduct, or coproduct, or for heat value).

(6) A gas stream transferred for fuel value (i.e., net positive heating value), use, reuse, or for sale for fuel value, use, or reuse.

(7) A storage vessel vent or transfer operation vent subject to 40 CFR 63.119 or ? 63.126.

(8) A vent from a waste management unit subject to 40 CFR 63.132 through 63.137.

(9) A gas stream exiting an analyzer.

(i) The gas stream would meet the characteristics specified in paragraphs (b) through (g) of this section, but, for purposes of avoiding applicability, has been deliberately interrupted, temporarily liquefied, routed through any item of equipment for no process purpose, or disposed of in a flare that does not meet the criteria in 40 CFR 63.11(b), or an incinerator that does not reduce emissions of organic HAP by 98 percent or to a concentration of 20 parts per million by volume, whichever is less stringent.

6. [40 CFR 63, Subpart G] National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater

The following emissions units are subject to this rule: P035, P048, P050, P062, P074, P075, P079, P801, P806, , T015, , T023, T024, T025, T026, T027, T028, T032, T033, T065, T066, T067, T068, T069, T070, , T073, T079, T080, T081, T082, T092, T093, T113, T114, T115 and T116.

§§ 63.110 Applicability.

(a) This subpart applies to all process vents, storage vessels, transfer racks, wastewater streams, and in-process equipment subject to 40 CFR 63.149 within a source subject to subpart F of this part.

(b) *Overlap with other regulations for storage vessels*

(1) After the compliance dates specified in 40 CFR 63.100 of subpart F of this part, a Group 1 or Group 2 storage vessel 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.

(2) After the compliance dates specified in 40 CFR 63.100 of subpart F of this part, a Group 1 storage vessel that is also subject to the provisions of 40 CFR part 61, subpart Y is required to comply only with the provisions of this subpart.

(3) After the compliance dates specified in 40 CFR 63.100 of subpart F of this part, a Group 2 storage vessel that is also subject to the provisions of 40 CFR part 61, subpart Y is required to comply only with the provisions of 40 CFR part 61, subpart Y. The recordkeeping and reporting requirements of 40 CFR part 61, subpart Y will be accepted as compliance with the recordkeeping and reporting requirements of this subpart.

(c) *Overlap with other regulations for transfer racks*

(1) After the compliance dates specified in 40 CFR 63.100 of subpart F of this part, a Group 1 transfer rack that is also subject to the provisions of 40 CFR part 61, subpart BB is required to comply only with the provisions of this subpart.

(2) After the compliance dates specified in 40 CFR 63.100 of subpart F of this part, a Group 2 transfer rack that is also subject to the provisions of 40 CFR part 61, subpart BB is required to comply with the provisions of either paragraph (c)(2)(i) or (c)(2)(ii) of this subpart.

(i) If the transfer rack is subject to the control requirements specified in 40 CFR 61.302 of 40 CFR part 61, subpart BB, then the transfer rack is required to comply with the control requirements of 40 CFR 61.302 of 40 CFR part 61, subpart BB. The owner or operator may elect to comply with either the associated testing, monitoring, reporting, and recordkeeping requirements of 40 CFR part 61, subpart BB or with the testing, monitoring, recordkeeping, and reporting requirements specified in this subpart for Group 1 transfer racks. The owner or operator shall indicate this decision in either the Notification of Compliance Status specified in 40 CFR 63.152(b) of this subpart or in an operating permit application or amendment.

(ii) If the transfer rack is subject only to reporting and recordkeeping requirements under 40 CFR part 61, subpart BB, then the transfer rack is required to comply only with the reporting and recordkeeping requirements specified in this subpart for Group 2 transfer racks and is exempt from the reporting and recordkeeping requirements in 40 CFR part 61, subpart BB.

(d) *Overlap with other regulations for process vents*

(1) After the compliance dates specified in 40 CFR 63.100 of subpart F of this part, a Group 1 process vent that is also subject to the provisions of 40 CFR part 60, subpart III is required to comply only with the provisions of this subpart.

(2) After the compliance dates specified in 40 CFR 63.100 of subpart F of this part, the owner or operator of a Group 2 process vent that is also subject to the provisions of 40

CFR part 60, subpart III shall determine requirements according to paragraphs (d)(2)(i) and (d)(2)(ii) of this section.

(i) If the Group 2 process vent has a TRE value less than 1 as determined by the procedures in 40 CFR part 60, subpart III, the process vent is required to comply with the provisions in paragraphs (d)(2)(i)(A) through (d)(2)(i)(C) of this section.

(A) The provisions in both this subpart and in 40 CFR part 60, subpart III for applicability determination and the associated recordkeeping and reporting;

(B) The provisions in both this subpart and in 40 CFR part 60, subpart III for process changes and recalculation of the TRE index value and the associated recordkeeping and reporting; and

(C) The control requirements in 40 CFR 60.612 of 40 CFR part 60, subpart III. The owner or operator may elect to comply with either the associated testing, monitoring, reporting, and recordkeeping requirements of 40 CFR part 60, subpart III or with the testing, monitoring, reporting, and recordkeeping requirements specified in this subpart for Group 1 process vents. The owner or operator shall indicate this decision in either the Notification of Compliance Status specified in 40 CFR 63.152(b) of this subpart or in an operating permit application or amendment.

(ii) If the Group 2 process vent has a TRE value greater than or equal to 1 as determined by the procedures in 40 CFR part 60, subpart III, the process vent is required to comply only with the provisions specified in paragraphs (d)(2)(ii)(A) through (d)(2)(ii)(D) of this section.

(A) The provisions in both this subpart and in 40 CFR part 60, subpart III for applicability determination and the associated recordkeeping and reporting;

(B) The provisions in both this subpart and in 40 CFR part 60, subpart III for process changes and recalculation of the TRE index value and the associated recordkeeping and reporting;

(C) If the provisions of both this subpart and 40 CFR part 60, subpart III require continuous monitoring of recovery device operating parameters, the process vent is required to comply only with the provisions that are specified in this subpart for continuous monitoring of recovery device operating parameters and the associated testing, reporting, and recordkeeping.

(D) If only the provisions of 40 CFR part 60, subpart III require continuous monitoring of recovery device operating parameters, the process vent is required to comply only with the provisions that are specified in 40 CFR part 60, subpart III for continuous monitoring of recovery device operating parameters and the associated testing, reporting, and recordkeeping.

(3) After the compliance dates specified in 63.100 of subpart F of this part, if an owner or operator of a process vent subject to this subpart that is also subject to the provisions of 40 CFR part 60, subpart III elects to control the process vent to the levels required in ? 63.113 (a)(1) or (a)(2) of this subpart without calculating the TRE index value for the vent according to the procedures specified in 40 CFR 63.115(d) of this subpart then the owner or operator shall comply with the testing, monitoring, reporting, and recordkeeping provisions of this subpart and shall be exempt from the testing, monitoring, reporting, and recordkeeping provisions of 40 CFR part 60, subpart III.

(4) After the compliance dates specified in 40 CFR 63.100 of subpart F of this part, a Group 1 process vent 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.

(5) After the compliance dates specified in 40 CFR 63.100 of subpart F of this part, the owner or operator of a Group 2 process vent that is also subject to the provisions of 40 CFR part 60, subpart NNN shall determine requirements according to paragraphs (d)(5)(i) and (d)(5)(ii) of this section.

(i) If the Group 2 process vent has a TRE value less than 1 as determined by the procedures in 40 CFR part 60, subpart NNN, the process vent is required to comply with the provisions in paragraphs (d)(5)(i)(A) through (d)(5)(i)(C) of this section.

(A) The provisions in both this subpart and in 40 CFR part 60, subpart NNN for applicability determination and the associated recordkeeping and reporting;

(B) The provisions in both this subpart and in 40 CFR part 60, subpart NNN for process changes and recalculation of the TRE index value and the associated recordkeeping and reporting; and

(C) The control requirements in 40 CFR 60.662 of 40 CFR part 60, subpart NNN. The owner or operator may elect to comply with either the associated testing, monitoring, reporting, and recordkeeping requirements of 40 CFR part 60, subpart NNN or with the testing, monitoring, reporting, and recordkeeping requirements specified in this subpart for Group 1 process vents. The owner or operator shall indicate this decision in either the Notification of Compliance Status specified in 40 CFR 63.152(b) of this subpart or in an operating permit application or amendment.

(ii) If the Group 2 process vent has a TRE value greater than or equal to 1 as determined by the procedures in 40 CFR part 60, subpart NNN, the process vent is required to comply only with the provisions specified in paragraphs (d)(5)(ii)(A) through (d)(5)(ii)(D) of this section.

(A) The provisions in both this subpart and in 40 CFR part 60, subpart NNN for applicability determination and the associated recordkeeping and reporting;

(B) The provisions in both this subpart and in 40 CFR part 60, subpart NNN for process changes and recalculation of the TRE index value and the associated recordkeeping and reporting;

(C) If the provisions of both this subpart and 40 CFR part 60, subpart NNN require continuous monitoring of recovery device operating parameters, the process vent is required to comply only with the provisions that are specified in this subpart for continuous monitoring of recovery device operating parameters and the associated testing, reporting, and recordkeeping.

(D) If only the provisions of 40 CFR part 60, subpart NNN require continuous monitoring of recovery device operating parameters, the process vent is required to comply only with the provisions that are specified in 40 CFR part 60, subpart NNN for continuous monitoring of recovery device operating parameters and the associated testing, reporting, and recordkeeping.

(6) After the compliance dates specified in 40 CFR 63.100 of subpart F of this part, if an owner or operator of a process vent subject to this subpart that is also subject to the provisions of 40 CFR part 60, subpart NNN elects to control the process vent to the levels required in 40 CFR 63.113(a)(1) or (a)(2) of this subpart without calculating the TRE index value for the vent according to the procedures specified in 40 CFR 63.115(d) of this subpart then the owner or operator shall comply with the testing, monitoring, reporting, and recordkeeping provisions of this subpart and shall be exempt from the testing, monitoring, reporting, and recordkeeping provisions of 40 CFR part 60, subpart NNN.

(7) After the compliance dates specified in 40 CFR 63.100 of subpart F of this part, a Group 1 process vent that is also subject to the provisions of 40 CFR part 60, subpart RRR is required to comply only with the provisions of this subpart.

(8) After the compliance dates specified in 40 CFR 63.100 of subpart F of this part, the owner or operator of a Group 2 process vent that is also subject to the provisions of 40 CFR part 60, subpart RRR shall determine requirements according to paragraphs (d)(8)(i) and (d)(8)(ii) of this section.

(i) If the Group 2 process vent has a TRE value less than 1 as determined by the procedures in 40 CFR part 60, subpart RRR, the process vent is required to comply with the provisions in paragraphs (d)(8)(i)(A) through (d)(8)(i)(C) of this section.

(A) The provisions in both this subpart and in 40 CFR part 60, subpart RRR for applicability determination and the associated recordkeeping and reporting;

(B) The provisions in both this subpart and in 40 CFR part 60, subpart RRR for process changes and recalculation of the TRE index value and the associated recordkeeping and reporting; and

(C) The control requirements in 40 CFR 60.702 of 40 CFR part 60, subpart RRR. The owner or operator may elect to comply with either the associated testing, monitoring, reporting, and recordkeeping requirements of 40 CFR part 60, subpart RRR or with the testing, monitoring, reporting, and recordkeeping requirements specified in this subpart for Group 1 process vents. The owner or operator shall indicate this decision in either the Notification of Compliance Status specified in ? 63.152(b) of this subpart or in an operating permit application or amendment.

(ii) If the Group 2 process vent has a TRE value greater than or equal to 1 as determined by the procedures in 40 CFR part 60, subpart RRR, the process vent is required to comply only with the provisions specified in paragraphs (d)(8)(ii)(A) through (d)(8)(ii)(D) of this section.

(A) The provisions in both this subpart and in 40 CFR part 60, subpart RRR for applicability determination and the associated recordkeeping and reporting;

(B) The provisions in both this subpart and in 40 CFR part 60, subpart RRR for process changes and recalculation of the TRE index value and the associated recordkeeping and reporting;

(C) If the provisions of both this subpart and 40 CFR part 60, subpart RRR require continuous monitoring of recovery device operating parameters, the process vent is required to comply only with the provisions that are specified in this subpart for continuous monitoring of recovery device operating parameters and the associated testing, reporting, and recordkeeping.

(D) If only the provisions of 40 CFR part 60, subpart RRR require continuous monitoring of recovery device operating parameters, the process vent is required to comply only with the provisions that are specified in 40 CFR part 60, subpart RRR for continuous monitoring of recovery device operating parameters and the associated testing, reporting, and recordkeeping.

(9) After the compliance dates specified in 40 CFR 63.100 of subpart F of this part, if an owner or operator of a process vent subject to this subpart that is also subject to the provisions of 40 CFR part 60, subpart RRR elects to control the process vent to the levels required in 40 CFR 63.113(a)(1) or (a)(2) of this subpart without calculating the TRE index value for the vent according to the procedures specified in 40 CFR 63.115(d) of this subpart then the owner or operator shall comply with the testing, monitoring, reporting, and recordkeeping provisions of this subpart and shall be exempt from the testing, monitoring, reporting, and recordkeeping provisions of 40 CFR part 60, subpart RRR.

(10) As an alternative to the requirements of paragraphs (d)(2), (d)(3), (d)(5), (d)(6), (d)(8), and/or (d)(9) of this section as applicable, if a chemical manufacturing process unit has equipment subject to the provisions of this subpart and equipment subject to the provisions of 40 CFR part 60, subpart III, NNN, or RRR, the owner or operator may elect

to apply this subpart to all such equipment in the chemical manufacturing process unit. If the owner or operator elects this method of compliance, all total organic compounds minus methane and ethane, in such equipment shall be considered for purposes of applicability and compliance with this subpart, as if they were organic hazardous air pollutants. Compliance with the provisions of this subpart, in the manner described in this paragraph, shall be deemed to constitute compliance with 40 CFR part 60, subpart III, NNN, or RRR, as applicable.

(e) *Overlap with other regulations for wastewater*

(1) After the compliance dates specified in 40 CFR 63.100 of subpart F of this part, the owner or operator of a Group 1 or Group 2 wastewater stream that is also subject to the provisions of 40 CFR part 61, subpart FF is required to comply with the provisions of both this subpart and 40 CFR part 61, subpart FF. Alternatively, the owner or operator may elect to comply with the provisions of paragraphs (e)(1)(i) and (e)(1)(ii) of this section, which shall constitute compliance with the provisions of 40 CFR part 61, subpart FF.

(i) Comply with the provisions of this subpart; and

(ii) For any Group 2 wastewater stream or organic stream whose benzene emissions are subject to control through the use of one or more treatment processes or waste management units under the provisions of 40 CFR part 61, subpart FF on or after December 31, 1992, comply with the requirements of this subpart for Group 1 wastewater streams.

(2) After the compliance dates specified in 40 CFR 63.100 of subpart F of this part, the owner or operator of any Group 1 or Group 2 wastewater stream that is also subject to provisions in 40 CFR parts 260 through 272 shall comply with the requirements of either paragraph (e)(2)(i) or (e)(2)(ii) of this section.

(i) For each Group 1 or Group 2 wastewater stream, the owner or operator shall comply with the more stringent control requirements (e.g., waste management units, numerical treatment standards, etc.) and the more stringent testing, monitoring, recordkeeping, and reporting requirements that overlap between the provisions of this subpart and the provisions of 40 CFR parts 260 through 272. The owner or operator shall keep a record of the information used to determine which requirements were the most stringent and shall submit this information if requested by the Administrator; or

(ii) The owner or operator shall submit, no later than four months before the applicable compliance date specified in 40 CFR 63.100 of subpart F of this part, a request for a case-by-case determination of requirements. The request shall include the information specified in paragraphs (e)(2)(ii)(A) and (e)(2)(ii)(B) of this section.

(A) Identification of the wastewater streams that are subject to this subpart and to provisions in 40 CFR parts 260 through 272, determination of the Group 1/Group 2 status of those streams, determination of whether or not those streams are listed or exhibit a characteristic as specified in 40 CFR part 261, and determination of whether the waste management unit is subject to permitting under 40 CFR part 270.

(B) Identification of the specific control requirements (e.g., waste management units, numerical treatment standards, etc.) and testing, monitoring, recordkeeping, and reporting requirements that overlap between the provisions of this subpart and the provisions of 40 CFR parts 260 through 272.

(f) *Overlap with the Vinyl Chloride NESHAP*

(1) After the compliance dates specified in 40 CFR 63.100 of subpart F of this part, the owner or operator of any Group 1 process vent that is also subject to the provisions of 40 CFR part 61, subpart F shall comply only with the provisions of this subpart.

(2) After the compliance dates specified in 40 CFR 63.100 of subpart F of this part, the owner or operator of any Group 2 process vent that is also subject to the provisions of 40 CFR part 61, subpart F shall comply with the provisions specified in either paragraph (f)(2)(i) or (f)(2)(ii) of this subpart.

(i) If the process vent is already controlled by a combustion device meeting the requirements of 40 CFR part 61, subpart F, then the owner or operator shall comply with either the associated testing, monitoring, reporting, and recordkeeping provisions for Group 1 process vents in this subpart or the testing, monitoring, reporting, and recordkeeping provisions of 40 CFR part 61, subpart F. The owner or operator shall indicate this decision in either the Notification of Compliance Status specified in 40 CFR 63.152(b) of this subpart or in an operating permit application or amendment.

(ii) If the process vent is not already controlled by a combustion device, then the owner or operator shall comply with the provisions of both this subpart and 40 CFR part 61, subpart F.

(3) After the compliance dates specified in 40 CFR 63.100 of subpart F of this part, if an owner or operator of a process vent subject to this subpart that is also subject to the provisions of 40 CFR part 61, subpart F elects to control the process vent to the levels required in 40 CFR 63.113(a)(1) or (a)(2) of this subpart without calculating the TRE index value for the vent according to the procedures specified in 40 CFR 63.115(d) of this subpart then the owner or operator shall comply with the testing, monitoring, reporting, and recordkeeping provisions of this subpart and shall be exempt from the testing, monitoring, reporting, and recordkeeping provisions of 40 CFR part 61, subpart F.

(4) After the compliance dates specified in 40 CFR 63.100 of subpart F of this part, the owner or operator of a Group 1 or Group 2 wastewater stream that is also subject to the

provisions of 40 CFR part 61, subpart F shall comply with the provisions of either paragraph (f)(4)(i) or (f)(4)(ii) of this section.

(i) The owner or operator shall comply with the provisions of both this subpart and 40 CFR part 61, subpart F or

(ii) The owner or operator may submit, no later than four months before the applicable compliance date specified in 40 CFR 63.100 of subpart F of this part, information demonstrating how compliance with 40 CFR Part 61, subpart F, will also ensure compliance with this subpart. The information shall include a description of the testing, monitoring, reporting, and recordkeeping that will be performed.

(g) *Rules stayed for reconsideration*

Notwithstanding any other provision of this subpart, the effectiveness of subpart G is stayed from October 24, 1994, to April 24, 1995, only as applied to those sources for which the owner or operator makes a representation in writing to the Administrator that the resolution of the area source definition issues could have an effect on the compliance status of the source with respect to subpart G

(h) *Overlap with other regulations for monitoring, recordkeeping, or reporting with respect to combustion devices, recovery devices, or recapture devices*

After the compliance dates specified in 40 CFR 63.100 of subpart F of this part, 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 40 CFR 63.152(b).

(g) *Alternative means of compliance*

(1) Option to comply with part 65. Owners or operators of CMPU that are subject to 40 CFR 63.100 may choose to comply with the provisions of 40 CFR part 65 for all Group 1 and Group 2 process vents, Group 1 storage vessels, Group 1 transfer operations, and equipment that are subject to 40 CFR 63.100, that are part of the CMPU. Other provisions applying to owners or operators who choose to comply with 40 CFR part 65 are provided in 40 CFR 65.1. Group 1 and Group 2 wastewater streams, Group 2 transfer operations, Group 2 storage vessels, and in-process streams are not eligible to comply

with 40 CFR part 65 and must continue to comply with the requirements of this subpart and subpart F of this part.

(i) For Group 1 and Group 2 process vents, 40 CFR part 65, subpart D, satisfies the requirements of 40 CFR 63.102, 63.103, 63.112 through 63.118, 63.148, 63.151, and 63.152.

(ii) For Group 1 storage vessels, 40 CFR part 65, subpart C, satisfies the requirements of 40 CFR 63.102, 63.103, 63.112, 63.119 through 63.123, 63.148, 63.151, and 63.152.

(iii) For Group 1 transfer racks, 40 CFR part 65, subpart E, satisfies the requirements of 40 CFR 63.102, 63.103, 63.112, 63.126 through 63.130, 63.148, 63.151, and 63.152.

(iv) For equipment, comply with 40 CFR 65.160(g).

(2) Part 63, subpart A. Owners or operators who choose to comply with 40 CFR part 65 must also comply with the applicable general provisions of this part 63 listed in table 1A of this subpart. All sections and paragraphs of subpart A of this part that are not mentioned in table 1A of this subpart do not apply to owners or operators who choose to comply with 40 CFR part 65, except that provisions required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with a subpart of 40 CFR part 65 must comply with 40 CFR part 65, subpart A.

§§ 63.112 Emission standard.

(a) The owner or operator of an existing source subject to the requirements of this subpart shall control emissions of organic HAP's to the level represented by the following equation:

EA = 0.02S EPV1 + S EPV2 + 0.05S ES1 + S ES2 + 0.02S ETR1 + S ETR2 + S EWW1C + S EWW2 where:

EA = Emission rate, megagrams per year, allowed for the source.

0.02S EPV1 = Sum of the residual emissions, megagrams per year, from all Group 1 process vents, as defined in 40 CFR 63.111 of this subpart.

S EPV2 = Sum of the emissions, megagrams per year, from all Group 2 process vents as defined in 40 CFR 63.111 of this subpart.

0.05S ES1 = Sum of the residual emissions, megagrams per year, from all Group 1 storage vessels, as defined in 40 CFR 63.111 of this subpart.

S ES2 = Sum of the emissions, megagrams per year, from all Group 2 storage vessels, as defined in 40 CFR 63.111 of this subpart.

0.02S ETR1 = Sum of the residual emissions, megagrams per year, from all Group 1 transfer racks, as defined in 40 CFR 63.111 of this subpart.

S ETR2 = Sum of the emissions, megagrams per year, from all Group 2 transfer racks, as defined in 40 CFR 63.111 of this subpart.

S EWW1C = Sum of the residual emissions from all Group 1 wastewater streams, as defined in 40 CFR 63.111 of this subpart. This term is calculated for each Group 1 stream according to the equation for EWW1C in 40 CFR 63.150(g)(5)(i) of this subpart.

S EWW2 = Sum of emissions from all Group 2 wastewater streams, as defined in 40 CFR 63.111 of this subpart. The emissions level represented by this equation is dependent on the collection of emission points in the source. The level is not fixed and can change as the emissions from each emission point change or as the number of emission points in the source changes.

(b) The owner or operator of a new source subject to the requirements of this subpart shall control emissions of organic HAP's to the level represented by the equation in paragraph (a) of this section.

(c) The owner or operator of an existing source shall demonstrate compliance with the emission standard in paragraph (a) of this section by following the procedures specified in paragraph (e) of this section for all emission points, or by following the emissions averaging compliance approach specified in paragraph (f) of this section for some emission points and the procedures specified in paragraph (e) of this section for all other emission points within the source.

(d) The owner or operator of a new source shall demonstrate compliance with the emission standard in paragraph (b) of this section only by following the procedures in paragraph (e) of this section. The owner or operator of a new source may not use the emissions averaging compliance approach.

(e) The owner or operator of an existing or new source may comply with the process vent provisions in 40 CFR 63.113 through 63.118 of this subpart, the storage vessel provisions in 40 CFR 63.119 through 63.123 of this subpart, the transfer operation provisions in 40 CFR 63.126 through 63.130 of this subpart, the wastewater provisions in 40 CFR 63.131 through 63.147 of this subpart, the leak inspection provisions in 40 CFR 63.148, and the provisions in 40 CFR 63.149 of this subpart.

(1) The owner or operator using this compliance approach shall also comply with the requirements of 40 CFR 63.151 and 40 CFR 63.152 of this subpart, as applicable.

(2) The owner or operator using this compliance approach is not required to calculate the annual emission rate specified in paragraph (a) of this section.

(3) When emissions of different kinds (e.g., emissions from process vents, transfer operations, storage vessels, process wastewater, and/or in-process equipment subject to 40 CFR 63.149 of this subpart) 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 (e)(3)(i) or paragraph (e)(3)(ii) of this section.

(i) Comply with the applicable requirements of this subpart for each kind of emissions in the stream (e.g., the requirements in 40 CFR 63.113 through 63.118 of this subpart G for process vents, and the requirements of 40 CFR 63.126 through 63.130 for transfer operations); or

(ii) Comply with the first set of requirements identified in paragraphs (e)(3)(ii)(A) through (e)(3)(ii)(E) 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 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 (e)(3)(ii)(A) through (e)(3)(ii)(E) of this section constitutes compliance with all other requirements in paragraphs (e)(3)(ii)(A) through (e)(3)(ii)(E) of this section applicable to other types of emissions in the combined stream.

(A) The requirements of this subpart for Group 1 process vents, including applicable monitoring, recordkeeping, and reporting;

(B) The requirements of this subpart for Group 1 transfer racks, including applicable monitoring, recordkeeping, and reporting;

(C) The requirements of 40 CFR 63.119(e) for control of emissions from Group 1 storage vessels, including monitoring, recordkeeping, and reporting;

(D) The requirements of 40 CFR 63.139 for control devices used to control emissions from waste management units, including applicable monitoring, recordkeeping, and reporting; or

(E) The requirements of 40 CFR 63.139 for closed vent systems for control of emissions from in-process equipment subject to 40 CFR 63.149, including applicable monitoring, recordkeeping, and reporting.

(f) The owner or operator of an existing source may elect to control some of the emission points within the source to different levels than specified under 40 CFR 63.113 through 63.148 of this subpart by using an emissions averaging compliance approach as long as the overall emissions for the source do not exceed the emission level specified in paragraph (a) of this section. The owner or operator using emissions averaging must meet the requirements in paragraphs (f)(1) and (f)(2) of this section.

(1) Calculate emission debits and credits for those emission points involved in the emissions average as specified in 40 CFR 63.150 of this subpart; and

(2) Comply with the requirements of 40 CFR 63.151 and 40 CFR 63.152 of this subpart, as applicable.

(g) A State may restrict the owner or operator of an existing source to using only the procedures in paragraph (e) of this section to comply with the emission standard in paragraph (a) of this section.

(h) Where the provisions of this subpart require a performance test, waiver of that requirement shall be addressed only as provided in 40 CFR 63.103(b)(5) of subpart F of this part.

§§ 63.113 Process vent provisions -- reference control technology.

(a) The owner or operator of a Group 1 process vent as defined in this subpart shall comply with the requirements of paragraph (a)(1), (2), or (3) of this section. The owner or operator who transfers a gas stream that has the characteristics specified in 40 CFR 63.107 (b) through (h) or meets the criteria specified in 40 CFR 63.107(i) to an off-site location or an on-site location not owned or operated by the owner or operator of the source for disposal shall comply with the requirements of paragraph (i) of this section.

(1) Reduce emissions of organic HAP using a flare.

(i) The flare shall comply with the requirements of 40 CFR 63.11(b) of subpart A of this part.

(ii) Halogenated vent streams, as defined in 40 CFR 63.111 of this subpart, shall not be vented to a flare.

(2) Reduce emissions of total organic hazardous air pollutants by 98 weight-percent or to a concentration of 20 parts per million by volume, whichever is less stringent. For combustion devices, the emission reduction or concentration shall be calculated on a dry basis, corrected to 3-percent oxygen, and compliance can be determined by measuring either organic hazardous air pollutants or total organic carbon using the procedures in 40 CFR 63.116 of this subpart.

(i) Compliance with paragraph (a)(2) of this section may be achieved by using any combination of combustion, recovery, and/or recapture devices, except that a recovery device may not be used to comply with paragraph (a)(2) of this section by reducing emissions of total organic hazardous air pollutants by 98 weight-percent, except as provided in paragraph (a)(2)(ii) of this section.

(ii) An owner or operator may use a recovery device, alone or in combination with one or more combustion or recapture devices, to reduce emissions of total organic hazardous air

pollutants by 98 weight-percent if all the conditions of paragraphs (a)(2)(ii)(A) through (a)(2)(ii)(D) of this section are met.

(A) The recovery device (and any combustion device or recapture device which operates in combination with the recovery device to reduce emissions of total organic hazardous air pollutants by 98 weight-percent) was installed before the date of proposal of the subpart of this part 63 that makes this subpart G applicable to process vents in the chemical manufacturing process unit.

(B) The recovery device that will be used to reduce emissions of total organic hazardous air pollutants by 98 weight-percent is the last recovery device before emission to the atmosphere.

(C) The recovery device, alone or in combination with one or more combustion or recapture devices, is capable of reducing emissions of total organic hazardous air pollutants by 98 weight-percent, but is not capable of reliably reducing emissions of total organic hazardous air pollutants to a concentration of 20 parts per million by volume.

(D) If the owner or operator disposed of the recovered material, the recovery device would comply with the requirements of this subpart for recapture devices.

(E) Achieve and maintain a TRE index value greater than 1.0 at the outlet of the final recovery device, or prior to release of the vent stream to the atmosphere if no recovery device is present. If the TRE index value is greater than 1.0, the process vent shall comply with the provisions for a Group 2 process vent specified in either paragraph (d) or (e) of this section, whichever is applicable.

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

(c) Halogenated vent streams from Group 1 process vents that are combusted shall be controlled according to paragraph (c)(1) or (2) of this section.

(1) If a combustion device is used to comply with paragraph (a)(2) of this section for a halogenated vent stream, then the gas stream exiting the combustion device shall be conveyed to a halogen reduction device, such as a scrubber, before it is discharged to the atmosphere.

(i) Except as provided in paragraph (c)(1)(ii) of this section, the halogen reduction device shall reduce overall emissions of hydrogen halides and halogens, as defined in 40 CFR 63.111 of this subpart, by 99 percent or shall reduce the outlet mass of total hydrogen halides and halogens to less than 0.45 kilogram per hour, whichever is less stringent.

(ii) If a scrubber or other halogen reduction device was installed prior to December 31, 1992, the device shall reduce overall emissions of hydrogen halides and halogens, as defined in 40 CFR 63.111 of this subpart, by 95 percent or shall reduce the outlet mass of total hydrogen halides and halogens to less than 0.45 kilograms per hour, whichever is less stringent.

(2) A halogen reduction device, such as a scrubber or other technique, may be used to reduce the vent stream halogen atom mass emission rate to less than 0.45 kilogram per hour prior to any combustion control device, and thus make the vent stream nonhalogenated; the vent stream must comply with the requirements of paragraph (a)(1) or (a)(2) of this section.

(d) The owner or operator of a Group 2 process vent having a flow rate greater than or equal to 0.005 standard cubic meter per minute, a HAP concentration greater than or equal to 50 parts per million by volume, and a TRE index value greater than 1.0 but less than or equal to 4.0 shall maintain a TRE index value greater than 1.0 and shall comply with the monitoring of recovery device parameters in 40 CFR 63.114(b) or (c) of this subpart, the TRE index calculations of 40 CFR 63.115 of this subpart, and the applicable reporting and recordkeeping provisions of 40 CFR 63.117 and 63.118 of this subpart. Such owner or operator is not subject to any other provisions of 40 CFR 63.114 through 63.118 of this subpart.

(e) The owner or operator of a Group 2 process vent with a TRE index value greater than 4.0 shall maintain a TRE index value greater than 4.0, comply with the provisions for calculation of a TRE index value in 40 CFR 63.115 and the reporting and recordkeeping provisions in 40 CFR 63.117(b) and 63.118(c) and (h), and is not subject to monitoring or any other provisions of 40 CFR 63.114 through 63.118.

(f) The owner or operator of a Group 2 process vent with a flow rate less than 0.005 standard cubic meter per minute shall maintain a flow rate less than 0.005 standard cubic meter per minute; comply with the Group determination procedures in 40 CFR 63.115 (a), (b), and (e) of this subpart; and the reporting and recordkeeping requirements in 40 CFR 63.117(c) of this subpart, 40 CFR 63.118(d) of this subpart, and 40 CFR 63.118(i) of this subpart; and is not subject to monitoring or any other provisions of 40 CFR 63.114 through 63.118 of this subpart.

(g) The owner or operator of a Group 2 process vent with a total organic HAP concentration less than 50 parts per million by volume shall maintain a total organic HAP concentration less than 50 parts per million by volume; comply with the Group determination procedures in 40 CFR 63.115(a), (c), and (e); the reporting and recordkeeping requirements in 40 CFR 63.117(d) and 63.118(e) and (j); and is not subject to monitoring or any other provisions of 40 CFR 63.114 through 63.118.

(h) The owner or operator of a process vent complying with paragraph (a)(1) or (a)(2) of this section is not required to perform the group determination described in 40 CFR 63.115 of this subpart.

(i) *Off-site control or on-site control not owned or operated by the source*

This paragraph (i) applies to gas streams that have the characteristics specified in ? 63.107(b) through (h) or meet the criteria specified in 40 CFR 63.107(i); that are transferred for disposal to an on-site control device (or other compliance equipment) not owned or operated by the owner or operator of the source generating the gas stream, or to an off-site control device or other compliance equipment; and that have the characteristics (e.g., flow rate, total organic HAP concentration, or TRE index value) of a Group 1 process vent, determined at the point of transfer.

(1) The owner or operator transferring the gas stream shall:

(i) Comply with the provisions specified in 40 CFR 63.114(d) for each gas stream prior to transfer.

(ii) Notify the transferee that the gas stream contains organic hazardous air pollutants that are to be treated in accordance with the provisions of this subpart. The notice shall be submitted to the transferee initially and whenever there is a change in the required control.

(2) The owner or operator may not transfer the gas stream unless the transferee has submitted to the EPA a written certification that the transferee will manage and treat any gas stream transferred under this paragraph (i) and received from a source subject to the requirements of this subpart in accordance with the requirements of either 40 CFR 63.113 through 63.118, or 40 CFR 63.102(b), or subpart D of this part if alternative emission limitations have been granted the transferor in accordance with those provisions. The certifying entity may revoke the written certification by sending a written statement to EPA and the owner or operator giving at least 90 days notice that the certifying entity is rescinding acceptance of responsibility for compliance with the regulatory provisions listed in this paragraph (i). Upon expiration of the notice period, the owner or operator may not transfer the gas stream to the transferee. Records retained by the transferee shall be retained in accordance with 40 CFR 63.103(c).

(3) By providing this written certification to EPA, the certifying entity accepts responsibility for compliance with the regulatory provisions listed in paragraph (i)(2) of this section with respect to any transfer covered by the written certification. Failure to abide by any of those provisions with respect to such transfers may result in enforcement action by EPA against the certifying entity in accordance with the enforcement provisions applicable to violations of these provisions by owners or operators of sources.

(4) Written certifications and revocation statements to EPA from the transferees of such gas streams shall be signed by a responsible official of the certifying entity, provide the name and address of the certifying entity, and be sent to the appropriate EPA Regional Office at the addresses listed in 40 CFR 63.13. Such written certifications are not transferable by the transferee.

§§ 63.114 Process vent provisions -- monitoring requirements.

(a) Each owner or operator of a process vent that uses a combustion device to comply with the requirements in 40 CFR 63.113 (a)(1) or (a)(2) of this subpart, or that uses a recovery device or recapture device to comply with the requirements in 40 CFR 63.113(a)(2) of this subpart, shall install monitoring equipment specified in paragraph (a)(1), (a)(2), (a)(3), (a)(4), or (a)(5) of this section, depending on the type of device used. 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) Where an incinerator is used, a temperature monitoring device equipped with a continuous recorder is required.

(i) Where an incinerator other than a catalytic incinerator is used, a temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

(ii) Where a catalytic incinerator is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

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

(3) Where a boiler or process heater of less than 44 megawatts design heat input capacity is used, the following monitoring equipment is required: a temperature monitoring device in the firebox equipped with a continuous recorder. This requirement does not apply to gas streams that are introduced with primary fuel or are used as the primary fuel.

(4) Where a scrubber is used with an incinerator, boiler, or process heater in the case of halogenated vent streams, the following monitoring equipment is required for the scrubber.

(i) A pH monitoring device equipped with a continuous recorder shall be installed to monitor the pH of the scrubber effluent.

(ii) A flow meter equipped with a continuous recorder shall be located at the scrubber influent for liquid flow. Gas flow rate shall be determined using one of the procedures specified in paragraphs (a)(4)(ii)(A) through (C) of this section.

(A) The owner or operator may determine gas flow rate using the design blower capacity, with appropriate adjustments for pressure drop.

(B) If the scrubber is subject to rules 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 specified in 40 CFR 63.100(k), the owner or operator may determine gas flow rate by the method that had been utilized to comply with those rules. 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 flow rate determination plan that documents an appropriate method which will be used to determine the gas flow rate. The plan shall require determination of gas flow rate by a method which will at least provide a value for either a representative or the highest gas flow rate anticipated in the scrubber during representative operating conditions other than startups, 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 flow rate, and a description of the records that will be maintained to document the determination of gas flow rate. The owner or operator shall maintain the plan as specified in 40 CFR 63.103(c).

(5) Where a recovery device or recapture device is used to comply with the requirements of 40 CFR 63.113(a)(2) of this subpart, the owner or operator shall utilize the appropriate monitoring device identified in paragraph (b), (b)(1), (b)(2), or (b)(3) of this section.

(b) Each owner or operator of a process vent with a TRE index value greater than 1.0 as specified under 40 CFR 63.113(a)(3) or 40 CFR 63.113(d) of this subpart that uses one or more recovery devices shall install either an organic monitoring device equipped with a continuous recorder or the monitoring equipment specified in paragraph (b)(1), (b)(2), or (b)(3) of this section, depending on the type of recovery device used. All monitoring equipment shall be installed, calibrated, and maintained according to the manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately. Monitoring is not required for process vents with TRE index values greater than 4.0 as specified in 40 CFR 63.113(e) of this subpart.

(1) Where an absorber is the final recovery device in the recovery system, a scrubbing liquid temperature monitoring device and a specific gravity monitoring device, each equipped with a continuous recorder shall be used;

(2) Where a condenser is the final recovery device in the recovery system, a condenser exit (product side) temperature monitoring device equipped with a continuous recorder shall be used;

(3) Where a carbon adsorber is the final recovery device in the recovery system, an integrating regeneration stream flow monitoring device having an accuracy of +/-10 percent or better, capable of recording the total regeneration stream mass or volumetric flow for each regeneration cycle; and a carbon bed temperature monitoring device,

capable of recording the carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle shall be used.

(c) An owner or operator of a process vent may request approval to monitor parameters other than those listed in paragraph (a) or (b) of this section. The request shall be submitted according to the procedures specified in 40 CFR 63.151(f) or 40 CFR 63.152(e) of this subpart. Approval shall be requested if the owner or operator:

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

(2) Maintains a TRE greater than 1.0 but less than or equal to 4.0 without a recovery device or with a recovery device other than the recovery devices listed in paragraphs (a) and (b) of this section; or

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

(d) The owner or operator of a process vent shall comply with paragraph (d)(1) or (2) of this section for any bypass line between the origin of the gas stream (i.e., at an air oxidation reactor, distillation unit, or reactor as identified in 40 CFR 63.107(b)) and the point where the gas stream reaches the process vent, as described in 40 CFR 63.107, that could divert the gas stream directly to the atmosphere. 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 (d).

(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 40 CFR 63.118(a)(3). The flow indicator shall be installed at the entrance to any bypass line that could divert the gas stream to the atmosphere; or

(2) Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the non-diverting position and the gas stream is not diverted through the bypass line.

(e) The owner or operator shall establish a range that indicates proper operation of the control or recovery device for each parameter monitored under paragraphs (a), (b), and (c) of this section. In order to establish the range, the information required in 40 CFR 63.152(b) of this subpart shall be submitted in the Notification of Compliance Status or the operating permit application or amendment. The range may be based upon a prior performance test conducted for determining compliance with a regulation promulgated by the EPA, and the owner or operator is not required to conduct a performance test under 40 CFR 63.116 of this subpart, if the prior performance test was conducted using the same methods specified in 40 CFR 63.116 and either no process changes have been made since the test, or the owner or operator can demonstrate that the results

of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes.

§§ 63.115 Process vent provisions -- methods and procedures for process vent group determination.

(a) For purposes of determining vent stream flow rate, total organic HAP or total organic carbon concentration or TRE index value, as specified under paragraph (b), (c), or (d) of this section, the sampling site shall be after the last recovery device (if any recovery devices are present) but prior to the inlet of any control device that is present and prior to release to the atmosphere.

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

(2) No traverse site selection method is needed for vents smaller than 0.10 meter in diameter.

(b) To demonstrate that a vent stream flow rate is less than 0.005 standard cubic meter per minute in accordance with the Group 2 process vent definition of this subpart, the owner or operator shall measure flow rate by the following procedures:

(1) The sampling site shall be selected as specified in paragraph (a) of this section.

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

(c) Each owner or operator seeking to demonstrate that a vent stream has an organic HAP concentration below 50 parts per million by volume in accordance with the Group 2 process vent definition of this subpart shall measure either total organic HAP or TOC concentration using the following procedures:

(1) The sampling site shall be selected as specified in paragraph (a) of this section.

(2) Method 18 or Method 25A of 40 CFR part 60, appendix A shall be used to measure concentration; alternatively, any other method or data that has been validated according to the protocol in Method 301 of appendix A of this part may be used.

(3) Where Method 18 of 40 CFR part 60, appendix A is used, the following procedures shall be used to calculate parts per million by volume concentration:

(i) The minimum sampling time for each run shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15 minute intervals during the run.

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

(A) The TOC concentration (CTOC) is the sum of the concentrations of the individual components and shall be computed for each run using the following equation:

CTOC = (sum) x to i=1 [(sum) x to j=1 Cij] / X

where:

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

Cji=Concentration of sample component j of the sample i, dry basis, parts per million by volume.

n=Number of components in the sample.

x=Number of samples in the sample run.

(B) The total organic HAP concentration (CHAP) shall be computed according to the equation in paragraph (c)(3)(ii)(A) of this section except that only the organic HAP species shall be summed. The list of organic HAP's is provided in table 2 of subpart F of this part.

(4) Where Method 25A of 40 CFR part 60, appendix A is used, the following procedures shall be used to calculate parts per million by volume TOC concentration:

(i) Method 25A of 40 CFR part 60, appendix A, shall be used only if a single organic HAP compound is greater than 50 percent of total organic HAP, by volume, in the vent stream.

(ii) The vent stream composition may be determined by either process knowledge, test data collected using an appropriate EPA method, or a method or data validated according to the protocol in Method 301 of appendix A of this part. Examples of information that could constitute process knowledge include calculations based on material balances, process stoichiometry, or previous test results provided the results are still relevant to the current vent stream conditions.

(iii) The organic HAP used as the calibration gas for Method 25A of 40 CFR part 60, appendix A shall be the single organic HAP compound present at greater than 50 percent of the total organic HAP by volume.

(iv) The span value for Method 25A of 40 CFR part 60, appendix A shall be 50 parts per million by volume.

(v) Use of Method 25A of 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.

(vi) The owner or operator shall demonstrate that the concentration of TOC including methane and ethane measured by Method 25A of 40 CFR part 60, appendix A is below 25 parts per million by volume to be considered a Group 2 vent with an organic HAP concentration below 50 parts per million by volume and to qualify for the low concentration exclusion in 40 CFR 63.113(g) of this subpart.

(d) To determine the TRE index value, the owner or operator shall conduct a TRE determination and calculate the TRE index value according to the procedures in paragraph (d)(1) or (d)(2) of this section and the TRE equation in paragraph (d)(3) of this section.

(1) Engineering assessment may be used to determine vent stream flow rate, net heating value, TOC emission rate, and total organic HAP emission rate for the representative operating condition expected to yield the lowest TRE index value.

(i) If the TRE value calculated using such engineering assessment and the TRE equation in paragraph (d)(3) of this section is greater than 4.0, then the owner or operator is not required to perform the measurements specified in paragraph (d)(2) of this section.

(ii) If the TRE value calculated using such engineering assessment and the TRE equation in paragraph (d)(3) of this section is less than or equal to 4.0, then the owner or operator is required to perform the measurements specified in paragraph (d)(2) of this section for group determination or consider the process vent a Group 1 vent and comply with the emission reduction specified in 40 CFR 63.113(a) of this subpart.

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

(A) Previous test results provided the tests are representative of current operating practices at the process unit.

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

(C) Maximum flow rate, TOC emission rate, organic HAP emission rate, or net heating value limit specified or implied within a permit limit applicable to the process vent.

(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 based on process stoichiometry to estimate maximum organic HAP concentrations,

(2) Estimation of maximum 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,

(4) Estimation of maximum expected net heating value based on the vent stream concentration of each organic compound or, alternatively, as if all TOC in the vent stream were the compound with the highest heating value.

(E) All data, assumptions, and procedures used in the engineering assessment shall be documented.

(2) Except as provided in paragraph (d)(1) of this section, vent stream flow rate, net heating value, TOC emission rate, and total organic HAP emission rate shall be measured and calculated according to the procedures in paragraphs (d)(2)(i) through (v) of this section and used as input to the TRE index value calculation in paragraph (d)(3) of this section.

(i) The vent stream volumetric flow rate (Qs), in standard cubic meters per minute at 20 degrees Celsius, shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate. If the vent stream tested passes through a final steam jet ejector and is not condensed, the vent stream volumetric flow shall be corrected to 2.3 percent moisture.

(ii) The molar composition of the vent stream, which is used to calculate net heating value, shall be determined using the following methods:

(A) Method 18 of 40 CFR part 60, appendix A to measure the concentration of each organic compound.

(B) American Society for Testing and Materials D1946-77 to measure the concentration of carbon monoxide and hydrogen.

(C) Method 4 of 40 CFR part 60, appendix A, to measure the moisture content of the vent stream.

The net heating value of the vent stream shall be calculated using the following equation:

HT = K1 [(sum) n to j=1 Cj Hj](1 - Bws)

where:

HT=Net heating value of the sample, megaJoule per standard cubic meter, where the net enthalpy per mole of vent stream is based on combustion at 25 degrees C and 760 millimeters of mercury, but the standard temperature for determining the volume corresponding to one mole is 20 degrees C, as in the definition of Qs (vent stream flow rate).

Kl=Constant, 1.740 x 10-7 (parts per million)-1 (gram-mole per standard cubic meter) (megaJoule per kilocalorie), where standard temperature for (gram-mole per standard cubic meter) is 20 degrees C.

Bws=Water vapor content of the vent stream, proportion by volume; except that if the vent stream passes through a final steam jet and is not condensed, it shall be assumed that Bws=0.023 in order to correct to 2.3 percent moisture.

Cj=Concentration on a dry basis of compound j in parts per million, as measured for all organic compounds by Method 18 of 40 CFR part 60, appendix A and measured for hydrogen and carbon monoxide by American Society for Testing and Materials D1946-77 as indicated in paragraph (d)(2)(ii) of this section.

Hj=Net heat of combustion of compound j, kilocalorie per gram-mole, based on combustion at 25 degrees C and 760 millimeters mercury. The heats of combustion of vent stream components shall be determined using American Society for Testing and Materials D2382-76 if published values are not available or cannot be calculated.

(iv) The emission rate of TOC (minus methane and ethane) (ETOC) and the emission rate of total organic HAP (EHAP) in the vent stream shall both be calculated using the following equation:

E = K2 [(sum) n to j=1 Cj Mj] Q5

where:

E=Emission rate of TOC (minus methane and ethane) or emission rate of total organic HAP in the sample, kilograms per hour.

K2=Constant, 2.494 x 10-6 (parts per million)-1 (gram-mole per standard cubic meter) (kilogram/gram) (minutes/hour), where standard temperature for (gram-mole per standard cubic meter) is 20 degrees C.

Cj=Concentration on a dry basis of organic compound j in parts per million as measured by Method 18 of 40 CFR part 60, appendix A as indicated in paragraph (d)(2)(ii) of this section. If the TOC emission rate is being calculated, Cj includes all organic compounds measured minus methane and ethane; if the total organic HAP emission rate is being calculated, only organic HAP compounds listed in table 2 in subpart F of this part are included.

Mj=Molecular weight of organic compound j, gram/gram-mole.

Qs=Vent stream flow rate, dry standard cubic meter per minute, at a temperature of 20 degrees C.

(v) In order to determine whether a vent stream is halogenated, the mass emission rate of halogen atoms contained in organic compounds shall be calculated.

(A) The vent stream concentration of each organic compound containing halogen atoms (parts per million by volume, by compound) shall be determined based on the following procedures:

(1) Process knowledge that no halogen or hydrogen halides are present in the process, or

(2) Applicable engineering assessment as discussed in paragraph (d)(1)(iii) of this section, or

(3) Concentration of organic compounds containing halogens measured by Method 18 of 40 CFR part 60, appendix A, or

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

(B) The following equation shall be used to calculate the mass emission rate of halogen atoms:

E = K2Q [(sum) n to j=1 (sum) m to i=1 Cj * Lji * Mji]

where:

E=mass of halogen atoms, dry basis, kilogram per hour.

K2=Constant, 2.494 x 10-6 (parts per million)-1 (kilogram-mole per standard cubic meter) (minute/hour), where standard temperature is 20 degrees C.

Cj=Concentration of halogenated compound j in the gas stream, dry basis, parts per million by volume.

Mji=Molecular weight of halogen atom i in compound j of the gas stream, kilogram per kilogram-mole.

Lji=Number of atoms of halogen i in compound j of the gas stream.

Q=Flow rate of gas stream, dry standard cubic meters per minute, determined according to paragraph (d)(1) or (d)(2)(i) of this section.

j=Halogenated compound j in the gas stream.

i=Halogen atom i in compound j of the gas stream.

n=Number of halogenated compounds j in the gas stream.

m=Number of different halogens i in each compound j of the gas stream.

(3) The owner or operator shall calculate the TRE index value of the vent stream using the equations and procedures in this paragraph.

(i) The equation for calculating the TRE index for a vent stream controlled by a flare or incinerator is as follows:

TRE = 1/EHAP [a + b(Qs) + c(HT) + d(ETOC)]

where:

TRE=TRE index value.

EHAP=Hourly emission rate of total organic HAP, kilograms per hour, as calculated in paragraph (d)(1) or (d)(2)(iv) of this section.

Qs=Vent stream flow rate, standard cubic meters per minute, at a standard temperature of 20 ?C, as calculated in paragraph (d)(1) or (d)(2)(i) of this section.

HT=Vent stream net heating value, megaJoules per standard cubic meter, as calculated in paragraph (d)(1) or (d)(2)(iii) of this section.

ETOC=Emission rate of TOC (minus methane and ethane), kilograms per hour, as calculated in paragraph (d)(1) or (d)(2)(iv) of this section.

a,b,c,d=Coefficients presented in table 1 of this subpart, selected in accordance with paragraphs (d)(3)(ii) and (iii) of this section.

(ii) The owner or operator of a nonhalogenated vent stream shall calculate the TRE index value based on the use of a flare, a thermal incinerator with 0 percent heat recovery, and a thermal incinerator with 70 percent heat recovery and shall select the lowest TRE index value. The owner or operator shall use the applicable coefficients in table 1 of this subpart for nonhalogenated vent streams located within existing sources and the applicable coefficients in table 2 of this subpart for nonhalogenated vent streams located within new sources.

(iii) The owner or operator of a halogenated vent stream shall calculate the TRE index value based on the use of a thermal incinerator with 0 percent heat recovery, and a scrubber. The owner or operator shall use the applicable coefficients in table 1 of this subpart for halogenated vent streams located within existing sources and the applicable coefficients in table 2 of this subpart for halogenated vent streams located within new sources.

(e) The owner or operator of a Group 2 process vent shall recalculate the TRE index value, flow, or organic hazardous air pollutants concentration for each process vent, as necessary to determine

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

(1) The TRE index value, flow rate, or organic HAP concentration shall be recalculated based on measurements of vent stream flow rate, TOC, and organic HAP concentrations, and heating values as specified in 40 CFR 63.115 (a), (b), (c), and (d) of this subpart, as applicable, or on best engineering assessment of the effects of the change. Engineering assessments shall meet the specifications in paragraph (d)(1) of this section.

(2) Where the recalculated TRE index value is less than or equal to 1.0, or less than or equal to 4.0 but greater than 1.0, the recalculated flow rate is greater than or equal to 0.005 standard cubic meter per minute, or the recalculated concentration is greater than or equal to 50 parts per million by volume, the owner or operator shall submit a report as specified in 40 CFR 63.118 (g), (h), (i), or (j) of this subpart and shall comply with the appropriate provisions in ? 63.113 of this subpart by the dates specified in 40 CFR 63.100 of subpart F of this part.

(f) Notwithstanding any other provisions of this subpart, in any case where a process vent includes one or more gas streams that are not from a source subject to this subpart (hereafter called "non-HON streams" for purposes of this paragraph), and one or more gas streams that meet the criteria in 40 CFR 63.107(b) through (h) or the criteria in 40 CFR 63.107(i) (hereafter called "HON streams" for purposes of this paragraph), the owner or operator may elect to comply with paragraphs (f)(1) through (3) of this section.

(1) The owner or operator may determine the characteristics (flow rate, total organic HAP concentration, and TRE index value) for each HON stream, or combination of HON streams, at a representative point as near as practical to, but before, the point at which it is combined with one or more non-HON streams.

(2) If one or more of the HON streams, or combinations of HON streams, has the characteristics (determined at the location specified in paragraph (f)(1) of this section) associated with a Group 1 process vent, the combined vent stream is a Group 1 process vent. Except as specified in paragraph (f)(3) of this section, if none of the HON streams, or combinations of HON streams, when determined at the location specified in paragraph (f)(1) of this section, has the characteristics associated with a Group 1 process vent, the combined vent stream is a Group 2 process vent regardless of the TRE index value determined at the location specified in 40 CFR 63.115(a). If the combined vent stream is a Group 2 process vent as determined by the previous sentence, but one or more of the HON streams, or combinations of HON streams, has a TRE index value greater than 1 but less than or equal to 4, the combined vent stream is a process vent with a TRE index

value greater than 1 but less than or equal to 4. In this case, the owner or operator shall monitor the combined vent stream as required by 40 CFR 63.114(b).

(3) Paragraphs (f)(1) and (2) of this section are not intended to apply instead of any other subpart of this part. If another subpart of this part applies to one or more of the non-HON streams contributing to the combined vent stream, that subpart may impose emission control requirements such as, but not limited to, requiring the combined vent stream to be classified and controlled as a Group 1 process vent.

§§ 63.116 Process vent provisions -- performance test methods and procedures to determine compliance.

(a) When a flare is used to comply with 40 CFR 63.113(a)(1), the owner or operator shall comply with paragraphs (a)(1) through (3) of this section. The owner or operator is not required to conduct a performance test to determine percent emission reduction or outlet organic HAP or TOC concentration.

(1) Conduct a visible emission test using the techniques specified in 40 CFR 63.11(b)(4).

(2) Determine the net heating value of the gas being combusted using the techniques specified in 40 CFR 63.11(b)(6).

(3) Determine the exit velocity using the techniques specified in either 40 CFR 63.11(b)(7)(i) (and 40 CFR 63.11(b)(7)(iii), where applicable) or 40 CFR 63.11(b)(8), as appropriate.

(b) An owner or operator is not required to conduct a performance test when any control device specified in paragraphs (b)(1) through (b)(5) of this section is used.

(1) A boiler or process heater with a design heat input capacity of 44 megawatts or greater.

(2) A boiler or process heater into which the gas 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 process changes have been made since the test, or the owner or operator can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes.

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

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

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

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

(c) Except as provided in paragraphs (a) and (b) of this section, an owner or operator using a control device to comply with the organic HAP concentration limit or percent reduction efficiency requirements in 40 CFR 63.113(a)(2) of this subpart shall conduct a performance test using the procedures in paragraphs (c)(1) through (c)(4) of this section. The organic HAP concentration and percent reduction may be measured as either total organic HAP or as TOC minus methane and ethane according to the procedures specified.

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

(i) For determination of compliance with the 98 percent reduction of total organic HAP requirement of 40 CFR 63.113(a)(2) of this subpart, sampling sites shall be located at the inlet of the control device as specified in paragraphs (c)(1)(i)(A) and (c)(1)(i)(B) of this section, and at the outlet of the control device.

(A) The control device inlet sampling site shall be located after the final product recovery device.

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

(ii) For determination of compliance with the 20 parts per million by volume total organic HAP limit in 40 CFR 63.113(a)(2) of this subpart, the sampling site shall be located at the outlet of the control device.

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

(3) To determine compliance with the 20 parts per million by volume total organic HAP limit in 40 CFR 63.113(a)(2) of this subpart, the owner or operator shall use Method 18 of 40 CFR part 60, appendix A to measure either TOC minus methane and ethane or total organic HAP. Alternatively, any other method or data that has been validated according to the applicable procedures in Method 301 of appendix A of this part, may be used. The

following procedures shall be used to calculate parts per million by volume concentration, corrected to 3 percent oxygen:

(i) The minimum sampling time for each run shall be 1 hour in which either an integrated sample or a minimum of four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15 minute intervals during the run.

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

(A) The TOC concentration (CTOC) is the sum of the concentrations of the individual components and shall be computed for each run using the following equation:

CTOC = (sum) x to i=1 {[(sum) n to j=1 Cji] / x}

where:

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

Cji=Concentration of sample components j of sample i, dry basis, parts per million by volume.

n=Number of components in the sample.

x=Number of samples in the sample run.

The total organic HAP concentration (CHAP) shall be computed according to the equation in paragraph (c)(3)(ii)(A) of this section except that only the organic HAP species shall be summed. The list of organic HAP's is provided in table 2 of subpart F of this part.

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

(A) The emission rate correction factor or excess air, integrated sampling and analysis procedures of Method 3B of 40 CFR part 60, appendix A shall be used to determine the oxygen concentration (%O2d). The samples shall be taken during the same time that the TOC (minus methane or ethane) or total organic HAP samples are taken.

(B) The concentration corrected to 3 percent oxygen (Cc) shall be computed using the following equation:

Cc = Cm [17.9 / 20.9 - %O2d)

Where:

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

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

%02d=Concentration of oxygen, dry basis, percent by volume.

(4) To determine compliance with the 98 percent reduction requirement of 40 CFR 63.113(a)(2) of this subpart, the owner or operator shall use Method 18 of 40 CFR part 60, appendix A; alternatively, any other method or data that has been validated according to the applicable procedures in Method 301 of appendix A of this part may be used. The following procedures shall be used to calculate percent reduction efficiency:

(i) The minimum sampling time for each run shall be 1 hour in which either an integrated sample or a minimum of four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time such as 15 minute intervals during the run.

(ii) The mass rate of either TOC (minus methane and ethane) or total organic HAP (Ei, Eo) shall be computed.

(A) The following equations shall be used:

Ei = K2 [(sum) n to j=1 Cij Mij] Qi

Eo = K2 [(sum) n to j=1 Coj Moj] Qo

where:

Cij, Coj=Concentration of sample component j of the gas stream at the inlet and outlet of the control device, respectively, dry basis, parts per million by volume.

Ei, Eo=Mass rate of TOC (minus methane and ethane) or total organic HAP at the inlet and outlet of the control device, respectively, dry basis, kilogram per hour.

Mij, Moj=Molecular weight of sample component j of the gas stream at the inlet and outlet of the control device, respectively, gram/gram-mole.

Qi, Qo=Flow rate of gas stream at the inlet and outlet of the control device, respectively, dry standard cubic meter per minute.

K2=Constant, 2.494 x 10-6 (parts per million)-1 (gram-mole per standard cubic meter) (kilogram/gram) (minute/hour), where standard temperature (gram-mole per standard cubic meter) is 20 degrees C.

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

(C) Where the mass rate of total organic HAP is being calculated, only the organic HAP species shall be summed using the equation in paragraph (c)(4)(ii)(A) of this section. The list of organic HAP's is provided in table 2 of subpart F of this part.

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

R = [Ei - Eo / Ei] (100)

where:

R=Control efficiency of control device, percent.

Ei=Mass rate of TOC (minus methane and ethane) or total organic HAP at the inlet to the control device as calculated under paragraph (c)(4)(ii) of this section, kilograms TOC per hour or kilograms organic HAP per hour.

Eo=Mass rate of TOC (minus methane and ethane) or total organic HAP at the outlet of the control device, as calculated under paragraph (c)(4)(ii) of this section, kilograms TOC per hour or kilograms organic HAP per hour.

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

(d) An owner or operator using a combustion device followed by a scrubber or other halogen reduction device to control halogenated vent streams in compliance with 40 CFR 63.113(c)(1) shall conduct a performance test to determine compliance with the control efficiency or emission limits for hydrogen halides and halogens.

(1) For an owner or operator determining compliance with the percent reduction of total hydrogen halides and halogens, sampling sites shall be located at the inlet and outlet of the scrubber or other halogen reduction device used to reduce halogen emissions. For an

owner or operator determining compliance with the less than 0.45 kilogram per hour outlet emission limit for total hydrogen halides and halogens, the sampling site shall be located at the outlet of the scrubber or other halogen reduction device and prior to any releases to the atmosphere.

(2) Except as provided in paragraph (d)(5) of this section, Method 26 or Method 26A of 40 CFR part 60, appendix A, shall be used to determine the concentration, in milligrams per dry standard cubic meter, of total hydrogen halides and halogens that may be present in the vent stream. The mass emissions of each hydrogen halide and halogen compound shall be calculated from the measured concentrations and the gas stream flow rate.

(3) To determine compliance with the percent removal efficiency, 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 the compounds present at the outlet of the scrubber or other halogen reduction device shall be summed together. Percent reduction shall be determined by comparison of the summed inlet and outlet measurements.

(4) To demonstrate compliance with the less than 0.45 kilogram per hour outlet emission limit, the test results must show that the mass emission rate of total hydrogen halides and halogens measured at the outlet of the scrubber or other halogen reduction device is below 0.45 kilogram per hour.

(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) An owner or operator using a scrubber or other halogen reduction device to reduce the vent stream halogen atom mass emission rate to less than 0.45 kilogram per hour prior to a combustion control device in compliance with 40 CFR 63.113(c)(2) of this subpart shall determine the halogen atom mass emission rate prior to the combustor according to the procedures in 40 CFR 63.115(d)(2)(v) of this subpart.

§§ 63.117 Process vent provisions -- reporting and recordkeeping requirements for group and TRE determinations and performance tests.

(a) Each owner or operator subject to the control provisions for Group 1 process vents in 40 CFR 63.113(a) or the provisions for Group 2 process vents with a TRE index value greater than 1.0 but less than or equal to 4.0 in 40 CFR 63.113(d) shall:

(1) Keep an up-to-date, readily accessible record of the data specified in paragraphs (a)(4) through (a)(8) of this section, as applicable, and

(2) Include the data in paragraphs (a)(4) through (a)(8) of this section in the Notification of Compliance Status report as specified in 40 CFR 63.152(b) of this subpart.

(3) If any subsequent TRE determinations or performance tests are conducted after the Notification of Compliance Status has been submitted, report the data in paragraphs (a)(4) through (a)(8) of this section in the next Periodic Report as specified in 40 CFR 63.152(c) of this subpart.

(4) Record and report the following when using a combustion device to achieve a 98 weight percent reduction in organic HAP or an organic HAP concentration of 20 parts per million by volume, as specified in ? 63.113(a)(2) of this subpart:

(i) The parameter monitoring results for incinerators, catalytic incinerators, boilers or process heaters specified in table 3 of this subpart, and averaged over the same time period of the performance testing.

(ii) For an incinerator, the percent reduction of organic HAP or TOC achieved by the incinerator determined as specified in 40 CFR 63.116(c) of this subpart, or the concentration of organic HAP or TOC (parts per million by volume, by compound) determined as specified in 40 CFR 63.116(c) of this subpart at the outlet of the incinerator on a dry basis corrected to 3 percent oxygen.

(iii) For a boiler or process heater, a description of the location at which the vent stream is introduced into the boiler or process heater.

(iv) For a boiler or process heater with a design heat input capacity of less than 44 megawatts and where the 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, or the concentration of organic HAP or TOC (parts per million by volume, by compound) determined as specified in 40 CFR 63.116(c) at the outlet of the combustion device on a dry basis corrected to 3 percent oxygen.

(5) Record and report the following when using a flare to comply with 40 CFR 63.113(a)(1) of this subpart:

(i) 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 40 CFR 63.116(a) of this subpart; and

(iii) All periods during the compliance determination when the pilot flame is absent.

(6) Record and report the following when using a scrubber following a combustion device to control a halogenated vent stream:

(i) The percent reduction or scrubber outlet mass emission rate of total hydrogen halides and halogens as specified in 40 CFR 63.116(d) of this subpart;

(ii) The pH of the scrubber effluent; and

(iii) The scrubber liquid to gas ratio.

(7) Record and report the following when achieving and maintaining a TRE index value greater than 1.0 but less than 4.0 as specified in 40 CFR 63.113(a)(3) or 40 CFR 63.113(d) of this subpart:

(i) The parameter monitoring results for absorbers, condensers, or carbon adsorbers, as specified in table 4 of this subpart, and averaged over the same time period of the measurements of vent stream flow rate and concentration used in the TRE determination (both measured while the vent stream is normally routed and constituted), and

(ii) The measurements and calculations performed to determine the TRE index value of the vent stream.

(8) Record and report the halogen concentration in the vent stream determined according to the procedures specified in 40 CFR 63.115(d)(2)(v).

(b) The owner or operator of a Group 2 process vent with a TRE index greater than 4.0 as specified in 40 CFR 63.113(e) of this subpart, shall maintain records and submit as part of the Notification of Compliance Status specified in 40 CFR 63.152 of this subpart, measurements, engineering assessments, and calculations performed to determine the TRE index value of the vent stream. Documentation of engineering assessments shall include all data, assumptions, and procedures used for the engineering assessments, as specified in 40 CFR 63.115(d)(1) of this subpart.

(c) Each owner or operator who elects to demonstrate that a process vent is a Group 2 process vent based on a flow rate less than 0.005 standard cubic meter per minute must submit to the Administrator the flow rate measurement using methods and procedures specified in ? 63.115 (a) and (b) of this subpart with the Notification of Compliance Status specified in 40 CFR 63.152 of this subpart.

(d) Each owner or operator who elects to demonstrate that a process vent is a Group 2 process vent based on organic HAP or TOC concentration less than 50 parts per million by volume must submit to the Administrator an organic HAP or TOC concentration measurement using the methods and procedures specified in 40 CFR 63.115 (a) and (c) of this subpart with the Notification of Compliance Status specified in ? 63.152 of this subpart.

(e) If an owner or operator uses a control or recovery device other than those listed in tables 3 and 4 of this subpart or requests approval to monitor a parameter other than those specified in tables 3 and 4 of this subpart, the owner or operator shall submit a description of planned reporting and recordkeeping procedures as required under 40 CFR 63.151(f) or 40 CFR 63.152(e) of this subpart. The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the permit application or by other appropriate means.

(f) For each parameter monitored according to tables 3 or 4 of this subpart or paragraph (e) of this section, the owner or operator shall establish a range for the parameter that indicates proper operation of the control or recovery device. In order to establish the range, the information required in ? 63.152(b) of this subpart shall be submitted in the Notification of Compliance Status or the operating permit application or amendment.

§§ 63.118 Process vent provisions -- periodic reporting and recordkeeping requirements.

(a) Each owner or operator using a control device to comply with 40 CFR 63.113 (a)(1) or (a)(2) of this subpart shall keep the following records up-to-date and readily accessible:

(1) Continuous records of the equipment operating parameters specified to be monitored under 40 CFR 63.114(a) of this subpart and listed in table 3 of this subpart or specified by the Administrator in accordance with 40 CFR 63.114(c) and 40 CFR 63.117(e) of this subpart. For flares, the hourly records and records of pilot flame outages specified in table 3 of this subpart shall be maintained in place of continuous records.

(2) Records of the daily average value of each continuously monitored parameter for each operating day determined according to the procedures specified in 40 CFR 63.152(f). For flares, records of the times and duration of all periods during which all pilot flames are absent shall be kept rather than daily averages.

(3) Hourly records of whether the flow indicator specified under 40 CFR 63.114(d)(1) was operating and whether a diversion was detected at any time during the hour, as well as records of the times and durations of all periods when the gas stream is diverted to the atmosphere or the monitor is not operating.

(4) Where a seal mechanism is used to comply with 40 CFR 63.114(d)(2) of this subpart, hourly records of flow are not required. In such cases, the owner or operator shall record that the monthly visual inspection of the seals or closure mechanism has been done, and shall record the duration 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 lock has been checked out, and records of any car-seal that has broken.

(b) Each owner or operator using a recovery device or other means to achieve and maintain a TRE index value greater than 1.0 but less than 4.0 as specified in 40 CFR 63.113(a)(3) or 40 CFR 63.113(d) of this subpart shall keep the following records up-to-date and readily accessible:

(1) Continuous records of the equipment operating parameters specified to be monitored under 40 CFR 63.114(b) of this subpart and listed in table 4 of this subpart or specified by the Administrator in accordance with 40 CFR 63.114(c) of this subpart and 40 CFR 63.114(e) of this subpart and

(2) Records of the daily average value of each continuously monitored parameter for each operating day determined according to the procedures specified in 40 CFR 63.152(f). If

carbon adsorber regeneration stream flow and carbon bed regeneration temperature are monitored, the records specified in table 4 of this subpart shall be kept instead of the daily averages.

(c) Each owner or operator subject to the provisions of this subpart and who elects to demonstrate compliance with the TRE index value greater than 4.0 under 40 CFR 63.113(e) of this subpart or greater than 1.0 under 40 CFR 63.113(a)(3) or 40 CFR 63.113(d) of this subpart shall keep up-to-date, readily accessible records of:

(1) Any process changes as defined in 40 CFR 63.115(e) of this subpart; and

(2) Any recalculation of the TRE index value pursuant to 40 CFR 63.115(e) of this subpart.

(d) Each owner or operator who elects to comply by mainlining a flow rate less than 0.005 standard cubic meter per minute under 40 CFR 63.113(f) of this subpart, shall keep up-to-date, readily accessible records of:

(1) Any process changes as defined in 40 CFR 63.115(e) of this subpart that increase the vent stream flow rate,

(2) Any recalculation or measurement of the flow rate pursuant to 40 CFR 63.115(e) of this subpart, and

(3) If the flow rate increases to 0.005 standard cubic meter per minute or greater as a result of the process change, the TRE determination performed according to the procedures of 40 CFR 63.115(d) of this subpart.

(e) Each owner or operator who elects to comply by maintaining an organic HAP concentration less than 50 parts per million by volume organic HAP concentration under 40 CFR 63.113(g) of this subpart shall keep up-to-date, readily accessible records of:

(1) Any process changes as defined in 40 CFR 63.115(e) that increase the organic HAP concentration of the vent stream,

(2) Any recalculation or measurement of the concentration pursuant to 40 CFR 63.115(e) of this subpart, and

(3) If the organic HAP concentration increases to 50 parts per million by volume or greater as a result of the process change, the TRE determination performed according to the procedures of 40 CFR 63.115(d) of this subpart.

(f) Each owner or operator who elects to comply with the requirements of 40 CFR 63.113 of this subpart shall submit to the Administrator Periodic Reports of the following recorded information according to the schedule in 40 CFR 63.152 of this subpart.

(1) Reports of daily average values of monitored parameters for all operating days when the daily average values recorded under paragraphs (a) and (b) of this section were outside the ranges established in the Notification of Compliance Status or operating permit.

(2) For Group 1 points, reports of the duration of periods when monitoring data is not collected for each excursion caused by insufficient monitoring data as defined in 40 CFR 63.152(c)(2)(ii)(A) of this subpart.

(3) Reports of the times and durations of all periods recorded under paragraph (a)(3) of this section when the gas stream is diverted to the atmosphere through a bypass line.

(4) Reports of all periods recorded under paragraph (a)(4) of this section in which the seal mechanism is broken, the bypass line valve position has changed, or the key to unlock the bypass line valve was checked out.

(5) Reports of the times and durations of all periods recorded under paragraph (a)(2) of this section in which all pilot flames of a flare were absent.

(6) Reports of all carbon bed regeneration cycles during which the parameters recorded under paragraph (b)(2)(v) of this section were outside the ranges established in the Notification of Compliance Status or operating permit.

(g) Whenever a process change, as defined in 40 CFR 63.115(e) of this subpart, is made that causes a Group 2 process vent to become a Group 1 process vent, the owner or operator shall submit a report within 180 calendar days after the process change as specified in 40 CFR 63.151(j) of this subpart. The report shall include:

(1) A description of the process change;

(2) The results of the recalculation of the flow rate, organic HAP concentration, and TRE index value required under 40 CFR 63.115(e) of this subpart and recorded under paragraph (c), (d), or (e) of this section; and

(3) A statement that the owner or operator will comply with the provisions of ? 63.113 of this subpart for Group 1 process vents by the dates specified in subpart F of this part.

(h) Whenever a process change, as defined in 40 CFR 63.115(e) of this subpart, is made that causes a Group 2 process vent with a TRE greater than 4.0 to become a Group 2 process vent with a TRE less than 4.0, the owner or operator shall submit a report within 180 calendar days after the process change. The report may be submitted as part of the next periodic report. The report shall include:

(1) A description of the process change,

(2) The results of the recalculation of the TRE index value required under 40 CFR 63.115(e) of this subpart and recorded under paragraph (c) of this section, and

(3) A statement that the owner or operator will comply with the requirements specified in 40 CFR 63.113(d) of this subpart.

(i) Whenever a process change, as defined in 40 CFR 63.115(e) of this subpart, is made that causes a Group 2 process vent with a flow rate less than 0.005 standard cubic meter per minute to become a Group 2 process vent with a flow rate of 0.005 standard cubic meter per minute or greater and a TRE index value less than or equal to 4.0, the owner or operator shall submit a report within 180 calendar days after the process change. The report may be submitted as part of the next periodic report. The report shall include:

(1) A description of the process change,

(2) The results of the recalculation of the flow rate and the TRE determination required under 40 CFR 63.115(e) of this subpart and recorded under paragraph (d) of this section, and

(3) A statement that the owner or operator will comply with the requirements specified in 40 CFR 63.113(d) of this subpart.

(j) Whenever a process change, as defined in 40 CFR 63.115(e) of this subpart, is made that causes a Group 2 process vent with an organic HAP concentration less than 50 parts per million by volume to become a Group 2 process vent with an organic HAP concentration of 50 parts per million by volume or greater and a TRE index value less than or equal to 4.0, the owner or operator shall submit a report within 180 calendar days after the process change. The report may be submitted as part of the next periodic report. The report shall include:

(1) A description of the process change,

(2) The results of the recalculation of the organic HAP concentration and the TRE determination required under 40 CFR 63.115(e) of this subpart and recorded under paragraph (e) of this section, and

(3) A statement that the owner or operator will comply with the requirements specified in 40 CFR 63.113(d) of this subpart.

(k) The owner or operator is not required to submit a report of a process change if one of the conditions listed in paragraph (k)(1), (k)(2), (k)(3), or (k)(4) of this section is met.

(1) The process change does not meet the definition of a process change in ? 63.115(e) of this subpart, or

(2) The vent stream flow rate is recalculated according to 40 CFR 63.115(e) of this subpart and the recalculated value is less than 0.005 standard cubic meter per minute, or

(3) The organic HAP concentration of the vent stream is recalculated according to 40 CFR 63.115(e) of this subpart and the recalculated value is less than 50 parts per million by volume, or

(4) The TRE index value is recalculated according to 40 CFR 63.115(e) of this subpart and the recalculated value is greater than 4.0.

§§ 63.119 Storage vessel provisions -- reference control technology.

(a) For each storage vessel to which this subpart applies, the owner or operator shall comply with the requirements of paragraphs (a)(1), (a)(2), (a)(3), and (a)(4) of this section according to the schedule provisions of 40 CFR 63.100 of subpart F of this part.

(1) For each Group 1 storage vessel (as defined in table 5 of this subpart for existing sources and table 6 for new sources) 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 owner or operator 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 in accordance with the requirements in paragraph (b), (c), (d), (e), or (f) of this section, or equivalent as provided in 40 CFR 63.121 of this subpart.

(2) For each Group 1 storage vessel (as defined in table 5 of this subpart for existing sources and table 6 of this subpart for new sources) storing a liquid for which the maximum true vapor pressure of the total organic hazardous air pollutants in the liquid is greater than or equal to 76.6 kilopascals, the owner or operator shall operate and maintain a closed vent system and control device meeting the requirements specified in paragraph (e) of this section, or route the emissions to a process or a fuel gas system as specified in paragraph (f) of this section, or equivalent as provided in 40 CFR 63.121 of this subpart.

(3) For each Group 2 storage vessel that is not part of an emissions average as described in 40 CFR 63.150 of this subpart, the owner or operator shall comply with the recordkeeping requirement in 40 CFR 63.123(a) of this subpart and is not required to comply with any other provisions in 40 CFR 63.119 through 63.

(4) For each Group 2 storage vessel that is part of an emissions average, the owner or operator shall comply with the emissions averaging provisions in 40 CFR 63.150 of this subpart.

(b) The owner or operator who elects to use a fixed roof and an internal floating roof, as defined in 40 CFR 63.111 of this subpart, to comply with the requirements of paragraph (a)(1) of this section shall comply with the requirements specified in paragraphs (b)(1) through (b)(6) of this section.

Note: The intent of paragraphs (b)(1) and (b)(2) of this section is to avoid having a vapor space between the floating roof and the stored liquid for extended periods. Storage vessels may be emptied for purposes such as routine storage vessel maintenance, inspections, petroleum liquid deliveries, or transfer operations. Storage vessels where liquid is left on walls, as bottom clingage, or in pools due to floor irregularity are considered completely empty.

(1) The internal floating roof shall be floating on the liquid surface at all times except when the floating roof must be supported by the leg supports during the periods specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section.

(i) During the initial fill.

(ii) After the vessel has been completely emptied and degassed.

(iii) When the vessel is completely emptied before being subsequently refilled.

(2) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as soon as practical.

(3) Each internal floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. Except as provided in paragraph (b)(3)(iv) of this section, the closure device shall consist of one of the devices listed in paragraph (b)(3)(i), (b)(3)(ii), or (b)(3)(iii) of this section.

(i) A liquid-mounted seal as defined in 40 CFR 63.111 of this subpart.

(ii) A metallic shoe seal as defined in 40 CFR 63.111 of this subpart.

(iii) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor- mounted, but both must be continuous seals.

(iv) If the internal floating roof is equipped with a vapor-mounted seal as of December 31, 1992, the requirement for one of the seal options specified in paragraphs (b)(3)(i), (b)(3)(ii), and (b)(3)(iii) of this section does not apply until the earlier of the dates specified in paragraphs (b)(3)(iv)(A) and (b)(3)(iv)(B) of this section.

(A) The next time the storage vessel is emptied and degassed.

(B) No later than 10 years after April 22, 1994.

(4) Automatic bleeder vents are to be closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the roof leg supports.

(5) Except as provided in paragraph (b)(5)(viii) of this section, each internal floating roof shall meet the specifications listed in paragraphs (b)(5)(i) through (b)(5)(vii) of this section.

(i) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and rim space vents is to provide a projection below the liquid surface.

(ii) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover or lid. The cover or lid shall be equipped with a gasket.

(iii) Each penetration of the internal floating roof for the purposes of sampling shall be a sample well. Each sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

(iv) Each automatic bleeder vent shall be gasketed.

(v) Each rim space vent shall be gasketed.

(vi) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(vii) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(viii) If the internal floating roof does not meet any one of the specifications listed in paragraphs (b)(5)(i) through (b)(5)(vii) of this section as of December 31, 1992, the requirement for meeting those specifications does not apply until the earlier of the dates specified in paragraphs (b)(5)(viii)(A) and (b)(5)(viii)(B) of this section.

(A) The next time the storage vessel is emptied and degassed.

(B) No later than 10 years after April 22, 1994.

(6) Each cover or lid on any opening in the internal floating roof shall be closed (i.e., no visible gaps), except when the cover or lid must be open for access. Covers on each access hatch and each gauge float well shall be bolted or fastened so as to be air-tight when they are closed. Rim space vents are to be set to open only when the internal floating roof is not floating or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.

(c) The owner or operator who elects to use an external floating roof, as defined in 40 CFR 63.111 of this subpart, to comply with the requirements of paragraph (a)(1) of this section shall comply with the requirements specified in paragraphs (c)(1) through (c)(4) of this section.

(1) Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge.

(i) Except as provided in paragraph (c)(1)(iv) of this section, the closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal and the upper seal is referred to as the secondary seal.

(ii) Except as provided in paragraph (c)(1)(v) of this section, the primary seal shall be either a metallic shoe seal or a liquid-mounted seal.

(iii) Except during the inspections required by 40 CFR 63.120(b) of this subpart, both the primary seal and the secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion.

(iv) If the external floating roof is equipped with a liquid-mounted or metallic shoe primary seal as of December 31, 1992, the requirement for a secondary seal in paragraph (c)(1)(i) of this section does not apply until the earlier of the dates specified in paragraphs (c)(1)(iv)(A) and (c)(1)(iv)(B) of this section.

(A) The next time the storage vessel is emptied and degassed.

(B) No later than 10 years after April 22, 1994.

(v) If the external floating roof is equipped with a vapor-mounted primary seal and a secondary seal as of December 31, 1992, the requirement for a liquid-mounted or metallic shoe primary seal in paragraph (c)(1)(ii) of this section does not apply until the earlier of the dates specified in paragraphs (c)(1)(v)(A) and (c)(1)(v)(B) of this section.

(A) The next time the storage vessel is emptied and degassed.

(B) No later than 10 years after April 22, 1994.

(2) Each external floating roof shall meet the specifications listed in paragraphs (c)(2)(i) through (c)(2)(xii) of this section.

(i) Except for automatic bleeder vents (vacuum breaker vents) and rim space vents, each opening in the noncontact external floating roof shall provide a projection below the liquid surface except as provided in paragraph (c)(2)(xii) of this section.

(ii) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal or lid which is to be

maintained in a closed position (i.e., no visible gap) at all times except when the cover or lid must be open for access. Covers on each access hatch and each gauge float well shall be bolted or fastened so as to be air-tight when they are closed.

(iii) Automatic bleeder vents are to be closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the roof leg supports.

(iv) Rim space vents are to be set to open only when the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.

(v) Automatic bleeder vents and rim space vents are to be gasketed.

(vi) Each roof drain that empties into the stored liquid is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(vii) Each unslotted guide pole well shall have a gasketed sliding cover or a flexible fabric sleeve seal.

(viii) Each unslotted guide pole shall have on the end of the pole a gasketed cap which is closed at all times except when gauging the liquid level or taking liquid samples.

(ix) Each slotted guide pole well shall have a gasketed sliding cover or a flexible fabric sleeve seal.

(x) Each slotted guide pole shall have a gasketed float or other device which closes off the liquid surface from the atmosphere.

(xi) Each gauge hatch/sample well shall have a gasketed cover which is closed at all times except when the hatch or well must be open for access.

(xii) If each opening in a noncontact external floating roof except for automatic bleeder vents (vacuum breaker vents) and rim space vents does not provide a projection below the liquid surface as of December 31, 1992, the requirement for providing these projections below the liquid surface does not apply until the earlier of the dates specified in paragraphs (c)(2)(xii)(A) and (c)(2)(xii)(B) of this section.

(A) The next time the storage vessel is emptied and degassed.

(B) No later than 10 years after April 22, 1994.

Note: The intent of paragraphs (c)(3) and (c)(4) of this section is to avoid having a vapor space between the floating roof and the stored liquid for extended periods. Storage vessels may be emptied for purposes such as routine storage vessel maintenance, inspections, petroleum liquid deliveries, or transfer operations. Storage vessels where

liquid is left on walls, as bottom clingage, or in pools due to floor irregularity are considered completely empty.

(3) The external floating roof shall be floating on the liquid surface at all times except when the floating roof must be supported by the leg supports during the periods specified in paragraphs (c)(3)(i) through (c)(3)(iii) of this section.

(i) During the initial fill.

(ii) After the vessel has been completely emptied and degassed.

(iii) When the vessel is completely emptied before being subsequently refilled.

(4) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as soon as practical.

(d) The owner or operator who elects to use an external floating roof converted to an internal floating roof (i.e., fixed roof installed above external floating roof) to comply with paragraph (a)(1) of this section shall comply with paragraphs (d)(1) and (d)(2) of this section.

(1) Comply with the requirements for internal floating roof vessels specified in paragraphs (b)(1), (2), and (3) of this section; and

(2) Comply with the requirements for deck fittings that are specified for external floating roof vessels in paragraphs (c)(2)(i) through (c)(2)(xii) of this section.

(e) The owner or operator who elects to use a closed vent system and control device, as defined in 40 CFR 63.111 of this subpart, to comply with the requirements of paragraph (a)(1) or (a)(2) of this section shall comply with the requirements specified in paragraphs (e)(1) through (e)(5) of this section.

(1) Except as provided in paragraph (e)(2) of this section, the control device shall be designed and operated to reduce inlet emissions of total organic HAP by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements of 40 CFR 63.11(b) of subpart A of this part.

(2) If the owner or operator can demonstrate that a control device installed on a storage vessel on or before December 31, 1992 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 paragraph (e)(1) or (e)(2) of this section, as applicable, shall not exceed 240 hours per year.

(4) The specifications and requirements in paragraphs (e)(1) and (e)(2) of this section for control devices do not apply during periods of planned routine maintenance.

(5) The specifications and requirements in paragraphs (e)(1) and (e)(2) of this section for control devices do not apply during a control system malfunction.

(6) An owner or operator may use a combination of control devices to achieve the required reduction of total organic hazardous air pollutants specified in paragraph (e)(1) of this section. An owner or operator may use a combination of control devices installed on a storage vessel on or before December 31, 1992 to achieve the required reduction of total organic hazardous air pollutants specified in paragraph (e)(2) of this section.

(f) The owner or operator who elects to route emissions to a fuel gas system or to a process, as defined in ? 63.111 of this subpart, to comply with the requirements of paragraph (a)(1) or (a)(2) of this section shall comply with the requirements in paragraphs (f)(1) through (f)(3) of this section, as applicable.

(1) If emissions are routed to a fuel gas system, there is no requirement to conduct a performance test or design evaluation. If emissions are routed to a process, the organic hazardous air pollutants in the emissions shall predominantly meet one of, or a combination of, the ends specified in paragraphs (f)(1)(i) through (f)(1)(iv) of this section. The owner or operator shall comply with the compliance demonstration requirements in 40 CFR 63.120(f).

(i) Recycled and/or consumed in the same manner as a material that fulfills the same function in that process;

(ii) Transformed by chemical reaction into materials that are not organic hazardous air pollutants;

(iii) Incorporated into a product; and/or

(iv) Recovered.

(2) If the emissions are conveyed by a system other than hard-piping, any conveyance system operated under positive pressure shall be subject to the requirements of 40 CFR 63.148 of this subpart.

(3) The fuel gas system or process shall be operating at all times when organic hazardous air pollutants emissions are routed to it except as provided in 40 CFR 63.102(a)(1) of subpart F of this part and in paragraphs (f)(3)(i) through (f)(3)(iii) of this section. Whenever the owner or operator by-passes the fuel gas system or process, the owner or operator shall comply with the recordkeeping requirement in 40 CFR 63.123(h) of this subpart. Bypassing is permitted if the owner or operator complies with one or more of the conditions specified in paragraphs (f)(3)(i) through (f)(3)(iii) of this section.

(i) The liquid level in the storage vessel is not increased;

(ii) The emissions are routed through a closed-vent system to a control device complying with 40 CFR 63.119(e) of this subpart; or

(iii) The total aggregate amount of time during which the emissions by-pass the fuel gas system or process during the calendar year without being routed to a control device, for all reasons (except start-ups/shutdowns/malfunctions or product changeovers of flexible operation units and periods when the storage vessel has been emptied and degassed), does not exceed 240 hours.

§§ 63.120 Storage vessel provisions -- procedures to determine compliance.

(a) To demonstrate compliance with 40 CFR 63.119(b) of this subpart (storage vessel equipped with a fixed roof and internal floating roof) or with 40 CFR 63.119(d) of this subpart (storage vessel equipped with an external floating roof converted to an internal floating roof), the owner or operator shall comply with the requirements in paragraphs (a)(1) through (a)(7) of this section.

(1) The owner or operator shall visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), according to the schedule specified in paragraphs (a)(2) and (a)(3) of this section.

(2) For vessels equipped with a single-seal system, the owner or operator shall perform the inspections specified in paragraphs (a)(2)(i) and (a)(2)(ii) of this section.

(i) Visually inspect the internal floating roof and the seal through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill, or at least once every 12 months after the compliance date specified in ? 63.100 of subpart F of this part.

(ii) Visually inspect the internal floating roof, the seal, gaskets, slotted membranes, and sleeve seals (if any) each time the storage vessel is emptied and degassed, and at least once every 10 years after the compliance date specified in 40 CFR 63.100 of subpart F of this part.

(3) For vessels equipped with a double-seal system as specified in 40 CFR 63.119(b)(3)(iii) of this subpart, the owner or operator shall perform either the inspection required in paragraph (a)(3)(i) of this section or the inspections required in both paragraphs (a)(3)(ii) and (a)(3)(iii) of this section.

(i) The owner or operator shall visually inspect the internal floating roof, the primary seal, the secondary seal, gaskets, slotted membranes, and sleeve seals (if any) each time the storage vessel is emptied and degassed and at least once every 5 years after the compliance date specified in 40 CFR 63.100 of subpart F of this part; or

(ii) The owner or operator shall visually inspect the internal floating roof and the secondary seal through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill, or at least once every 12 months after the compliance date specified in 40 CFR 63.100 of subpart F of this part, and

(iii) Visually inspect the internal floating roof, the primary seal, the secondary seal, gaskets, slotted membranes, and sleeve seals (if any) each time the vessel is emptied and degassed and at least once every 10 years after the compliance date specified in 40 CFR 63.100 of subpart F of this part.

(4) If during the inspections required by paragraph (a)(2)(i) or (a)(3)(ii) of this section, the internal floating roof is not resting on the surface of the liquid inside the storage vessel and is not resting on the leg supports; or there is liquid on the floating roof; or the seal is detached; or there are holes or tears in the seal fabric; or there are visible gaps between the seal and the wall of the storage vessel, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 calendar days. If a failure that is detected during inspections required by paragraph (a)(2)(i) or (a)(3)(ii) of this section cannot be repaired within 45 calendar days and if the vessel cannot be emptied within 45 calendar days, the owner or operator may utilize up to 2 extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include a description of the failure, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be emptied as soon as practical.

(5) Except as provided in paragraph (a)(6) of this section, for all the inspections required by paragraphs (a)(2)(ii), (a)(3)(i), and (a)(3)(iii) of this section, the owner or operator shall notify the Administrator in writing at least 30 calendar days prior to the refilling of each storage vessel to afford the Administrator the opportunity to have an observer present.

(6) If the inspection required by paragraph (a)(2)(ii), (a)(3)(i), or (a)(3)(iii) of this section is not planned and the owner or operator could not have known about the inspection 30 calendar days in advance of refilling the vessel, the owner or operator shall notify the Administrator at least 7 calendar days prior to the refilling of the storage vessel. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, the notification including the written documentation may be made in writing and sent so that it is received by the Administrator at least 7 calendar days prior to refilling.

(7) If during the inspections required by paragraph (a)(2)(ii), (a)(3)(i), or (a)(3)(iii) of this section, the internal floating roof has defects; or the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal has holes, tears, or other openings in the seal or the seal fabric; or the gaskets no longer close off the liquid surface from the atmosphere; or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with organic HAP.

(b) To demonstrate compliance with 40 CFR 63.119(c) of this subpart (storage vessel equipped with an external floating roof), the owner or operator shall comply with the requirements specified in paragraphs (b)(1) through (b)(10) of this section.

(1) Except as provided in paragraph (b)(7) of this section, the owner or operator shall determine the gap areas and maximum gap widths between the primary seal and the wall of the storage vessel, and the secondary seal and the wall of the storage vessel according to the frequency specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section.

(i) For an external floating roof vessel equipped with primary and secondary seals, measurements of gaps between the vessel wall and the primary seal shall be performed during the hydrostatic testing of the vessel or by the compliance date specified in 40 CFR 63.100 of subpart F of this part, whichever occurs last, and at least once every 5 years thereafter.

(ii) For an external floating roof vessel equipped with a liquid-mounted or metallic shoe primary seal and without a secondary seal as provided for in ? 63.119(c)(1)(iv) of this subpart, measurements of gaps between the vessel wall and the primary seal shall be performed by the compliance date specified in 40 CFR 63.100 of subpart F of this part and at least once per year thereafter, until a secondary seal is installed. When a secondary seal is installed above the primary seal, measurements of gaps between the vessel wall and both the primary and secondary seals shall be performed within 90 calendar days of installation of the secondary seal, and according to the frequency specified in paragraphs (b)(1)(i) and (b)(1)(iii) of this section thereafter.

(iii) For an external floating roof vessel equipped with primary and secondary seals, measurements of gaps between the vessel wall and the secondary seal shall be performed by the compliance date specified in 40 CFR 63.100 of subpart F of this part and at least once per year thereafter.

(iv) If any storage vessel ceases to store organic HAP for a period of 1 year or more, or if the maximum true vapor pressure of the total organic HAP's in the stored liquid falls below the values defining Group 1 storage vessels specified in table 5 or table 6 of this subpart for a period of 1 year or more, measurements of gaps between the vessel wall and the primary seal, and gaps between the vessel wall and the secondary seal shall be performed within 90 calendar days of the vessel being refilled with organic HAP.

(2) Except as provided in paragraph (b)(7) of this section, the owner or operator shall determine gap widths and gap areas in the primary and secondary seals (seal gaps) individually by the procedures described in paragraphs (b)(2)(i) through (b)(2)(iii) of this section.

(i) Seal gaps, if any, shall be measured at one or more floating roof levels when the roof is not resting on the roof leg supports.

(ii) Seal gaps, if any, shall be measured around the entire circumference of the vessel in each place where an 0.32 centimeter (1/8 inch) diameter uniform probe passes freely (without forcing or binding against the seal) between the seal and the wall of the storage vessel. The circumferential distance of each such location shall also be measured.

(iii) The total surface area of each gap described in paragraph (b)(2)(ii) of this section shall be determined by using probes of various widths to measure accurately the actual distance from the vessel wall to the seal and multiplying each such width by its respective circumferential distance.

(3) The owner or operator shall add the gap surface area of each gap location for the primary seal and divide the sum by the nominal diameter of the vessel. The accumulated area of gaps between the vessel wall and the primary seal shall not exceed 212 square centimeters per meter of vessel diameter and the width of any portion of any gap shall not exceed 3.81 centimeters.

(4) The owner or operator shall add the gap surface area of each gap location for the secondary seal and divide the sum by the nominal diameter of the vessel. The accumulated area of gaps between the vessel wall and the secondary seal shall not exceed 21.2 square centimeters per meter of vessel diameter and the width of any portion of any gap shall not exceed 1.27 centimeters. These seal gap requirements may be exceeded during the measurement of primary seal gaps as required by paragraph (b)(1)(i) and (b)(1)(ii) of this section.

(5) The primary seal shall meet the additional requirements specified in paragraphs (b)(5)(i) and (b)(5)(ii) of this section.

(i) Where a metallic shoe seal is in use, one end of the metallic shoe shall extend into the stored liquid and the other end shall extend a minimum vertical distance of 61 centimeters above the stored liquid surface.

(ii) There shall be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.

(6) The secondary seal shall meet the additional requirements specified in paragraphs (b)(6)(i) and (b)(6)(ii) of this section.

(i) The secondary seal shall be installed above the primary seal so that it completely covers the space between the roof edge and the vessel wall except as provided in paragraph (b)(4) of this section.

(ii) There shall be no holes, tears, or other openings in the seal or seal fabric.

(7) If the owner or operator determines that it is unsafe to perform the seal gap measurements required in paragraphs (b)(1) and (b)(2) of this section or to inspect the vessel to determine compliance with paragraphs (b)(5) and (b)(6) of this section because the

floating roof appears to be structurally unsound and poses an imminent or potential danger to inspecting personnel, the owner or operator shall comply with the requirements in either paragraph (b)(7)(i) or (b)(7)(ii) of this section.

(i) The owner or operator shall measure the seal gaps or inspect the storage vessel no later than 30 calendar days after the determination that the roof is unsafe, or

(ii) The owner or operator shall empty and remove the storage vessel from service no later than 45 calendar days after determining that the roof is unsafe. If the vessel cannot be emptied within 45 calendar days, the owner or operator may utilize up to 2 extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include an explanation of why it was unsafe to perform the inspection or seal gap measurement, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the vessel will be emptied as soon as practical.

(8) The owner or operator shall repair conditions that do not meet requirements listed in paragraphs (b)(3), (b)(4), (b)(5), and (b)(6) of this section (i.e., failures) no later than 45 calendar days after identification, or shall empty and remove the storage vessel from service no later than 45 calendar days after identification. If during seal gap measurements required in paragraph (b)(1) and (b)(2) of this section or during inspections necessary to determine compliance with paragraphs (b)(5) and (b)(6) of this section a failure is detected that cannot be repaired within 45 calendar days and if the vessel cannot be emptied within 45 calendar days, the owner or operator may utilize up to 2 extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include a description of the failure, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be emptied as soon as practical.

(9) The owner or operator shall notify the Administrator in writing 30 calendar days in advance of any gap measurements required by paragraph (b)(1) or (b)(2) of this section to afford the Administrator the opportunity to have an observer present.

(10) The owner or operator shall visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.

(i) If the external floating roof has defects; the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal has holes, tears, or other openings in the seal or the seal fabric; or the gaskets no longer close off the liquid surface from the atmosphere; or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with organic HAP.

(ii) Except as provided in paragraph (b)(10)(iii) of this section, for all the inspections required by paragraph (b)(10) of this section, the owner or operator shall notify the Administrator in writing at least 30 calendar days prior to filling or refilling of each storage vessel with organic HAP to afford the Administrator the opportunity to inspect the storage vessel prior to refilling.

(iii) If the inspection required by paragraph (b)(10) of this section is not planned and the owner or operator could not have known about the inspection 30 calendar days in advance of refilling the vessel with organic HAP, the owner or operator shall notify the Administrator at least 7 calendar days prior to refilling of the storage vessel. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent so that it is received by the Administrator at least 7 calendar days prior to the refilling.

(c) To demonstrate compliance with 40 CFR 63.119(d) of this subpart (storage vessel equipped with an external floating roof converted to an internal floating roof), the owner or operator shall comply with the requirements of paragraph (a) of this section.

(d) To demonstrate compliance with ? 63.119(e) of this subpart (storage vessel equipped with a closed vent system and control device) using a control device other than a flare, the owner or operator shall comply with the requirements in paragraphs (d)(1) through (d)(7) of this section, except as provided in paragraph (d)(8) of this section.

(1) The owner or operator shall either prepare a design evaluation, which includes the information specified in paragraph (d)(1)(i) of this section, or submit the results of a performance test as described in paragraph (d)(1)(ii) of this section.

(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 paragraphs (d)(1)(i)(A) through (d)(1)(i)(E) of this section, as applicable.

(A) If the control device receives vapors, gases or liquids, other than fuels, from emission points other than storage vessels subject to this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids, other than fuels, received by the control device.

(B) If an enclosed combustion device with a minimum residence time of 0.5 seconds and a minimum temperature of 760 degrees C is used to meet the emission reduction requirement specified in 40 CFR 63.119 (e)(1) or (e)(2), as applicable, documentation that those conditions exist is sufficient to meet the requirements of paragraph (d)(1)(i) of this section.

(C) Except as provided in paragraph (d)(1)(i)(B) of this section, for thermal incinerators, the design evaluation shall include the autoignition 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.

(D) 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.

(E) 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 40 CFR 63.119(e) of this subpart is also used to comply with 40 CFR 63.113(a)(2), 40 CFR 63.126(b)(1), or 40 CFR 63.139(c) of this subpart, the performance test required by 40 CFR 63.116(c), 40 CFR 63.128(a), or 40 CFR 63.139(d)(1) of this subpart is acceptable to demonstrate compliance with 40 CFR 63.119(e) of this subpart. The owner or operator is not required to prepare a design evaluation for the control device as described in paragraph (d)(1)(i) of this section, if the performance tests meets the criteria specified in paragraphs (d)(1)(ii)(A) and (d)(1)(ii)(B) of this section.

(A) The performance test demonstrates that the control device achieves greater than or equal to the required control efficiency specified in 40 CFR 63.119 (e)(1) or (e)(2) of this subpart, as applicable; and

(B) The performance test is submitted as part of the Notification of Compliance Status required by 40 CFR 63.151(b) of this subpart.

(2) The owner or operator shall submit, as part of the Notification of Compliance Status required by 40 CFR 63.151 (b) of this subpart, a monitoring plan containing the information specified in paragraph (d)(2)(i) of this section and in either (d)(2)(ii) or (d)(2)(iii) of this section.

(i) 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); and either

(ii) The documentation specified in paragraph (d)(1)(i) of this section, if the owner or operator elects to prepare a design evaluation; or

(iii) The information specified in paragraph (d)(2)(iii) (A) and (B) of this section if the owner or operator elects to submit the results of a performance test.

(A) Identification of the storage vessel and control device for which the performance test will be submitted, and

(B) Identification of the emission point(s) that share the control device with the storage vessel and for which the performance test will be conducted.

(3) The owner or operator shall submit, as part of the Notification of Compliance Status required by 40 CFR 63.152(b) of this subpart, the information specified in paragraphs (d)(3)(i) and, if applicable, (d)(3)(ii) of this section.

(i) The operating range for each monitoring parameter identified in the monitoring plan. The specified operating range shall represent the conditions for which the control device is being properly operated and maintained.

(ii) Results of the performance test described in paragraph (d)(1)(ii) of this section.

(4) The owner or operator shall demonstrate compliance with the requirements of 40 CFR 63.119(e)(3) of this subpart (planned routine maintenance of a control device, during which the control device does not meet the specifications of 40 CFR 63.119 (e)(1) or

(e)(2) of this subpart, as applicable, shall not exceed 240 hours per year) by including in each Periodic Report required by 40 CFR 63.152(c) of this subpart the information specified in 40 CFR 63.122(g)(1) of this subpart.

(5) The owner or operator shall monitor the parameters specified in the Notification of Compliance Status required in 40 CFR 63.152(b) of this subpart or in the operating permit and shall operate and maintain the control device such that the monitored parameters remain within the ranges specified in the Notification of Compliance Status.

(6) Except as provided in paragraph (d)(7) of this section, each closed vent system shall be inspected as specified in 40 CFR 63.148 of this subpart. The initial and annual inspections required by 40 CFR 63.148(b) of this subpart shall be done during filling of the storage vessel.

(7) For any fixed roof tank and closed vent system that are operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in 40 CFR 63.148 of this subpart.

(8) A design evaluation or performance test is not required, if the owner or operator uses a combustion device meeting the criteria in paragraph (d)(8)(i), (d)(8)(ii), (d)(8)(iii), or (d)(8)(iv) of this section.

(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 owner or operator:

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

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

(iii) 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.

(iv) A boiler or process heater into which the vent stream is introduced with the primary fuel.

§§ 63.121 Storage vessel provisions -- alternative means of emission limitation.

(a) Determination of equivalence to the reduction in emissions achieved by the requirements of 40 CFR 63.119 (b), (c), or (d) of this subpart will be evaluated according to 40 CFR 63.102(b) of subpart F of this part.

(b) The determination of equivalence referred to in paragraph (a) of this section will be based on the application to the Administrator which shall include the information specified in either paragraph (b)(1) or (b)(2) of this section.

(1) Actual emissions tests that use full-size or scale-model storage vessels that accurately collect and measure all organic HAP emissions from a given control technique, and that accurately simulate wind and account for other emission variables such as temperature and barometric pressure, or

(2) An engineering analysis that the Administrator determines is an accurate method of determining equivalence.

§§ 63.122 Storage vessel provisions -- reporting.

(a) For each Group 1 storage vessel, the owner or operator shall comply with the requirements of paragraphs (a)(1) through (a)(5) of this section.

(1) The owner or operator shall submit an Initial Notification as required by 40 CFR 63.151(b) of this subpart.

(2) [Reserved]

(3) The owner or operator shall submit a Notification of Compliance Status as required by 40 CFR 63.152(b) of this subpart and shall submit as part of the Notification of Compliance Status the information specified in paragraph (c) of this section.

(4) The owner or operator shall submit Periodic Reports as required by 40 CFR 63.152(c) of this subpart and shall submit as part of the Periodic Reports the information specified in paragraphs (d), (e), (f), and (g) of this section.

(5) The owner or operator shall submit, as applicable, other reports as required by 40 CFR 63.152(d) of this subpart, containing the information specified in paragraph (h) of this section.

(b) An owner or operator who elects to comply with 40 CFR 63.119(e) of this subpart 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 40 CFR 63.120(d)(2)(i) of this subpart and the information specified in either 40 CFR 63.120(d)(2)(ii) of this subpart or 40 CFR 63.120(d)(2)(iii) of this subpart.

(c) An owner or operator who elects to comply with 40 CFR 63.119(e) of this subpart by using a closed vent system and a control device shall submit, as part of the Notification of Compliance Status required by 40 CFR 63.152(b) of this subpart, the information specified in either paragraph (c)(1) or (c)(2) of this section. An owner or operator who elects to comply with 40 CFR 63.119(f) of this subpart by routing emissions to a process or to a fuel gas system shall

submit, as part of the Notification of Compliance Status required by 40 CFR 63.152(b) of this subpart, the information specified in paragraph (c)(3) of this section.

(1) If a control device other than a flare is used, the owner or operator shall submit the information specified in 40 CFR 63.120(d)(3)(i) and, if applicable, (d)(3)(ii) of this subpart.

(2) If a flare is used, the owner or operator shall submit the information specified in 40 CFR 63.120(e)(2)(i), (e)(2)(ii), and (e)(2)(iii) of this subpart.

(3) If emissions are routed to a process, the owner or operator shall submit the information specified in 40 CFR 63.120(f). If emissions are routed to a fuel gas system, the owner or operator shall submit a statement that the emission stream is connected to the fuel gas system and whether the conveyance system is subject to the requirements of 40 CFR 63.148.

(d) An owner or operator who elects to comply with 40 CFR 63.119(b) of this subpart by using a fixed roof and an internal floating roof or with 40 CFR 63.119(d) of this subpart by using an external floating roof converted to an internal floating roof shall submit, as part of the Periodic Report required under 40 CFR 63.152(c) of this subpart, the results of each inspection conducted in accordance with 40 CFR 63.120(a) of this subpart in which a failure is detected in the control equipment.

(1) For vessels for which annual inspections are required under 40 CFR 63.120 (a)(2)(i) or (a)(3)(ii) of this subpart, the specifications and requirements listed in paragraphs (d)(1)(i) through (d)(1)(iii) of this section apply.

(i) A failure is defined as any time in which the internal floating roof is not resting on the surface of the liquid inside the storage vessel and is not resting on the leg supports; or there is liquid on the floating roof; or the seal is detached from the internal floating roof; or there are holes, tears, or other openings in the seal or seal fabric; or there are visible gaps between the seal and the wall of the storage vessel.

(ii) Except as provided in paragraph (d)(1)(iii) of this section, each Periodic Report shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall also describe the nature of and date the repair was made or the date the storage vessel was emptied.

(iii) If an extension is utilized in accordance with 40 CFR 63.120(a)(4) of this subpart, the owner or operator shall, in the next Periodic Report, identify the vessel; include the documentation specified in 40 CFR 63.120(a)(4) of this subpart; and describe the date the storage vessel was emptied and the nature of and date the repair was made.

(2) For vessels for which inspections are required under 40 CFR 63.120 (a)(2)(ii), (a)(3)(i), or (a)(3)(iii) of this subpart, the specifications and requirements listed in paragraphs (d)(2)(i) and (d)(2)(ii) of this section apply.

(i) A failure is defined as any time in which the internal floating roof has defects; or the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal (if one has been installed) has holes, tears, or other openings in the seal or the seal fabric; or the gaskets no longer close off the liquid surface from the atmosphere; or the slotted membrane has more than 10 percent open area.

(ii) Each Periodic Report required under 40 CFR 63.152(c) of this subpart shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall also describe the nature of and date the repair was made.

(e) An owner or operator who elects to comply with 40 CFR 63.119(c) of this subpart by using an external floating roof shall meet the periodic reporting requirements specified in paragraphs (e)(1), (e)(2), and (e)(3) of this section.

(1) The owner or operator shall submit, as part of the Periodic Report required under 40 CFR 63.152(c) of this subpart, documentation of the results of each seal gap measurement made in accordance with 40 CFR 63.120(b) of this subpart in which the requirements of 40 CFR 63.120 (b)(3), (b)(4), (b)(5), or (b)(6) of this subpart are not met. This documentation shall include the information specified in paragraphs (e)(1)(i) through (e)(1)(iv) of this section.

(i) The date of the seal gap measurement.

(ii) The raw data obtained in the seal gap measurement and the calculations described in 40 CFR 63.120 (b)(3) and (b)(4) of this subpart.

(iii) A description of any condition specified in 40 CFR 63.120 (b)(5) or (b)(6) of this subpart that is not met.

(iv) A description of the nature of and date the repair was made, or the date the storage vessel was emptied.

(2) If an extension is utilized in accordance with 40 CFR 63.120(b)(7)(ii) or (b)(8) of this subpart, the owner or operator shall, in the next Periodic Report, identify the vessel; include the documentation specified in ? 63.120(b)(7)(ii) or (b)(8) of this subpart, as applicable; and describe the date the vessel was emptied and the nature of and date the repair was made.

(3) The owner or operator shall submit, as part of the Periodic Report required under 40 CFR 63.152(c) of this subpart, documentation of any failures that are identified during visual

inspections required by 40 CFR 63.120(b)(10) of this subpart. This documentation shall meet the specifications and requirements in paragraphs (e)(3)(i) and (e)(3)(ii) of this section.

(i) A failure is defined as any time in which the external floating roof has defects; or the primary seal has holes, or other openings in the seal or the seal fabric; or the secondary seal has holes, tears, or other openings in the seal or the seal fabric; or the gaskets no longer close off the liquid surface from the atmosphere; or the slotted membrane has more than 10 percent open area.

(ii) Each Periodic Report required under 40 CFR 63.152(c) of this subpart shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The periodic report shall also describe the nature of and date the repair was made.

(f) An owner or operator who elects to comply with 40 CFR 63.119(d) of this subpart by using an external floating roof converted to an internal floating roof shall comply with the periodic reporting requirements of paragraph (d) of this section.

(g) An owner or operator who elects to comply with 40 CFR 63.119(e) of this subpart by installing a closed vent system and control device shall submit, as part of the next Periodic Report required by 40 CFR 63.152(c) of this subpart, the information specified in paragraphs (g)(1) through (g)(3) of this section.

(1) As required by 40 CFR 63.120(d)(4) and 40 CFR 63.120(e)(3) of this subpart, the Periodic Report shall include the information specified in paragraphs (g)(1)(i) and (g)(1)(ii) of this section for those planned routine maintenance operations that would require the control device not to meet the requirements of 40 CFR 63.119 (e)(1) or (e)(2) of this subpart, 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.

(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 40 CFR 63.119 (e)(1) or (e)(2) of this subpart, as applicable, due to planned routine maintenance.

(2) 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 40 CFR

63.120(d)(3)(i) of this subpart. The description shall include the information specified in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(i) Identification of the control device for which the measured parameters were outside of the established ranges, and

(ii) Cause for the measured parameters to be outside of the established ranges.

(3) If a flare is used, the Periodic Report shall describe each occurrence when the flare does not meet the general control device requirements specified in 40 CFR 63.11(b) of subpart A of this part and shall include the information specified in paragraphs (g)(3)(i) and (g)(3)(ii) of this section.

(i) Identification of the flare which does not meet the general requirements specified in 40 CFR 63.11(b) of subpart A of this part, and

(ii) Reason the flare did not meet the general requirements specified in 40 CFR 63.11(b) of subpart A of this part.

(h) An owner or operator who elects to comply with 40 CFR 63.119 (b), (c), or (d) of this subpart shall submit, as applicable, the reports specified in paragraphs (h)(1) and (h)(2) of this section.

(1) In order to afford the Administrator the opportunity to have an observer present, the owner or operator shall notify the Administrator of the refilling of a storage vessel that has been emptied and degassed.

(i) If the storage vessel is equipped with an internal floating roof as specified in 40 CFR 63.119(b) of this subpart, the notification shall meet the requirements of either 40 CFR 63.120 (a)(5) or (a)(6) of this subpart, as applicable.

(ii) If the storage vessel is equipped with an external floating roof as specified in 40 CFR 63.119(c) of this subpart, the notification shall meet the requirements of either 40 CFR 63.120 (b)(10)(ii) or (b)(10)(iii) of this subpart, as applicable.

(iii) If the storage vessel is equipped with an external floating roof converted into an internal floating roof as specified in 40 CFR 63.119(d) of this subpart, the notification shall meet the requirements of either 40 CFR 63.120 (a)(5) or (a)(6) of this subpart, as applicable.

(2) In order to afford the Administrator the opportunity to have an observer present, the owner or operator of a storage vessel equipped with an external floating roof as specified in 40 CFR 63.119(c) of this subpart shall notify the Administrator of any seal gap measurements. This notification shall meet the requirements of 40 CFR 63.120(b)(9) of this subpart.

§§ 63.123 Storage vessel provisions -- recordkeeping.

(a) Each owner or operator 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. For each Group 2 storage vessel, the owner or operator is not required to comply with any other provisions of 40 CFR 63.119 through 63.123 of this subpart other than those required by this paragraph unless such vessel is part of an emissions average as described in 40 CFR 63.150 of this subpart.

(b) [Reserved]

(c) An owner or operator who elects to comply with 40 CFR 63.119(b) of this subpart shall keep a record that each inspection required by 40 CFR 63.120(a) of this subpart was performed.

(d) An owner or operator who elects to comply with 40 CFR 63.119(c) of this subpart shall keep records describing the results of each seal gap measurement made in accordance with 40 CFR 63.120(b) of this subpart. The records shall include the date of the measurement, the raw data obtained in the measurement, and the calculations described in 40 CFR 63.120(b) (3) and (4) of this subpart.

(e) An owner or operator who elects to comply with 40 CFR 63.119(d) of this subpart shall keep a record that each inspection required by 40 CFR 63.120 (a) and (c) of this subpart was performed.

(f) An owner or operator who elects to comply with 40 CFR 63.119(e) of this subpart shall keep in a readily accessible location the records specified in paragraphs (f)(1) and (f)(2) of this section.

(1) A record of the measured values of the parameters monitored in accordance with 40 CFR 63.120(d)(5) of this subpart.

(2) 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 40 CFR 63.119 (e)(1) or (e)(2) of this subpart, as applicable, due to the planned routine maintenance. Such a record shall include the information specified in paragraphs (f)(2)(i) and (f)(2)(ii) of this section.

(i) The first time of day and date the requirements of 40 CFR 63.119 (e)(1) or (e)(2) of this subpart, 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 40 CFR 63.119 (e)(1) or (e)(2) of this subpart, as applicable, were met at the conclusion of the planned routine maintenance.

(g) An owner or operator who elects to utilize an extension in emptying a storage vessel in accordance with 40 CFR 63.120 (a)(4), (b)(7)(ii), or (b)(8) of this subpart shall keep in a readily

accessible location, the documentation specified in 40 CFR 63.120 (a)(4), (b)(7)(ii), or (b)(8), as applicable.

(h) An owner or operator who uses the by-pass provisions of 40 CFR 63.119(f)(3) of this subpart shall keep in a readily accessible location the records specified in paragraphs (h)(1) through (h)(3) of this section.

(1) The reason it was necessary to by-pass the process equipment or fuel gas system;

(2) The duration of the period when the process equipment or fuel gas system was by-passed;

(3) Documentation or certification of compliance with the applicable provisions of 40 CFR 63.119(f)(3)(i) through 40 CFR 63.119(f)(3)(iii).

§§ 63.124 [Reserved]

§§ 63.125 [Reserved]

§§ 63.126 Transfer operations provisions -- reference control technology.

(a) For each Group 1 transfer rack the owner or operator shall equip each transfer rack with a vapor collection system and control device.

(1) Each vapor collection system shall be designed and operated to collect the organic hazardous air pollutants vapors displaced from tank trucks or railcars during loading, and to route the collected hazardous air pollutants vapors to a process, or to a fuel gas system, or to a control device as provided in paragraph (b) of this section.

(2) Each vapor collection system shall be designed and operated such that organic HAP vapors collected at one loading arm will not pass through another loading arm in the rack to the atmosphere.

(3) Whenever organic hazardous air pollutants emissions are vented to a process, fuel gas system, or control device used to comply with the provisions of this subpart, the process, fuel gas system, or control device shall be operating.

(b) For each Group 1 transfer rack the owner or operator shall comply with paragraph (b)(1), (b)(2), (b)(3), or (b)(4) of this section.

(1) Use a control device to reduce emissions of total organic hazardous air pollutants by 98 weight-percent or to an exit concentration of 20 parts per million by volume, whichever is less stringent. For combustion devices, the emission reduction or concentration shall be calculated on a dry basis, corrected to 3-percent oxygen. If a boiler or process heater is used to comply with the percent reduction requirement, then the vent stream shall be

introduced into the flame zone of such a device. Compliance may be achieved by using any combination of combustion, recovery, and/or recapture devices.

(2) Reduce emissions of organic HAP's using a flare.

(i) The flare shall comply with the requirements of 63.11(b) of subpart A of this part.

(ii) Halogenated vent streams, as defined in 40 CFR 63.111 of this subpart, shall not be vented to a flare.

(3) Reduce emissions of organic hazardous air pollutants using a vapor balancing system designed and operated to collect organic hazardous air pollutants vapors displaced from tank trucks or railcars during loading; and to route the collected hazardous air pollutants vapors to the storage vessel from which the liquid being loaded originated, or to another storage vessel connected to a common header, or to compress and route to a process collected hazardous air pollutants vapors.

Route emissions of organic hazardous air pollutants to a fuel gas system or to a process where the organic hazardous air pollutants in the emissions shall predominantly meet one of, or a combination of, the ends specified in paragraphs (b)(4)(i) through (b)(4)(iv) of this section.

(i) Recycled and/or consumed in the same manner as a material that fulfills the same function in that process;

(ii) Transformed by chemical reaction into materials that are not organic hazardous air pollutants;

(iii) Incorporated into a product; and/or

(iv) Recovered.

(c) For each Group 2 transfer rack, the owner or operator shall maintain records as required in 40 CFR 63.130(f). No other provisions for transfer racks apply to the Group 2 transfer rack.

(d) Halogenated emission streams from Group 1 transfer racks that are combusted shall be controlled according to paragraph (d)(1) or (d)(2) of this section. Determination of whether a vent stream is halogenated shall be made using procedures in (d)(3).

(1) If a combustion device is used to comply with paragraph (b)(1) of this section for a halogenated vent stream, then the vent stream exiting the combustion device shall be ducted to a halogen reduction device, including, but not limited to, a scrubber before it is discharged to the atmosphere.

(i) Except as provided in paragraph (d)(1)(ii) of this section, the halogen reduction device shall reduce overall emissions of hydrogen halides and halogens, as defined in 40 CFR

63.111 of this subpart, by 99 percent or shall reduce the outlet mass emission rate of total hydrogen halides and halogens to 0.45 kilograms per hour or less, whichever is less stringent.

(ii) If a scrubber or other halogen reduction device was installed prior to December 31, 1992, the halogen reduction device shall reduce overall emissions of hydrogen halides and halogens, as defined in 40 CFR 63.111 of this subpart, by 95 percent or shall reduce the outlet mass of total hydrogen halides and halogens to less than 0.45 kilograms per hour, whichever is less stringent.

(2) A halogen reduction device, such as a scrubber, or other technique may be used to make the vent stream non-halogenated by reducing the vent stream halogen atom mass emission rate to less than 0.45 kilograms per hour prior to any combustion control device used to comply with the requirements of paragraphs (b)(1) or (b)(2) of this section.

(3) In order to determine whether a vent stream is halogenated, the mass emission rate of halogen atoms contained in organic compounds shall be calculated.

(i) The vent stream concentration of each organic compound containing halogen atoms (parts per million by volume by compound) shall be determined based on the following procedures:

(A) Process knowledge that no halogen or hydrogen halides are present in the process, or

(B) Applicable engineering assessment as specified in 40 CFR 63.115(d)(1)(iii) of this subpart, or

(C) Concentration of organic compounds containing halogens measured by Method 18 of 40 CFR part 60, appendix A, or

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

(ii) The following equation shall be used to calculate the mass emission rate of halogen atoms:

E = K2V5 [(sum) n to j=1 (sum) m to i=1 Cj * Lji * Mji]

where:

E=Mass of halogen atoms, dry basis, kilograms per hour.

K2=Constant, 2.494 x 10-6 (parts per million)-1 (kilogram-mole per standard cubic meter) (minute/hour), where standard temperature is 20 ?C.

Cj=Concentration of halogenated compound j in the gas stream, dry basis, parts per million by volume.

Mji=Molecular weight of halogen atom i in compound j of the gas stream, kilogram per kilogram-mole.

Lji=Number of atoms of halogen i in compound j of the gas stream.

Vs=Flow rate of gas stream, dry standard cubic meters per minute, determined according to 40 CFR 63.128(a)(8) of this subpart.

j=Halogenated compound j in the gas stream.

i=Halogen atom i in compound j of the gas stream.

n=Number of halogenated compounds j in the gas stream.

m=Number of different halogens i in each compound j of the gas stream.

(e) For each Group 1 transfer rack the owner or operator shall load organic HAP's into only tank trucks and railcars which:

(1) Have a current certification in accordance with the U. S. Department of Transportation pressure test requirements of 49 CFR part 180 for tank trucks and 49 CFR 173.31 for railcars; or

(2) Have been demonstrated to be vapor-tight within the preceding 12 months, as determined by the procedures in 40 CFR 63.128(f) of this subpart. Vapor-tight means that the truck or railcar tank will sustain a pressure change of not more than 750 pascals within 5 minutes after it is pressurized to a minimum of 4,500 pascals.

(f) The owner or operator of a transfer rack subject to the provisions of this subpart shall load organic HAP's to only tank trucks or railcars equipped with vapor collection equipment that is compatible with the transfer rack's vapor collection system.

(g) The owner or operator of a transfer rack subject to this subpart shall load organic HAP's to only tank trucks or railcars whose collection systems are connected to the transfer rack's vapor collection systems.

(h) The owner or operator of a transfer rack subject to the provisions of this subpart shall ensure that no pressure-relief device in the transfer rack's vapor collection system or in the organic hazardous air pollutants loading equipment of each tank truck or railcar shall begin to open during loading. Pressure relief devices needed for safety purposes are not subject to this paragraph.

(i) Each valve in the vent system that would divert the vent stream to the atmosphere, either directly or indirectly, shall be secured in a non-diverting position using a carseal or a lock-and-key type configuration, or shall be equipped with a flow indicator. Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief devices needed for safety purposes is not subject to this paragraph.

§§ 63.127 Transfer operations provisions -- monitoring requirements.

(a) Each owner or operator of a Group 1 transfer rack equipped with a combustion device used to comply with the 98 percent total organic hazardous air pollutants reduction or 20 parts per million by volume outlet concentration requirements in 40 CFR 63.126(b)(1) of this subpart shall install, calibrate, maintain, and operate according to the manufacturers' specifications (or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately) the monitoring equipment specified in paragraph (a)(1), (a)(2), (a)(3), or (a)(4) of this section, as appropriate.

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

(i) Where an incinerator other than a catalytic incinerator is used, a temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

(ii) Where a catalytic incinerator is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

(2) Where a flare is used, a device (including but not limited to a thermocouple, infrared sensor, or an ultra-violet beam sensor) capable of continuously detecting the presence of a pilot flame is required.

(3) Where a boiler or process heater with a design heat input capacity less than 44 megawatts is used, a temperature monitoring device in the firebox equipped with a continuous recorder is required. Any boiler or process heater in which all 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 the case of halogenated vent streams, the following monitoring equipment is required for the scrubber:

(i) A pH monitoring device equipped with a continuous recorder shall be installed to monitor the pH of the scrubber effluent.

(ii) A flow meter 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 (a)(4)(ii)(A) through (a)(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 specified in 40 CFR 63.100(k) of subpart F of this part, 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 40 CFR 63.103(c).

(b) Each owner or operator of a Group 1 transfer rack that uses a recovery device or recapture device to comply with the 98-percent organic hazardous air pollutants reduction or 20 parts per million by volume hazardous air pollutants concentration requirements in 40 CFR 63.126(b)(1) of this subpart shall install either an organic monitoring device equipped with a continuous recorder, or the monitoring equipment specified in paragraph (b)(1), (b)(2), or (b)(3) of this section, depending on the type of recovery device or recapture device used. All monitoring equipment shall be installed, calibrated, and maintained according to the manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(1) Where an absorber is used, a scrubbing liquid temperature monitoring device equipped with a continuous recorder shall be used; and a specific gravity monitoring device equipped with a continuous recorder shall be used.

(2) Where a condenser is used, a condenser exit (product side) temperature monitoring device equipped with a continuous recorder shall be used.

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

(c) An owner or operator of a Group 1 transfer rack may request approval to monitor parameters other than those listed in paragraph (a) or (b) of this section. The request shall be submitted according to the procedures specified in 40 CFR 63.151(f) or 40 CFR 63.152(e) of this subpart. Approval shall be requested if the owner or operator:

(1) Seeks to demonstrate compliance with the standards specified in 40 CFR 63.126(b) of this subpart with a control device other than an incinerator, boiler, process heater, flare, absorber, condenser, or carbon adsorber; or

(2) Uses one of the control devices listed in paragraphs (a) and (b) of this section, but seeks to monitor a parameter other than those specified in paragraphs (a) and (b) of this subpart.

(d) The owner or operator of a Group 1 transfer rack using a vent system that contains by-pass lines that could divert a vent stream flow away from the control device used to comply with 40 CFR 63.126(b) of this subpart shall comply with paragraph (d)(1) or (d)(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.

(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 40 CFR 63.130(b) of this subpart. The flow indicator shall be installed at the entrance to any by-pass line that could divert the vent stream away from the control device to the atmosphere; or

(2) Secure the by-pass line valve in the closed position with a car-seal or a lock-and-key type configuration.

(i) A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and the vent stream is not diverted through the by-pass line.

(ii) If a car-seal has been broken or a valve position changed, the owner or operator shall record that the vent stream has been diverted. The car-seal or lock-and-key combination shall be returned to the secured position as soon as practicable but not later than 15 calendar days after the change in position is detected.

(e) The owner or operator shall establish a range that indicates proper operation of the control device for each parameter monitored under paragraphs (a), (b), and (c) of this section. In order to establish the range, the information required in ? 63.152(b)(2) of this subpart shall be submitted in the Notification of Compliance Status or the operating permit application or amendment.

§§ 63.128 Transfer operations provisions -- test methods and procedures.

(a) A performance test is required for determining compliance with the reduction of total organic HAP emissions in 40 CFR 63.126(b) of this subpart for all control devices except as specified in paragraph (c) of this section. Performance test procedures are as follows:

(1) For control devices shared between transfer racks and process vents, the performance test procedures in 40 CFR 63.116(c) of this subpart shall be followed.

(2) A performance test shall consist of three runs.

(3) All testing equipment shall be prepared and installed as specified in the appropriate test methods.

(4) For control devices shared between multiple arms that load simultaneously, the minimum sampling time for each run shall be 1 hour in which either an integrated sample or a minimum of four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15-minute intervals during the run.

(5) For control devices that are capable of continuous vapor processing but do not meet the conditions in (a)(7)(i)(B) of this section.

(A) Sampling sites shall be located at the inlet and outlet of the control device, except as provided in paragraph (a)(7)(i)(B) of this section.

(B) If a vent stream is introduced with the combustion air or as a secondary fuel into a boiler or process heater with a design capacity less than 44 megawatts, selection of paragraph (a)(1) or (a)(4) of this section, each run shall represent at least one complete filling period, during which liquid organic HAP's are loaded, and samples shall be collected using integrated sampling or grab samples taken at least four times per hour at approximately equal intervals of time, such as 15-minute intervals.

(6) For intermittent vapor processing systems that do not meet the conditions in paragraph (a)(1) or (a)(4) of this section, each run shall represent at least one complete control device cycle, and samples shall be collected using integrated sampling or grab samples taken at least four times per hour at approximately equal intervals of time, such as 15-minute intervals.

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

(i) For an owner or operator complying with the 98-percent total organic HAP reduction requirements in 40 CFR 63.126(b)(1) of this subpart, sampling sites shall be located as specified in paragraph (a)(7)(i)(A) or (a)(7)(i)(B) of this section.

(A) Sampling sites shall be located at the inlet and outlet of the control device, except as provided in paragraph (a)(7)(i)(B) of this section.

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

(ii) For an owner or operator complying with the 20 parts per million by volume limit in ? 63.126(b)(1) of this subpart, the sampling site shall be located at the outlet of the control device.

(8) The volumetric flow rate, in standard cubic meters per minute at 20 ?C, shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A as appropriate.

(9) For the purpose of determining compliance with the 20 parts per million by volume limit in 40 CFR 63.126(b)(1), Method 18 or Method 25A of 40 CFR part 60, appendix A shall be used to measure either organic compound concentration or organic HAP concentration, except as provided in paragraph (a)(11) of this section.

(i) If Method 25A of 40 CFR part 60, appendix A is used, the following procedures shall be used to calculate the concentration of organic compounds (CT):

(A) The principal organic HAP in the vent stream shall be used as the calibration gas.

(B) The span value for Method 25A of 40 CFR part 60, appendix A shall be between 1.5 and 2.5 times the concentration being measured.

(C) Use of Method 25A of 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.

(D) The concentration of TOC shall be corrected to 3 percent oxygen using the procedures and equation in paragraph (a)(9)(v) of this section.

(ii) If Method 18 of 40 CFR part 60, appendix A is used to measure the concentration of organic compounds, the organic compound concentration (CT) is the sum of the individual components and shall be computed for each run using the following equation:

CT = (sum) n to j=1 Cj

where:

CT=Total concentration of organic compounds (minus methane and ethane), dry basis, parts per million by volume.

Cj=Concentration of sample components j, dry basis, parts per million by volume.

n=Number of components in the sample.

(iii) If an owner or operator uses Method 18 of 40 CFR part 60, appendix A to compute total organic HAP concentration rather than organic compounds concentration, the equation in paragraph (a)(9)(ii) of this section shall be used except that only organic HAP species shall be summed. The list of organic HAP's is provided in table 2 of subpart F of this part.

(iv) The emission rate correction factor or excess air, integrated sampling and analysis procedures of Method 3B of 40 CFR part 60, appendix A shall be used to determine the oxygen concentration. The sampling site shall be the same as that of the organic hazardous air pollutants or organic compound samples, and the samples shall be taken during the same time that the organic hazardous air pollutants or organic compound samples are taken.

(v) The organic compound concentration corrected to 3 percent oxygen (Cc) shall be calculated using the following equation:

Cc = CT [17.9 / 20.9 - %02d]

where:

Cc=Concentration of organic compounds corrected to 3 percent oxygen, dry basis, parts per million by volume.

CT=Total concentration of organic compounds, dry basis, parts per million by volume.

%O2d=Concentration of oxygen, dry basis, percent by volume.

(10) For the purpose of determining compliance with the 98-percent reduction requirement in 40 CFR 63.126(b)(1) of this subpart, Method 18 or Method 25A of 40 CFR part 60, appendix A shall be used, except as provided in paragraph (a)(11) of this section.

(i) For the purpose of determining compliance with the reduction efficiency requirement, organic compound concentration may be measured in lieu of organic HAP concentration.

(ii) If Method 25A of 40 CFR part 60, appendix A is used to measure the concentration of organic compounds (CT), the principal organic HAP in the vent stream shall be used as the calibration gas.

(A) An emission testing interval shall consist of each 15-minute period during the performance test. For each interval, a reading from each measurement shall be recorded.

(B) The average organic compound concentration and the volume measurement shall correspond to the same emissions testing interval.

(C) The mass at the inlet and outlet of the control device during each testing interval shall be calculated as follows:

Mj=FKVs CT where:

Mj=Mass of organic compounds emitted during testing interval j, kilograms.

Vs=Volume of air-vapor mixture exhausted at standard conditions, 20 ?C and 760 millimeters mercury, standard cubic meters.

CT=Total concentration of organic compounds (as measured) at the exhaust vent, parts per million by volume, dry basis.

K=Density, kilograms per standard cubic meter organic HAP. 659 kilograms per standard cubic meter organic HAP. (Note: The density term cancels out when the percent reduction is calculated. Therefore, the density used has no effect. The density of hexane is given so that it can be used to maintain the units of Mj.)

F=10-6=Conversion factor, (cubic meters organic HAP per cubic meters air) * (parts per million by volume)-1.

(D) The organic compound mass emission rates at the inlet and outlet of the control device shall be calculated as follows:

Ei = [(sum) n to j=1 Mij / T]

Eo = [(sum) n to j=1 Moj / T]

where:

Ei, Eo=Mass flow rate of organic compounds at the inlet (i) and outlet (o) of the combustion or recovery device, kilograms per hour.

Mij, Moj=Mass of organic compounds at the inlet (i) or outlet (o) during testing interval j, kilograms.

T=Total time of all testing intervals, hours.

n=Number of testing intervals.

(iii) If Method 18 of 40 CFR part 60, appendix A is used to measure organic compounds, the mass rates of organic compounds (Ei, Eo) shall be computed using the following equations:

Ei = K2 [(sum) n to j=1 Cij * M * Wij] Qi

Eo = K2 [(sum) n to j=1 Coj * M * Woj] Qo

where:

Cij, Coj=Concentration of sample component j of the gas stream at the inlet and outlet of the control device, respectively, dry basis, parts per million by volume.

MWij, MWoj=Molecular weight of sample component j of the gas stream at the inlet and outlet of the control device, respectively, gram/gram-mole.

Qi, Qo=Flow rate of gas stream at the inlet and outlet of the control device, respectively, dry standard cubic meter per minute.

K2=Constant, 2.494 x 10-6 (parts per million)-1 (gram-mole per standard cubic meter) (kilogram/gram) (minute/hour), where standard temperature for (gram-mole per standard cubic meter) is 20 degrees C.

(iv) Where Method 18 or 25A of 40 CFR part 60, appendix A is used to measure the percent reduction in organic compounds, the percent reduction across the control device shall be calculated as follows:

R = [Ei - Eo / Ei] (100)

where:

R=Control efficiency of control device, percent.

Ei=Mass emitted or mass flow rate of organic compounds at the inlet to the combustion or recovery device as calculated under paragraph (a)(10)(ii)(D) or (a)(10)(iii) of this section, kilogram per hour.

Eo=Mass emitted or mass flow rate of organic compounds at the outlet of the combustion or recovery device, as calculated under paragraph (a)(10)(ii)(D) or (a)(10)(iii) of this section, kilogram per hour.

(11) The owner or operator may use any methods or data other than Method 18 or Method 25A of 40 CFR part 60, appendix A, if the method or data has been validated according to Method 301 of appendix A of this part.

(b) When a flare is used to comply with 40 CFR 63.126(b)(2), the owner or operator shall comply with paragraphs (b)(1) through (3) of this section. The owner or operator is not required to conduct a performance test to determine percent emission reduction or outlet organic HAP or TOC concentration.

(1) Conduct a visible emission test using the techniques specified in 40 CFR 63.11(b)(4). The observation period shall be as specified in paragraph (b)(1)(i) or (ii) of this section instead of the 2-hour period specified in 40 CFR 63.11(b)(4).

(i) If the loading cycle is less than 2 hours, then the observation period for that run shall be for the entire loading cycle.

(ii) If additional loading cycles are initiated within the 2-hour period, then visible emission observations shall be conducted for the additional cycles.

(2) Determine the net heating value of the gas being combusted, using the techniques specified in 40 CFR 63.11(b)(6).

(3) Determine the exit velocity using the techniques specified in either 40 CFR 63.11(b)(7)(i) (and ? 63.11(b)(7)(iii), where applicable) or 40 CFR 63.11(b)(8), as appropriate.

(c) An owner or operator is not required to conduct a performance test when any of the conditions specified in paragraphs (c)(1) through (c)(7) of this section are met.

(1) When a boiler or process heater with a design heat input capacity of 44 megawatts or greater is used.

(2) When a boiler or process heater burning hazardous waste is used 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.

(3) When emissions are routed to a fuel gas system or when a boiler or process heater is used and the vent stream is introduced with the primary fuel.

(4) When a vapor balancing system is used.

(5) When emissions are recycled to a chemical manufacturing process unit.

(6) When a transfer rack transfers less than 11.8 million liters per year and the owner or operator complies with the requirements in paragraph (h) of this section or uses a flare to comply with 40 CFR 63.126(b)(2) of this subpart.

(7) When a hazardous waste incinerator is used 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 40 CFR part 265, subpart O.

(d) An owner or operator using a combustion device followed by a scrubber or other halogen reduction device to control a halogenated transfer vent stream in compliance with 40 CFR 63.126(d) of this subpart shall conduct a performance test to determine compliance with the control efficiency or emission limits for hydrogen halides and halogens.

(1) For an owner or operator determining compliance with the percent reduction of total hydrogen halides and halogens, sampling sites shall be located at the inlet and outlet of the scrubber or other halogen reduction device used to reduce halogen emissions. For an owner or operator complying with the 0.45 kilogram per hour outlet mass emission rate limit for total hydrogen halides and halogens, the sampling site shall be located at the outlet of the scrubber or other halogen reduction device and prior to release to the atmosphere.

(2) Except as provided in paragraph (d)(5) of this section, Method 26 or 26A of 40 CFR part 60, appendix A, shall be used to determine the concentration in milligrams per dry standard cubic meter of the hydrogen halides and halogens that may be present in the stream. The mass emission rate of each hydrogen halide and halogen compound shall be calculated from the concentrations and the gas stream flow rate.

(3) To determine compliance with the percent emissions reduction limit, the mass emission rate for any hydrogen halides and halogens present at the scrubber inlet shall be summed together. The mass emission rate of the compounds present at the scrubber outlet shall be summed together. Percent reduction shall be determined by comparison of the summed inlet and outlet measurements.

(4) To demonstrate compliance with the 0.45 kilograms per hour mass emission rate limit, the test results must show that the mass emission rate of the total hydrogen halides and halogens measured at the scrubber outlet is below 0.45 kilograms per hour.

(5) The owner or operator may use any other method or data to demonstrate compliance if the method or data has been validated according to the protocol of Method 301 of appendix A of this part.

(e) The owner or operator shall inspect the vapor collection system and vapor balancing system, according to the requirements for vapor collection systems in 40 CFR 63.148 of this subpart.

(1) Inspections shall be performed only while a tank truck or railcar is being loaded.

(2) For vapor collection systems only, an inspection shall be performed prior to each performance test required to demonstrate compliance with 40 CFR 63.126(b)(1) of this subpart.

(3) For each vapor collection system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in 40 CFR 63.148 of this subpart.

(f) For the purposes of demonstrating vapor tightness to determine compliance with 40 CFR 63.126(e)(2) of this subpart, the following procedures and equipment shall be used:

(1) The pressure test procedures specified in Method 27 of 40 CFR part 60, appendix A; and

(2) A pressure measurement device which has a precision of #1B2.5 millimeters of mercury or better and which is capable of measuring above the pressure at which the tank truck or railcar is to be tested for vapor tightness.

(g) An owner or operator using a scrubber or other halogen reduction device to reduce the vent stream halogen atom mass emission rate to less than 0.45 kilograms per hour prior to a combustion device used to comply with 40 CFR 63.126(d)(2) shall determine the halogen atom mass emission rate prior to the combustor according to the procedures in paragraph (d)(3) of this section.

(h) For transfer racks that transfer less than 11.8 million liters per year of liquid organic HAP's, the owner or operator may comply with the requirements in paragraphs (h)(1) through (h)(3) of this section instead of the requirements in paragraph (a) or (b) of this section.

(1) The owner or operator shall prepare, as part of the Notification of Compliance Status required by 40 CFR 63.152(b) of this subpart, a design evaluation that shall document that the control device being used achieves the required control efficiency during reasonably expected maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and organic HAP content, and the information specified in paragraphs (h)(1)(i) through (h)(1)(v) of this section, as applicable.

(i) If the control device receives vapors, gases, or liquids, other than fuels, from emission points other than transfer racks subject to this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids, other than fuels, received by the control device.

(ii) If an enclosed combustion device with a minimum residence time of 0.5 seconds and a minimum temperature of 760 degrees Celsius is used to meet the 98-percent emission

reduction requirement, documentation that those conditions exist is sufficient to meet the requirements of paragraph (h)(1) of this section.

(iii) Except as provided in paragraph (h)(1)(ii) of this section, for thermal incinerators, the design evaluation shall include the autoignition 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.

(iv) 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.

(v) 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.

(2) The owner or operator shall submit, as part of the Notification of Compliance Status required by 40 CFR 63.152(b) of this subpart, the operating range for each monitoring parameter identified for each control device. The specified operating range shall represent the conditions for which the control device can achieve the 98-percent-or-greater emission reduction required by 40 CFR 63.126(b)(1) of this subpart.

(3) The owner or operator shall monitor the parameters specified in the Notification of Compliance Status required in 40 CFR 63.152(b) of this subpart or operating permit and shall operate and maintain the control device such that the monitored parameters remain within the ranges specified in the Notification of Compliance Status, except as provided in 40 CFR 63.152(c) and 63.152(f) of this subpart.

§§ 63.129 Transfer operations provisions -- reporting and recordkeeping for performance tests and notification of compliance status.

(a) Each owner or operator of a Group 1 transfer rack shall:

(1) Keep an up-to-date, readily accessible record of the data specified in paragraphs (a)(4) through (a)(8) of this section, as applicable.

(2) Include the data specified in paragraphs (a)(4) through (a)(7) of this section in the Notification of Compliance Status report as specified in ? 63.152(b) of this subpart.

(3) If any subsequent performance tests are conducted after the Notification of Compliance Status has been submitted, report the data in paragraphs (a)(4) through (a)(7) of this section in the next Periodic Report as specified in 40 CFR 63.152(c) of this subpart.

(4) Record and report the following when using a control device other than a flare to achieve a 98 weight percent reduction in total organic HAP or a total organic HAP concentration of 20 parts per million by volume, as specified in 40 CFR 63.126(b)(1) of this subpart:

(i) The parameter monitoring results for thermal incinerators, catalytic incinerators, boilers or process heaters, absorbers, condensers, or carbon adsorbers specified in table 7 of this subpart, recorded during the performance test, and averaged over the time period of the performance testing.

(ii) The percent reduction of total organic HAP or TOC achieved by the control device determined as specified in 40 CFR 63.128(a) of this subpart, or the concentration of total organic HAP or TOC (parts per million by volume, by compound) determined as specified in 40 CFR 63.128(a) of this subpart at the outlet of the control device. For combustion devices, the concentration shall be reported on a dry basis corrected to 3 percent oxygen.

(iii) The parameters shall be recorded at least every 15 minutes.

(iv) For a boiler or process heater, a description of the location at which the vent stream is introduced into the boiler or process heater.

(5) Record and report the following when using a flare to comply with 40 CFR 63.126(b)(2) of this subpart:

(i) 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 40 CFR 63.128(b) of this subpart; and

(iii) All periods during the compliance determination when the pilot flame is absent.

(6) Record and report the following when using a scrubber following a combustion device to control a halogenated vent stream, as specified in 40 CFR 63.126(d) of this subpart:

(i) The percent reduction or scrubber outlet mass emission rate of total hydrogen halides and halogens determined according to the procedures in 40 CFR 63.128(d) of this subpart;

(ii) The parameter monitoring results for scrubbers specified in table 7 of this subpart, and averaged over the time period of the performance test; and

(iii) The parameters shall be recorded at least every 15 minutes.

(7) Record and report the halogen concentration in the vent stream determined according to the procedures as specified in 40 CFR 63.128(d) of this subpart.

(8) Report that the emission stream is being routed to a fuel gas system or a process, when complying using 40 CFR 63.126(b)(4).

(b) If an owner or operator requests approval to use a control device other than those listed in table 7 of this subpart or to monitor a parameter other than those specified in table 7 of this subpart, the owner or operator shall submit a description of planned reporting and recordkeeping procedures as required under 40 CFR 63.151(f) or 40 CFR 63.152(e) of this subpart. The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the permit application or by other appropriate means.

(c) For each parameter monitored according to table 7 of this subpart or paragraph (b) of this section, the owner or operator shall establish a range for the parameter that indicates proper operation of the control device. In order to establish the range, the information required in 40 CFR 63.152(b)(2) of this subpart shall be submitted in the Notification of Compliance Status or the operating permit application or amendment.

(d) Each owner or operator shall maintain a record describing in detail the vent system used to vent each affected transfer vent stream to a control device. This document shall list all valves and vent pipes that could vent the stream to the atmosphere, thereby by-passing the control device; identify which valves are secured by car-seals or lock-and-key type configurations; and indicate the position (open or closed) of those valves which have car-seals. Equipment leaks 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) An owner or operator meeting the requirements of 40 CFR 63.128(h) of this subpart shall submit, as part of the Notification of Compliance Status required by 40 CFR 63.152(b) of this subpart, the information specified in 40 CFR 63.128(h)(1) of this subpart.

(f) An owner or operator meeting the requirements of 40 CFR 63.128(h) of this subpart shall submit, as part of the Notification of Compliance Status required by 40 CFR 63.152(b) of this subpart, the operating range for each monitoring parameter identified for each control device.

§§ 63.130 Transfer operations provisions -- periodic recordkeeping and reporting.

(a) Each owner or operator using a control device to comply with 40 CFR 63.126(b)(1) or (b)(2) of this subpart shall keep the following up-to-date, readily accessible records:

(1) While the transfer vent stream is being vented to the control device, continuous records of the equipment operating parameters specified to be monitored under 40 CFR 63.127 of this subpart, and listed in table 7 of this subpart or specified by the Administrator in accordance with 40 CFR 63.127(c) and 63.129(b). For flares, the hourly records and records of pilot flame outages specified in table 7 shall be maintained in place of continuous records.

(2) Records of the daily average value of each monitored parameter for each operating day determined according to the procedures specified in 40 CFR 63.152(f), except as provided in paragraphs (a)(2)(i) through (a)(2)(iii) of this section.

(i) For flares, records of the times and duration of all periods during which the pilot flame is absent shall be kept rather than daily averages.

(ii) If carbon adsorber regeneration stream flow and carbon bed regeneration temperature are monitored, the records specified in table 7 of this subpart shall be kept instead of the daily averages.

(iii) Records of the duration of all periods when the vent stream is diverted through by-pass lines shall be kept rather than daily averages.

(3) For boilers or process heaters, records of any changes in the location at which the vent stream is introduced into the flame zone as required under the reduction of total organic HAP emissions in 40 CFR 63.126(b)(1) of this subpart.

(b) If a vapor collection system containing valves that could divert the emission stream away from the control device is used, each owner or operator of a Group 1 transfer rack subject to the provisions of 40 CFR 63.127(d) of this subpart shall keep up-to-date, readily accessible records of:

(1) Hourly records of whether the flow indicator specified under 40 CFR 63.127(d)(1) 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.

(2) Where a seal mechanism is used to comply with 40 CFR 63.127(d)(2), hourly records of flow are not required. In such cases, the owner or operator shall record that 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 by-pass line valve position has changed, or the key for a lock-and-key type lock has been checked out, and records of any car-seal that has broken, as listed in table 7 of this subpart.

(c) Each owner or operator of a Group 1 transfer rack who uses a flare to comply with 40 CFR 63.126(b)(2) of this subpart shall keep up-to-date, readily accessible records of the flare pilot flame monitoring specified under 40 CFR 63.127(a)(2) of this subpart.

(d) Each owner or operator of a transfer rack subject to the requirements of 40 CFR 63.126 of this subpart shall submit to the Administrator Periodic Reports of the following information according to the schedule in 40 CFR 63.152(c) of this subpart:

(1) Reports of daily average values of monitored parameters for all operating days when the daily average values were outside the range established in the Notification of Compliance Status or operating permit.

(2) Reports of the duration of periods when monitoring data are not collected for each excursion caused by insufficient monitoring data as defined in 40 CFR 63.152(c)(2)(ii)(A) of this subpart.

(3) Reports of the times and durations of all periods recorded under paragraph (b)(1) of this section when the vent stream was diverted from the control device.

(4) Reports of all times recorded under paragraph (b)(2) of this section when maintenance is performed on car-sealed valves, when the car seal is broken, when the by-pass line valve position is changed, or the key for a lock-and-key type configuration has been checked out.

(5) Reports of the times and durations of all periods recorded under paragraph (a)(2)(i) of this section in which all pilot flames of a flare were absent.

(6) Reports of all carbon bed regeneration cycles during which the parameters recorded under paragraph (a)(2)(vi) of this section were outside the ranges established in the Notification of Compliance Status or operating permit.

(e) The owner or operator of a Group 1 transfer rack shall record that the verification of DOT tank certification or Method 27 testing, required in 40 CFR 63.126(e) of this subpart, has been performed. Various methods for the record of verification can be used, such as: A check off on a log sheet; a list of DOT serial numbers or Method 27 data; or a position description for gate security, showing that the security guard will not allow any trucks on site that do not have the appropriate documentation.

(f) Each owner or operator of a Group 1 or Group 2 transfer rack shall record, update annually, and maintain the information specified in paragraphs (f)(1) through (f)(3) of this section in a readily accessible location on site:

(1) An analysis demonstrating the design and actual annual throughput of the transfer rack;

(2) An analysis documenting the weight-percent organic HAP's in the liquid loaded. Examples of acceptable documentation include but are not limited to analyses of the material and engineering calculations.

(3) An analysis documenting the annual rack weighted average HAP partial pressure of the transfer rack.

(i) For Group 2 transfer racks that are limited to transfer of organic HAP's with partial pressures less than 10.3 kilopascals, documentation is required of the organic HAP's (by

compound) that are transferred. The rack weighted average partial pressure does not need to be calculated.

(ii) For racks transferring one or more organic HAP's with partial pressures greater than 10.3 kilopascals, as well as one or more organic HAP's with partial pressures less than 10.3 kilopascals, a rack weighted partial pressure shall be documented. The rack weighted average HAP partial pressure shall be weighted by the annual throughput of each chemical transferred.

§§ 63.131 [Reserved]

§§ 63.132 Process wastewater provisions -- general.

(a) Existing sources. This paragraph specifies the requirements applicable to process wastewater streams located at existing sources. The owner or operator shall comply with the requirements in paragraphs (a)(1) through (a)(3) of this section, no later than the applicable dates specified in 40 CFR 63.100 of subpart F of this part.

(1) Determine wastewater streams to be controlled for Table 9 compounds. Determine whether each wastewater stream requires control for Table 9 compounds by complying with the requirements in either paragraph (a)(1)(i) or (a)(1)(ii) of this section, and comply with the requirements in paragraph (a)(1)(iii) of this section.

(i) Comply with paragraph (c) of this section, determining whether the wastewater stream is Group 1 or Group 2 for Table 9 compounds; or

(ii) Comply with paragraph (e) of this section, designating the wastewater stream as a Group 1 wastewater stream.

(iii) Comply with paragraph (f) of this section.

(2) Requirements for Group 1 wastewater streams. For wastewater streams that are Group 1 for Table 9 compounds, comply with paragraphs (a)(2)(i) through (a)(2)(iv) of this section.

(i) Comply with the applicable requirements for wastewater tanks, surface impoundments, containers, individual drain systems, and oil/water separators as specified in 40 CFR 63.133 through 40 CFR 63.137 of this subpart, except as provided in paragraphs (a)(2)(i)(A) and (a)(2)(i)(B) of this section and 40 CFR 63.138(a)(3) of this subpart.

(A) The waste management units may be equipped with pressure relief devices that vent directly to the atmosphere provided the pressure relief device is not used for planned or routine venting of emissions.

(B) The pressure relief device remains in a closed position at all times except when it is necessary for the pressure relief device to open for the purpose of preventing physical damage or permanent deformation of the waste management unit in accordance with good engineering and safety practices.

(ii) Comply with the applicable requirements for control of Table 9 compounds as specified in 40 CFR 63.138 of this subpart. Alternatively, the owner or operator may elect to comply with the treatment provisions specified in 40 CFR 63.132(g) of this subpart.

(iii) Comply with the applicable monitoring and inspection requirements specified in 40 CFR 63.143 of this subpart.

(iv) Comply with the applicable recordkeeping and reporting requirements specified in 40 CFR 63.146 and 63.147 of this subpart.

(3) Requirements for Group 2 wastewater streams. For wastewater streams that are Group 2 for table 9 compounds, comply with the applicable recordkeeping and reporting requirements specified in ?? 63.146(b)(1) and 63.147(b)(8).

(b) New sources. This paragraph specifies the requirements applicable to process wastewater streams located at new sources. The owner or operator shall comply with the requirements in paragraphs (b)(1) through (b)(4) of this section, no later than the applicable dates specified in 40 CFR 63.100 of subpart F of this part.

(1) Determine wastewater streams to be controlled for Table 8 compounds. Determine whether each wastewater stream requires control for Table 8 compounds by complying with the requirements in either paragraph (b)(1)(i) or (b)(1)(ii) of this section, and comply with the requirements in paragraph (b)(1)(iii) of this section.

(i) Comply with paragraph (d) of this section, determining whether the wastewater stream is Group 1 or Group 2 for Table 8 compounds; or

(ii) Comply with paragraph (e) of this section, designating the wastewater stream as a Group 1 wastewater stream for Table 8 compounds.

(iii) Comply with paragraph (f) of this section.

(2) Determine wastewater streams to be controlled for Table 9 compounds. Determine whether each wastewater stream requires control for Table 9 compounds by complying with the requirements in either paragraph (b)(2)(i) or (b)(2)(ii) of this section, and comply with the requirements in paragraph (b)(2)(iii) of this section.

(i) Comply with paragraph (c) of this section, determining whether the wastewater stream is Group 1 or Group 2 for Table 9 compounds; or

(ii) Comply with paragraph (e) of this section, designating the wastewater stream as a Group 1 wastewater stream.

(iii) Comply with paragraph (f) of this section.

(3) Requirements for Group 1 wastewater streams. For wastewater streams that are Group 1 for Table 8 compounds and/or Table 9 compounds, comply with paragraphs (b)(3)(i) through (b)(3)(iv) of this section.

(i) Comply with the applicable requirements for wastewater tanks, surface impoundments, containers, individual drain systems, and oil/water separators specified in the requirements of 40 CFR 63.133 through 40 CFR 63.137 of this subpart, except as provided in paragraphs (b)(3)(i)(A) and (b)(3)(i)(B) of this section and 40 CFR 63.138(a)(3) of this subpart.

(A) The waste management units may be equipped with pressure relief devices that vent directly to the atmosphere provided the pressure relief device is not used for planned or routine venting of emissions.

(B) The pressure relief device remains in a closed position at all times except when it is necessary for the pressure relief device to open for the purpose of preventing physical damage or permanent deformation of the waste management unit in accordance with good engineering and safety practices.

(ii) Comply with the applicable requirements for control of Table 8 compounds specified in 40 CFR 63.138 of this subpart. Alternatively, the owner or operator may elect to comply with the provisions specified in ? 63.132(g) of this subpart.

(iii) Comply with the applicable monitoring and inspection requirements specified in 40 CFR 63.143 of this subpart.

(iv) Comply with the applicable recordkeeping and reporting requirements specified in 40 CFR 63.146 and 63.147 of this subpart.

(4) Requirements for Group 2 wastewater streams. For wastewater streams that are Group 2 for both table 8 and table 9 compounds, comply with the applicable recordkeeping and reporting requirements specified in 40 CFR 63.146(b)(1) and 63.147(b)(8).

(c) How to determine Group 1 or Group 2 status for Table 9 compounds. This paragraph provides instructions for determining whether a wastewater stream is Group 1 or Group 2 for Table 9 compounds. Total annual average concentration shall be determined according to the procedures specified in 40 CFR 63.144(b) of this subpart. Annual average flow rate shall be determined according to the procedures specified in 40 CFR 63.144(c) of this subpart.

(1) A wastewater stream is a Group 1 wastewater stream for Table 9 compounds if:

(i) The total annual average concentration of Table 9 compounds is greater than or equal to 10,000 parts per million by weight at any flow rate; or

(ii) The total annual average concentration of Table 9 compounds is greater than or equal to 1,000 parts per million by weight and the annual average flow rate is greater than or equal to 10 liters per minute.

(2) A wastewater stream is a Group 2 wastewater stream for Table 9 compounds if it is not a Group 1 wastewater stream for Table 9 compounds by the criteria in paragraph (c)(1) of this section.

(d) How to determine Group 1 or Group 2 status for Table 8 compounds. This paragraph provides instructions for determining whether a wastewater stream is Group 1 or Group 2 for Table 8 compounds. Annual average concentration for each Table 8 compound shall be determined according to the procedures specified in ? 63.144(b) of this subpart. Annual average flow rate shall be determined according to the procedures specified in ? 63.144(c) of this subpart.

(1) A wastewater stream is a Group 1 wastewater stream for Table 8 compounds if the annual average flow rate is 0.02 liter per minute or greater and the annual average concentration of any individual table 8 compound is 10 parts per million by weight or greater.

(2) A wastewater stream is a Group 2 wastewater stream for Table 8 compounds if the annual average flow rate is less than 0.02 liter per minute or the annual average concentration for each individual Table 8 compound is less than 10 parts per million by weight.

(e) How to designate a Group 1 wastewater stream. The owner or operator may elect to designate a wastewater stream a Group 1 wastewater stream in order to comply with paragraph (a)(1) or (b)(1) of this section. To designate a wastewater stream or a mixture of wastewater streams a Group 1 wastewater stream, the procedures specified in paragraphs (e)(1) and (e)(2) of this section and 40 CFR 63.144(a)(2) of this subpart shall be followed.

(1) From the point of determination for each wastewater stream that is included in the Group 1 designation to the location where the owner or operator elects to designate such wastewater stream(s) as a Group 1 wastewater stream, the owner or operator shall comply with all applicable emission suppression requirements specified in 40 CFR 63.133 through 63.137.

(2) From the location where the owner or operator designates a wastewater stream or mixture of wastewater streams to be a Group 1 wastewater stream, such Group 1 wastewater stream shall be managed in accordance with all applicable emission suppression requirements specified in 40 CFR 63.133 through 63.137 and with the treatment requirements in 40 CFR 63.138 of this part.

(f) Owners or operators of sources subject to this subpart shall not discard liquid or solid organic materials with a concentration of greater than 10,000 parts per million of Table 9 compounds (as determined by analysis of the stream composition, engineering calculations, or process knowledge, according to the provisions of 40 CFR 63.144(b) of this subpart) from a chemical manufacturing process unit to water or wastewater, unless the receiving stream is managed and treated as a Group 1 wastewater stream. This prohibition does not apply to materials from the activities listed in paragraphs (f)(1) through (f)(4) of this section.

(1) Equipment leaks;

(2) Activities included in maintenance or startup/shutdown/malfunction plans;

(3) Spills; or

(4) Samples of a size not greater than reasonably necessary for the method of analysis that is used.

(g) Off-site treatment or on-site treatment not owned or operated by the source. The owner or operator may elect to transfer a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream to an on-site treatment operation not owned or operated by the owner or operator of the source generating the wastewater stream or residual, or to an off-site treatment operation.

(1) The owner or operator transferring the wastewater stream or residual shall:

(i) Comply with the provisions specified in 40 CFR 63.133 through 63.137 of this subpart for each waste management unit that receives or manages a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream prior to shipment or transport.

(ii) Include a notice with the shipment or transport of each Group 1 wastewater stream or residual removed from a Group 1 wastewater stream. The notice shall state that the wastewater stream or residual contains organic hazardous air pollutants that are to be treated in accordance with the provisions of this subpart. When the transport is continuous or ongoing (for example, discharge to a publicly-owned treatment works), the notice shall be submitted to the treatment operator initially and whenever there is a change in the required treatment.

(2) The owner or operator may not transfer the wastewater stream or residual unless the transferee has submitted to the EPA a written certification that the transferee will manage and treat any Group 1 wastewater stream or residual removed from a Group 1 wastewater stream received from a source subject to the requirements of this subpart in accordance with the requirements of either 40 CFR 63.133 through 63.147, or 40 CFR 63.102(b) of subpart F or D of this part if alternative emission limitations have been granted the transferor in accordance with those provisions. The certifying entity may revoke the written certification by sending a written statement to the EPA and the owner or operator

giving at least 90 days notice that the certifying entity is rescinding acceptance of responsibility for compliance with the regulatory provisions listed in this paragraph. Upon expiration of the notice period, the owner or operator may not transfer the wastewater stream or residual to the treatment operation.

(3) By providing this written certification to the EPA, the certifying entity accepts responsibility for compliance with the regulatory provisions listed in paragraph (g)(2) of this section with respect to any shipment of wastewater or residual covered by the written certification. Failure to abide by any of those provisions with respect to such shipments may result in enforcement action by the EPA against the certifying entity in accordance with the enforcement provisions applicable to violations of these provisions by owners or operators of sources.

(4) Written certifications and revocation statements, to the EPA from the transferees of wastewater or residuals shall be signed by the responsible official of the certifying entity, provide the name and address of the certifying entity, and be sent to the appropriate EPA Regional Office at the addresses listed in 40 CFR 63.13.Such written certifications are not transferable by the treater.

§§ 63.133 Process wastewater provisions -- wastewater tanks.

(a) For each wastewater tank that receives, manages, or treats a Group 1 wastewater stream or a residual removed from a Group 1 wastewater stream, the owner or operator shall comply with the requirements of either paragraph (a)(1) or (a)(2) of this section as specified in table 10 of this subpart.

(1) The owner or operator shall operate and maintain a fixed roof except that if the wastewater tank is used for heating wastewater, or treating by means of an exothermic reaction or the contents of the tank is sparged, the owner or operator shall comply with the requirements specified in paragraph (a)(2) of this section.

(2) The owner or operator shall comply with the requirements in paragraphs (b) through (h) of this section and shall operate and maintain one of the emission control techniques listed in paragraphs (a)(2)(i) through (a)(2)(iv) of this section.

(i) A fixed roof and a closed-vent system that routes the organic hazardous air pollutants vapors vented from the wastewater tank to a control device.

(ii) A fixed roof and an internal floating roof that meets the requirements specified in 40 CFR 63.119(b) of this subpart;

(iii) An external floating roof that meets the requirements specified in 40 CFR 63.119(c), 63.120(b)(5), and 63.120(b)(6) of this subpart; or

(iv) An equivalent means of emission limitation. Determination of equivalence to the reduction in emissions achieved by the requirements of paragraphs (a)(2)(i) through (a)(2)(iii) of this section will be evaluated according to 40 CFR 63.102(b) of subpart F of this part. The determination will be based on the application to the Administrator which shall include the information specified in either paragraph (a)(2)(iv)(A) or (a)(2)(iv)(B) of this section.

(A) Actual emissions tests that use full-size or scale-model wastewater tanks that accurately collect and measure all organic hazardous air pollutants emissions from a given control technique, and that accurately simulate wind and account for other emission variables such as temperature and barometric pressure, or

(B) An engineering evaluation that the Administrator determines is an accurate method of determining equivalence.

(b) If the owner or operator elects to comply with the requirements of paragraph (a)(2)(i) of this section, the fixed roof shall meet the requirements of paragraph (b)(1) of this section, the control device shall meet the requirements of paragraph (b)(2) of this section, and the closed-vent system shall meet the requirements of paragraph (b)(3) of this section.

(1) The fixed-roof shall meet the following requirements:

(i) Except as provided in paragraph (b)(4) of this section, the fixed roof and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be maintained in accordance with the requirements specified in 40 CFR 63.148 of this subpart.

(ii) Each opening shall be maintained in a closed position (e.g., covered by a lid) at all times that the wastewater tank contains a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream except when it is necessary to use the opening for wastewater sampling, removal, or for equipment inspection, maintenance, or repair.

(2) The control device shall be designed, operated, and inspected in accordance with the requirements of 40 CFR 63.139 of this subpart.

(3) Except as provided in paragraph (b)(4) of this section, the closed-vent system shall be inspected in accordance with the requirements of 40 CFR 63.148 of this subpart.

(4) For any fixed roof tank and closed-vent system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in 40 CFR 63.148 of this subpart.

(c) If the owner or operator elects to comply with the requirements of paragraph (a)(2)(ii) of this section, the floating roof shall be inspected according to the procedures specified in 40 CFR 63.120(a)(2) and (a)(3) of this subpart.

(d) Except as provided in paragraph (e) of this section, if the owner or operator elects to comply with the requirements of paragraph (a)(2)(iii) of this section, seal gaps shall be measured according to the procedures specified in 40 CFR 63.120(b)(2)(i) through (b)(4) of this subpart and the wastewater tank shall be inspected to determine compliance with 40 CFR 63.120(b)(5) and (b)(6) of this subpart.

(e) If the owner or operator determines that it is unsafe to perform the seal gap measurements specified in 40 CFR 63.120(b)(2)(i) through (b)(4) of this subpart or to inspect the wastewater tank to determine compliance with 40 CFR 63.120(b)(5) and (b)(6) of this subpart because the floating roof appears to be structurally unsound and poses an imminent or potential danger to inspecting personnel, the owner or operator shall comply with the requirements in either paragraph (e)(1) or (e)(2) of this section.

(1) The owner or operator shall measure the seal gaps or inspect the wastewater tank within 30 calendar days of the determination that the floating roof is unsafe, or

(2) The owner or operator shall empty and remove the wastewater tank from service within 45 calendar days of determining that the roof is unsafe. If the wastewater tank cannot be emptied within 45 calendar days, the owner or operator may utilize up to two extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include an explanation of why it was unsafe to perform the inspection or seal gap measurement, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the wastewater tank will be emptied as soon as practical.

(f) Except as provided in paragraph (e) of this section, each wastewater tank shall be inspected initially, and semi-annually thereafter, for improper work practices in accordance with 40 CFR 63.143 of this subpart. For wastewater tanks, improper work practice includes, but is not limited to, leaving open any access door or other opening when such door or opening is not in use.

(g) Except as provided in paragraph (e) of this section, each wastewater tank shall be inspected for control equipment failures as defined in paragraph (g)(1) of this section according to the schedule in paragraphs (g)(2) and (g)(3) of this section.

(1) Control equipment failures for wastewater tanks include, but are not limited to, the conditions specified in paragraphs (g)(1)(i) through (g)(1)(ix) of this section.

(i) The floating roof is not resting on either the surface of the liquid or on the leg supports.

(ii) There is stored liquid on the floating roof.

(iii) A rim seal is detached from the floating roof.

(iv) There are holes, tears, cracks or gaps in the rim seal or seal fabric of the floating roof.

(v) There are visible gaps between the seal of an internal floating roof and the wall of the wastewater tank.

(vi) There are gaps between the metallic shoe seal or the liquid mounted primary seal of an external floating roof and the wall of the wastewater tank that exceed 212 square centimeters per meter of tank diameter or the width of any portion of any gap between the primary seal and the tank wall exceeds 3.81 centimeters.

(vii) There are gaps between the secondary seal of an external floating roof and the wall of the wastewater tank that exceed 21.2 square centimeters per meter of tank diameter or the width of any portion of any gap between the secondary seal and the tank wall exceeds 1.27 centimeters.

(viii) Where a metallic shoe seal is used on an external floating roof, one end of the metallic shoe does not extend into the stored liquid or one end of the metallic shoe does not extend a minimum vertical distance of 61 centimeters above the surface of the stored liquid.

(ix) A gasket, joint, lid, cover, or door has a crack or gap, or is broken.

(2) The owner or operator shall inspect for the control equipment failures in paragraphs (g)(1)(i) through (g)(1)(viii) of this section according to the schedule specified in paragraphs (c) and (d) of this section.

(3) The owner or operator shall inspect for the control equipment failures in paragraph (g)(1)(ix) of this section initially, and semi-annually thereafter.

(h) Except as provided in 40 CFR 63.140 of this subpart, when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than 5 calendar days after identification and repair shall be completed within 45 calendar days after identification. If a failure that is detected during inspections required by this section cannot be repaired within 45 calendar days and if the vessel cannot be emptied within 45 calendar days, the owner or operator may utilize up to 2 extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include a description of the failure, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be emptied as soon as practical.

§§ 63.134 Process wastewater provisions -- surface impoundments.

(a) For each surface impoundment that receives, manages, or treats a Group 1 wastewater stream or a residual removed from a Group 1 wastewater stream, the owner or operator shall comply with the requirements of paragraphs (b), (c), and (d) of this section.

(b) The owner or operator shall operate and maintain on each surface impoundment either a cover (e.g., air-supported structure or rigid cover) and a closed-vent system that routes the organic hazardous air pollutants vapors vented from the surface impoundment to a control device in accordance with paragraph (b)(1) of this section, or a floating flexible membrane cover as specified in paragraph (b)(2) of this section.

(1) The cover and all openings shall meet the following requirements:

(i) Except as provided in paragraph (b)(4) of this section, the cover and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be maintained in accordance with the requirements specified in ? 63.148 of this subpart.

(ii) Each opening shall be maintained in a closed position (e.g., covered by a lid) at all times that a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream is in the surface impoundment except when it is necessary to use the opening for sampling, removal, or for equipment inspection, maintenance, or repair.

(iii) The cover shall be used at all times that a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream is in the surface impoundment except during removal of treatment residuals in accordance with 40 CFR 268.4 or closure of the surface impoundment in accordance with 40 CFR 264.228.

(2) Floating flexible membrane covers shall meet the requirements specified in paragraphs (b)(2)(i) through (b)(2)(vii) of this section.

(i) The floating flexible cover shall be designed to float on the liquid surface during normal operations, and to form a continuous barrier over the entire surface area of the liquid.

(ii) The cover shall be fabricated from a synthetic membrane material that is either:

(A) High density polyethylene (HDPE) with a thickness no less than 2.5 millimeters (100 mils); or

(B) A material or a composite of different materials determined to have both organic permeability properties that are equivalent to those of the material listed in paragraph (b)(2)(ii)(A) of this section, and chemical and physical properties that maintain the material integrity for the intended service life of the material.

(iii) The cover shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between cover section seams or between the interface of the cover edge and its foundation mountings.

(iv) Except as provided for in paragraph (b)(2)(v) of this section, each opening in the floating membrane cover shall be equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks,

holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device.

(v) The floating membrane cover may be equipped with one or more emergency cover drains for removal of stormwater. Each emergency cover drain shall be equipped with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening or a flexible fabric sleeve seal.

(vi) The closure devices shall be made of suitable materials that will minimize exposure of organic hazardous air pollutants to the atmosphere, to the extent practical, and will maintain the integrity of the equipment throughout its intended service life. Factors to be considered in designing the closure devices shall include: The effects of any contact with the liquid and its vapor managed in the surface impoundment; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the surface impoundment on which the floating membrane cover is installed.

(vii) Whenever a Group 1 wastewater stream or residual from a Group 1 wastewater stream is in the surface impoundment, the floating membrane cover shall float on the liquid and each closure device shall be secured in the closed position. Opening of closure devices or removal of the cover is allowed to provide access to the surface impoundment for performing routine inspection, maintenance, or other activities needed for normal operations and/or to remove accumulated sludge or other residues from the bottom of surface impoundment. Openings shall be maintained in accordance with ? 63.148 of this subpart.

(3) The control device shall be designed, operated, and inspected in accordance with 40 CFR 63.139 of this subpart.

(4) Except as provided in paragraph (b)(5) of this section, the closed-vent system shall be inspected in accordance with ? 63.148 of this subpart.

(5) For any cover and closed-vent system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in 40 CFR 63.148 of this subpart.

(c) Each surface impoundment shall be inspected initially, and semi-annually thereafter, for improper work practices and control equipment failures in accordance with 40 CFR 63.143 of this subpart.

(1) For surface impoundments, improper work practice includes, but is not limited to, leaving open any access hatch or other opening when such hatch or opening is not in use.

(2) For surface impoundments, control equipment failure includes, but is not limited to, any time a joint, lid, cover, or door has a crack or gap, or is broken.

(d) Except as provided in 40 CFR 63.140 of this subpart, when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than 5 calendar days after identification and repair shall be completed within 45 calendar days after identification.

§§ 63.135 Process wastewater provisions -- containers.

(a) For each container that receives, manages, or treats a Group 1 wastewater stream or a residual removed from a Group 1 wastewater stream, the owner or operator shall comply with the requirements of paragraphs (b) through (f) of this section.

(b) The owner or operator shall operate and maintain a cover on each container used to handle, transfer, or store a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream in accordance with the following requirements:

(1) Except as provided in paragraph (d)(4) of this section, if the capacity of the container is greater than 0.42 m3, the cover and all openings (e.g., bungs, hatches, sampling ports, and pressure relief devices) shall be maintained in accordance with the requirements specified in 40 CFR 63.148 of this subpart.

(2) If the capacity of the container is less than or equal to 0.42 m3, the owner or operator shall comply with either paragraph (b)(2)(i) or (b)(2)(ii) of this section.

(i) The container must meet existing Department of Transportation specifications and testing requirements under 49 CFR part 178; or

(ii) Except as provided in paragraph (d)(4) of this section, the cover and all openings shall be maintained without leaks as specified in 40 CFR 63.148 of this subpart.

(3) The cover and all openings shall be maintained in a closed position (e.g., covered by a lid) at all times that a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream is in the container except when it is necessary to use the opening for filling, removal, inspection, sampling, or pressure relief events related to safety considerations.

(c) For containers with a capacity greater than or equal to 0.42 m3, a submerged fill pipe shall be used when a container is being filled by pumping with a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream.

(1) The submerged fill pipe outlet shall extend to no more than 6 inches or within two fill pipe diameters of the bottom of the container while the container is being filled.

(2) The cover shall remain in place and all openings shall be maintained in a closed position except for those openings required for the submerged fill pipe and for venting of the

container to prevent physical damage or permanent deformation of the container or cover.

(d) During treatment of a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream, including aeration, thermal or other treatment, in a container, whenever it is necessary for the container to be open, the container shall be located within an enclosure with a closed-vent system that routes the organic hazardous air pollutants vapors vented from the container to a control device.

(1) Except as provided in paragraph (d)(4) of this section, the enclosure and all openings (e.g., doors, hatches) shall be maintained in accordance with the requirements specified in 40 CFR 63.148 of this subpart.

(2) The control device shall be designed, operated, and inspected in accordance with 40 CFR 63.139 of this subpart.

(3) Except as provided in paragraph (d)(4) of this section, the closed-vent system shall be inspected in accordance with 40 CFR 63.148 of this subpart.

(4) For any enclosure and closed-vent system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in 40 CFR 63.148 of this subpart.

(e) Each container shall be inspected initially, and semi-annually thereafter, for improper work practices and control equipment failures in accordance with 40 CFR 63.143 of this subpart.

(1) For containers, improper work practice includes, but is not limited to, leaving open any access hatch or other opening when such hatch or opening is not in use.

(2) For containers, control equipment failure includes, but is not limited to, any time a cover or door has a gap or crack, or is broken.

(f) Except as provided in 40 CFR 63.140 of this subpart, when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than 5 calendar days after identification and repair shall be completed within 15 calendar days after identification.

§§ 63.136 Process wastewater provisions -- individual drain systems.

(a) For each individual drain system that receives or manages a Group 1 wastewater stream or a residual removed from a Group 1 wastewater stream, the owner or operator shall comply with the requirements of paragraphs (b), (c), and (d) or with paragraphs (e), (f), and (g) of this section.

(b) If the owner or operator elects to comply with this paragraph, the owner or operator shall operate and maintain on each opening in the individual drain system a cover and if vented, route

the vapors to a process or through a closed vent system to a control device. The owner or operator shall comply with the requirements of paragraphs (b)(1) through (b)(5) of this section.

(1) The cover and all openings shall meet the following requirements:

(i) Except as provided in paragraph (b)(4) of this section, the cover and all openings (e.g., access hatches, sampling ports) shall be maintained in accordance with the requirements specified in 40 CFR 63.148 of this subpart.

(ii) The cover and all openings shall be maintained in a closed position at all times that a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream is in the drain system except when it is necessary to use the opening for sampling or removal, or for equipment inspection, maintenance, or repair.

(2) The control device shall be designed, operated, and inspected in accordance with 40 CFR 63.139 of this subpart.

(3) Except as provided in paragraph (b)(4) of this section, the closed-vent system shall be inspected in accordance with 40 CFR 63.148 of this subpart.

(4) For any cover and closed-vent system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in 40 CFR 63.148 of this subpart.

(5) The individual drain system shall be designed and operated to segregate the vapors within the system from other drain systems and the atmosphere.

(c) Each individual drain system shall be inspected initially, and semi- annually thereafter, for improper work practices and control equipment failures, in accordance with the inspection requirements specified in table 11 of this subpart.

(1) For individual drain systems, improper work practice includes, but is not limited to, leaving open any access hatch or other opening when such hatch or opening is not in use for sampling or removal, or for equipment inspection, maintenance, or repair.

(2) For individual drain systems, control equipment failure includes, but is not limited to, any time a joint, lid, cover, or door has a gap or crack, or is broken.

(d) Except as provided in 40 CFR 63.140 of this subpart, when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than 5 calendar days after identification and repair shall be completed within 15 calendar days after identification.

(e) If the owner or operator elects to comply with this paragraph, the owner or operator shall comply with the requirements in paragraphs (e)(1) through (e)(3) of this section:

(1) Each drain shall be equipped with water seal controls or a tightly fitting cap or plug. The owner or operator shall comply with paragraphs (e)(1)(i) and (e)(1)(ii) of this section.

(i) For each drain equipped with a water seal, the owner or operator shall ensure that the water seal is maintained. For example, a flow-monitoring device indicating positive flow from a main to a branch water line supplying a trap or water being continuously dripped into the trap by a hose could be used to verify flow of water to the trap. Visual observation is also an acceptable alternative.

(ii) If a water seal is used on a drain receiving a Group 1 wastewater, the owner or operator shall either extend the pipe discharging the wastewater below the liquid surface in the water seal of the receiving drain, or install a flexible shield (or other enclosure which restricts wind motion across the open area between the pipe and the drain) that encloses the space between the pipe discharging the wastewater to the drain receiving the wastewater. (Water seals which are used on hubs receiving Group 2 wastewater for the purpose of eliminating cross ventilation to drains carrying Group 1 wastewater are not required to have a flexible cap or extended subsurface discharging pipe.)

(2) Each junction box shall be equipped with a tightly fitting solid cover (i.e., no visible gaps, cracks, or holes) which shall be kept in place at all times except during inspection and maintenance. If the junction box is vented, the owner or operator shall comply with the requirements in paragraph (e)(2)(i) or (e)(2)(ii) of this section.

(i) The junction box shall be vented to a process or through a closed vent system to a control device. The closed vent system shall be inspected in accordance with the requirements of 40 CFR 63.148 and the control device shall be designed, operated, and inspected in accordance with the requirements of 40 CFR 63.139.

(ii) If the junction box is filled and emptied by gravity flow (i.e., there is no pump) or is operated with no more than slight fluctuations in the liquid level, the owner or operator may vent the junction box to the atmosphere provided that the junction box complies with the requirements in paragraphs (e)(2)(ii)(A) and (e)(2)(ii)(B) of this section.

(A) The vent pipe shall be at least 90 centimeters in length and no greater than 10.2 centimeters in nominal inside diameter.

(B) Water seals shall be installed and maintained at the wastewater entrance(s) to or exit from the junction box restricting ventilation in the individual drain system and between components in the individual drain system. The owner or operator shall demonstrate (e.g., by visual inspection or smoke test) upon request by the Administrator that the junction box water seal is properly designed and restricts ventilation.

(3) Each sewer line shall not be open to the atmosphere and shall be covered or enclosed in a manner so as to have no visible gaps or cracks in joints, seals, or other emission interfaces.

(f) Equipment used to comply with paragraphs (e)(1), (e)(2), or (e)(3) of this section shall be inspected as follows:

(1) Each drain using a tightly fitting cap or plug shall be visually inspected initially, and semi-annually thereafter, to ensure caps or plugs are in place and that there are no gaps, cracks, or other holes in the cap or plug.

(2) Each junction box shall be visually inspected initially, and semi-annually thereafter, to ensure that there are no gaps, cracks, or other holes in the cover.

(3) The unburied portion of each sewer line shall be visually inspected initially, and semi-annually thereafter, for indication of cracks or gaps that could result in air emissions.

(g) Except as provided in 40 CFR 63.140 of this subpart, when a gap, hole, or crack is identified in a joint or cover, first efforts at repair shall be made no later than 5 calendar days after identification, and repair shall be completed within 15 calendar days after identification.

§§ 63.137 Process wastewater provisions -- oil-water separators.

(a) For each oil-water separator that receives, manages, or treats a Group 1 wastewater stream or a residual removed from a Group 1 wastewater stream, the owner or operator shall comply with the requirements of paragraphs (c) and (d) of this section and shall operate and maintain one of the following:

(1) A fixed roof and a closed vent system that routes the organic hazardous air pollutants vapors vented from the oil-water separator to a control device. The fixed roof, closed-vent system, and control device shall meet the requirements specified in paragraph (b) of this section;

(2) A floating roof meeting the requirements in 40 CFR, part 60, subpart QQQ 40 CFR 60.693-2(a)(1)(i), (a)(1)(ii), (a)(2), (a)(3), and (a)(4). For portions of the oil-water separator where it is infeasible to construct and operate a floating roof, such as over the weir mechanism, the owner or operator shall operate and maintain a fixed roof, closed vent system, and control device that meet the requirements specified in paragraph (b) of this section.

(3) An equivalent means of emission limitation. Determination of equivalence to the reduction in emissions achieved by the requirements of paragraphs (a)(1) and (a)(2) of this section will be evaluated according to 40 CFR 63.102(b) of subpart F of this part. The determination will be based on the application to the Administrator which shall include the information specified in either paragraph (a)(3)(i) or (a)(3)(ii) of this section.

(i) Actual emissions tests that use full-size or scale-model oil-water separators that accurately collect and measure all organic hazardous air pollutants emissions from a

given control technique, and that accurately simulate wind and account for other emission variables such as temperature and barometric pressure, or

(ii) An engineering evaluation that the Administrator determines is an accurate method of determining equivalence.

(b) If the owner or operator elects to comply with the requirements of paragraphs (a)(1) or (a)(2) of this section, the fixed roof shall meet the requirements of paragraph (b)(1) of this section, the control device shall meet the requirements of paragraph (b)(2) of this section, and the closed-vent system shall meet the requirements of paragraph (b)(3) of this section.

(1) The fixed-roof shall meet the following requirements:

(i) Except as provided in paragraph (b)(4) of this section, the fixed roof and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be maintained in accordance with the requirements specified in 40 CFR 63.148 of this subpart.

(ii) Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that the oil-water separator contains a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream except when it is necessary to use the opening for sampling or removal, or for equipment inspection, maintenance, or repair.

(2) The control device shall be designed, operated, and inspected in accordance with the requirements of 40 CFR 63.139 of this subpart.

(3) Except as provided in paragraph (b)(4) of this section, the closed-vent system shall be inspected in accordance with the requirements of 40 CFR 63.148 of this subpart.

(4) For any fixed roof and closed-vent system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements of 40 CFR 63.148 of this subpart.

(c) If the owner or operator elects to comply with the requirements of paragraph (a)(2) of this section, seal gaps shall be measured according to the procedures specified in 40 CFR part 60, subpart QQQ 40 CFR 60.696(d)(1) and the schedule specified in paragraphs (c)(1) and (c)(2) of this section.

(1) Measurement of primary seal gaps shall be performed within 60 calendar days after installation of the floating roof and introduction of a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream and once every 5 years thereafter.

(2) Measurement of secondary seal gaps shall be performed within 60 calendar days after installation of the floating roof and introduction of a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream and once every year thereafter.

(d) Each oil-water separator shall be inspected initially, and semi-annually thereafter, for improper work practices in accordance with 40 CFR 63.143 of this subpart. For oil-water separators, improper work practice includes, but is not limited to, leaving open or ungasketed any access door or other opening when such door or opening is not in use.

(e) Each oil-water separator shall be inspected for control equipment failures as defined in paragraph (e)(1) of this section according to the schedule specified in paragraphs (e)(2) and (e)(3) of this section.

(1) For oil-water separators, control equipment failure includes, but is not limited to, the conditions specified in paragraphs (e)(1)(i) through (e)(1)(vii) of this section.

(i) The floating roof is not resting on either the surface of the liquid or on the leg supports.

(ii) There is stored liquid on the floating roof.

(iii) A rim seal is detached from the floating roof.

(iv) There are holes, tears, or other open spaces in the rim seal or seal fabric of the floating roof.

(v) There are gaps between the primary seal and the separator wall that exceed 67 square centimeters per meter of separator wall perimeter or the width of any portion of any gap between the primary seal and the separator wall exceeds 3.8 centimeters.

(vi) There are gaps between the secondary seal and the separator wall that exceed 6.7 square centimeters per meter of separator wall perimeter or the width of any portion of any gap between the secondary seal and the separator wall exceeds 1.3 centimeters.

(vii) A gasket, joint, lid, cover, or door has a gap or crack, or is broken.

(2) The owner or operator shall inspect for the control equipment failures in paragraphs (e)(1)(i) through (e)(1)(vi) of this section according to the schedule specified in paragraph (c) of this section.

(3) The owner or operator shall inspect for control equipment failures in paragraph (e)(1)(vii) of this section initially, and semi-annually thereafter.

(f) Except as provided in 40 CFR 63.140 of this subpart, when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than 5 calendar days after identification and repair shall be completed within 45 calendar days after identification.

§§ 63.138 Process wastewater provisions -- performance standards for treatment processes managing Group 1 wastewater streams and/or residuals removed from Group 1 wastewater streams.

(a) General requirements. This section specifies the performance standards for treating Group 1 wastewater streams. The owner or operator shall comply with the requirements as specified in paragraphs (a)(1) through (a)(6) of this section. Where multiple compliance options are provided, the options may be used in combination for different wastewater streams and/or for different compounds (e.g., Table 8 versus Table 9 compounds) in the same wastewater streams, except where otherwise provided in this section. Once a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream has been treated in accordance with this subpart, it is no longer subject to the requirements of this subpart.

(1) Existing source. If the wastewater stream, at an existing source, is Group 1 for Table 9 compounds, comply with 40 CFR 63.138(b).

(2) New source. If the wastewater stream, at a new source, is Group 1 for Table 8 compounds, comply with 40 CFR 63.138(c). If the wastewater stream, at a new source, is Group 1 for Table 9 compounds, comply with 40 CFR 63.138(b). If the wastewater stream, at a new source, is Group 1 for Table 8 and Table 9 compounds, comply with both 40 CFR 63.138(b) and 40 CFR 63.138(c).

Note to paragraph (a)(2): The requirements for Table 8 and/or Table 9 compounds are similar and often identical.

(3) Biological treatment processes. Biological treatment processes in compliance with this section may be either open or closed biological treatment processes as defined in 40 CFR 63.111. An open biological treatment process in compliance with this section need not be covered and vented to a control device as required in 40 CFR 63.133 through 40 CFR 63.137 of this subpart. An open or a closed biological treatment process in compliance with this section and using 40 CFR 63.145(f) or 40 CFR 63.145(g) of this subpart to demonstrate compliance is not subject to the requirements of 40 CFR 63.133 through 40 CFR 63.137 of this subpart. A closed biological treatment process in compliance with this section and using 40 CFR 63.145(e) of this subpart to demonstrate compliance shall comply with the requirements of 40 CFR 63.133 through 40 CFR 63.137 of this subpart. Waste management units upstream of an open or closed biological treatment process shall meet the requirements of 40 CFR 63.133 through 40 CFR 63.137 of this subpart, as applicable.

(4) Performance tests and design evaluations. If design steam stripper option (40 CFR 63.138(d)) or Resource Conservation and Recovery Act (RCRA) option (40 CFR 63.138(h)) is selected to comply with this section, neither a design evaluation nor a performance test is required. For any other non-biological treatment process, and for closed biological treatment processes as defined in 40 CFR 63.111 of this subpart, the owner or operator shall conduct either a design evaluation as specified in 40 CFR

63.138(j), or a performance test as specified in 40 CFR 63.145, of this subpart. For each open biological treatment process as defined in 40 CFR 63.111 of this subpart, the owner or operator shall conduct a performance test as specified in 40 CFR 63.145 of this subpart.

Note to paragraph (a)(4): Some open biological treatment processes may not require a performance test. Refer to 40 CFR 63.145(h) and table 36 of this subpart to determine whether the biological treatment process meets the criteria that exempt the owner or operator from conducting a performance test.

(5) Control device requirements. When gases are vented from the treatment process, the owner or operator shall comply with the applicable control device requirements specified in 40 CFR 63.139 and 40 CFR 63.145 (i) and (j), and the applicable leak inspection provisions specified in 40 CFR 63.148, of this subpart. This requirement does not apply to any open biological treatment process that meets the mass removal requirements. Vents from anaerobic biological treatment processes may be routed through hard-piping to a fuel gas system.

(6) Residuals: general. When residuals result from treating Group 1 wastewater streams, the owner or operator shall comply with the requirements for residuals specified in 40 CFR 63.138(k) of this subpart.

(7) Treatment using a series of treatment processes. In all cases where the wastewater provisions in this subpart allow or require the use of a treatment process or control device to comply with emissions limitations, the owner or operator may use multiple treatment processes or control devices, respectively. For combinations of treatment processes where the wastewater stream is conveyed by hard-piping, the owner or operator shall comply with either the requirements of paragraph (a)(7)(i) or (a)(7)(ii) of this section. For combinations of treatment processes where the wastewater stream is not conveyed by hard-piping, the owner or operator shall comply with the requirements of paragraph (a)(7)(ii) of this section. For combinations of control devices, the owner or operator shall comply with the requirements of paragraph (a)(7)(i) of this section.

(i) (A) For combinations of treatment processes, the wastewater stream shall be conveyed by hard-piping between the treatment processes. For combinations of control devices, the vented gas stream shall be conveyed by hard-piping between the control devices.

(B) For combinations of treatment processes, each treatment process shall meet the applicable requirements of 40 CFR 63.133 through 40 CFR 63.137 of this subpart except as provided in paragraph (a)(3) of this section.

(C) The owner or operator shall identify, and keep a record of, the combination of treatment processes or of control devices, including identification of the first and last treatment process or control device. The owner or operator shall include this

information as part of the treatment process description reported in the Notification of Compliance Status.

(D) The performance test or design evaluation shall determine compliance across the combination of treatment processes or control devices. If a performance test is conducted, the "inlet" shall be the point at which the wastewater stream or residual enters the first treatment process, or the vented gas stream enters the first control device. The "outlet" shall be the point at which the treated wastewater stream exits the last treatment process, or the vented gas stream exits the last control device.

(ii) (A) For combinations of treatment processes, each treatment process shall meet the applicable requirements of 40 CFR 63.133 through 40 CFR 63.137 of this subpart except as provided in paragraph (a)(3) of this section.

(B) The owner or operator shall identify, and keep a record of, the combination of treatment processes, including identification of the first and last treatment process. The owner or operator shall include this information as part of the treatment process description reported in the Notification of Compliance Status.

(C) The owner or operator shall determine the mass removed or destroyed by each treatment process. The performance test or design evaluation shall determine compliance for the combination of treatment processes by adding together the mass removed or destroyed by each treatment process.

(b) Control options: Group 1 wastewater streams for Table 9 compounds. The owner or operator shall comply with either paragraph (b)(1) or (b)(2) of this section for the control of Table 9 compounds at new or existing sources.

(1) 50 ppmw concentration option. The owner or operator shall comply with paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

(i) Reduce, by removal or destruction, the total concentration of Table 9 compounds to a level less than 50 parts per million by weight as determined by the procedures specified in 40 CFR 63.145(b) of this subpart.

(ii) This option shall not be used when the treatment process is a biological treatment process. This option shall not be used when the wastewater stream is designated as a Group 1 wastewater stream as specified in 40 CFR 63.132(e). Dilution shall not be used to achieve compliance with this option.

(2) Other compliance options. Comply with the requirements specified in any one of paragraphs (d), (e), (f), (g), (h), or (i) of this section.

(c) Control options: Group 1 wastewater streams for Table 8 compounds. The owner or operator shall comply with either paragraph (c)(1) or (c)(2) of this section for the control of Table 8 compounds at new sources.

(1) 10 ppmw concentration option. The owner or operator shall comply with paragraphs (c)(1)(i) and (c)(1)(ii) of this section.

(i) Reduce, by removal or destruction, the concentration of the individual Table 8 compounds to a level less than 10 parts per million by weight as determined in the procedures specified in 40 CFR 63.145(b) of this subpart.

(ii) This option shall not be used when the treatment process is a biological treatment process. This option shall not be used when the wastewater stream is designated as a Group 1 wastewater stream as specified in 40 CFR 63.132(e). Dilution shall not be used to achieve compliance with this option.

(2) Other compliance options. Comply with the requirements specified in any one of paragraphs (d), (e), (f), (g), (h), or (i) of this section.

(d) Design steam stripper option. The owner or operator shall operate and maintain a steam stripper that meets the requirements of paragraphs (d)(1) through (d)(6) of this section.

(1) Minimum active column height of 5 meters,

(2) Countercurrent flow configuration with a minimum of 10 actual trays,

(3) Minimum steam flow rate of 0.04 kilograms of steam per liter of wastewater feed within the column,

(4) Minimum wastewater feed temperature to the steam stripper of 95 ?C, or minimum column operating temperature of 95 degrees C,

(5) Maximum liquid loading of 67,100 liters per hour per square meter, and

(6) Operate at nominal atmospheric pressure.

(e) Percent mass removal/destruction option. The owner or operator of a new or existing source shall comply with paragraph (e)(1) or (e)(2) of this section for control of Table 8 and/or Table 9 compounds for Group 1 wastewater streams. This option shall not be used for biological treatment processes.

(1) Reduce mass flow rate of Table 8 and/or Table 9 compounds by 99 percent. For wastewater streams that are Group 1, the owner or operator shall reduce, by removal or destruction, the mass flow rate of Table 8 and/or Table 9 compounds by 99 percent or more. The removal/destruction efficiency shall be determined by the procedures specified in 40 CFR 63.145(c), for noncombustion processes, or 40 CFR 63.145(d), for combustion processes.

(2) Reduce mass flow rate of Table 8 and/or Table 9 compounds by Fr value. For wastewater streams that are Group 1 for Table 8 and/or Table 9 compounds, the owner or operator shall reduce, by removal or destruction, the mass flow rate by at least the fraction removal (Fr) values specified in Table 9 of this subpart. (The Fr values for Table 8 compounds are all 0.99.) The removal/destruction efficiency shall be determined by the procedures specified in 40 CFR 63.145(c), for noncombustion treatment processes, or 40 CFR 63.145(d), for combustion treatment processes.

(f) Required mass removal (RMR) option. The owner or operator shall achieve the required mass removal (RMR) of Table 8 compounds at a new source for a wastewater stream that is Group 1 for Table 8 compounds and/or of Table 9 compounds at a new or existing source for a wastewater stream that is Group 1 for Table 9 compounds. For nonbiological treatment processes compliance shall be determined using the procedures specified in 40 CFR 63.145(e) of this subpart. For aerobic biological treatment processes compliance shall be determined using the procedures specified in 40 CFR 63.145 (e) or (f) of this subpart. For closed anaerobic biological treatment processes compliance shall be determined using the procedures specified in 40 CFR

63.145(e) of this subpart. For open biological treatment processes compliance shall be determined using the procedures specified in 40 CFR 63.145(f) of this subpart.

(g) 95-percent RMR option, for biological treatment processes. The owner or operator of a new or existing source using biological treatment for at least one wastewater stream that is Group 1 for Table 9 compounds shall achieve a RMR of at least 95 percent for all Table 9 compounds. The owner or operator of a new source using biological treatment for at least one wastewater stream that is Group 1 for Table 8 compounds shall achieve a RMR of at least 95 percent for all Table 8 compounds. All Group 1 and Group 2 wastewater streams entering a biological treatment unit that are from chemical manufacturing process units subject to subpart F shall be included in the demonstration of the 95-percent mass removal. The owner or operator shall comply with paragraphs (g)(1) through (g)(4) of this section.

(1) Except as provided in paragraph (g)(4) of this section, the owner or operator shall ensure that all Group 1 and Group 2 wastewater streams from chemical manufacturing process units subject to this rule entering a biological treatment unit are treated to destroy at least 95-percent total mass of all Table 8 and/or Table 9 compounds.

(2) For open biological treatment processes compliance shall be determined using the procedures specified in 40 CFR 63.145(g) of this subpart. For closed aerobic biological treatment processes compliance shall be determined using the procedures specified in 40 CFR 63.145 (e) or (g) of this subpart. For closed anaerobic biological treatment processes compliance shall be determined using the procedures specified in 40 CFR 63.145(e) of this subpart.

(3) For each treatment process or waste management unit that receives, manages, or treats wastewater streams subject to this paragraph, from the point of determination of each Group 1 or Group 2 wastewater stream to the biological treatment unit, the owner or operator shall comply with 40 CFR 63.133 through 40 CFR 63.137 of this subpart for control of air emissions. When complying with this paragraph, the term Group 1, whether used alone or in combination with other terms, in 40 CFR 63.133 through 40 CFR 63.137 of this subpart shall mean both Group 1 and Group 2.

(4) If a wastewater stream is in compliance with the requirements in paragraph (b)(1), (c)(1), (d), (e), (f), or (h) of this section before entering the biological treatment unit, the hazardous air pollutants mass of that wastewater is not required to be included in the total mass flow rate entering the biological treatment unit for the purpose of demonstrating compliance.

(h) Treatment in a RCRA unit option. The owner or operator shall treat the wastewater stream or residual in a unit identified in, and complying with, paragraph (h)(1), (h)(2), or (h)(3) of this section. These units are exempt from the design evaluation or performance tests requirements specified in 40 CFR 63.138(a)(3) and 40 CFR 63.138(j) of this subpart, and from the monitoring requirements specified in 40 CFR 63.132(a)(2)(iii) and 40 CFR 63.132(b)(3)(iii) of this subpart,

as well as recordkeeping and reporting requirements associated with monitoring and performance tests.

(1) The wastewater stream or residual is discharged to 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;

(2) The wastewater stream or residual is discharged to a process heater or boiler 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.

(3) The wastewater stream or residual is discharged to an underground injection well for which the owner or operator has been issued a final permit under 40 CFR part 270 or 40 CFR part 144 and complies with the requirements of 40 CFR part 122. The owner or operator shall comply with all applicable requirements of this subpart prior to the point where the wastewater enters the underground portion of the injection well.

(i) One megagram total source mass flow rate option. A wastewater stream is exempt from the requirements of paragraphs (b) and (c) of this section if the owner or operator elects to comply with either paragraph (i)(1) or (2) of this section, and complies with paragraph (i)(3) of this section.

(1) All Group 1 wastewater streams at the source. The owner or operator shall demonstrate that the total source mass flow rate for Table 8 and/or Table 9 compounds is less than 1 megagram per year using the procedures in paragraphs (i)(1)(i) and (i)(1)(ii) of this section. The owner or operator shall include all Group 1 wastewater streams at the source in the total source mass flow rate. The total source mass flow rate shall be based on the mass as calculated before the wastewater stream is treated. The owner or operator who meets the requirements of this paragraph (i)(1) is exempt from the requirements of 40 CFR 63.133 through 63.137.

(i) Calculate the annual average mass flow rate for each Group 1 wastewater stream by multiplying the annual average flow rate of the wastewater stream, as determined by procedures specified in 40 CFR 63.144(c), times the total annual average concentration of Table 8 and/or Table 9 compounds, as determined by procedures specified in 40 CFR 63.144(b) of this subpart. (The mass flow rate of compounds in a wastewater stream that is Group 1 for both Table 8 and Table 9 compounds should be included in the annual average mass flow rate only once.)

(ii) Calculate the total source mass flow rate from all Group 1 wastewater streams by adding together the annual average mass flow rate calculated for each Group 1 wastewater stream.

(2) Untreated and partially treated Group 1 wastewater streams. The owner or operator shall demonstrate that the total source mass flow rate for untreated Group 1 wastewater streams and Group 1 wastewater streams treated to levels less stringent than required in paragraph (b) or (c) of this section is less than 1 megagram per year using the procedures in paragraphs (i)(2)(i) and (i)(2)(ii) of this section. The owner or operator shall manage these wastewater streams in accordance with paragraph (i)(2)(iii) of this section, and shall comply with paragraph (i)(3) of this section.

(i) Calculate the annual average mass flow rate in each wastewater stream by multiplying the annual average flow rate of the wastewater stream, as determined by procedures specified in 40 CFR 63.144(c), times the total annual average concentration of Table 8 and/or Table 9 compounds, as determined by procedures specified in 40 CFR 63.144(b). (The mass flow rate of compounds in a wastewater stream that are Group 1 for both Table 8 and Table 9 compounds should be included in the annual average mass flow rate only once.) When determining the total source mass flow rate for the purposes of paragraph (i)(2)(i)(B) of this section, the concentration and flow rate shall be determined at the location specified in paragraph (i)(2)(i)(B) of this section and not at the location specified in 40 CFR 63.144(b) and (c).

(A) For each untreated Group 1 wastewater stream, the annual average flow rate and the total annual average concentration shall be determined for that stream's point of determination.

(B) For each Group 1 wastewater stream that is treated to levels less stringent than those required by paragraph (b) or (c) of this section, the annual average flow rate and total annual average concentration shall be determined at the discharge from the treatment process or series of treatment processes.

(C) The annual average mass flow rate for Group 1 wastewater streams treated to the levels required by paragraph (b) or (c) of this section is not included in the calculation of the total source mass flow rate.

(ii) The total source mass flow rate shall be calculated by summing the annual average mass flow rates from all Group 1 wastewater streams, except those excluded by paragraph (i)(2)(i)(C) of this section.

(iii) The owner or operator of each waste management unit that receives, manages, or treats a partially treated wastewater stream prior to or during treatment shall comply with the requirements of 40 CFR 63.133 through 63.137, as applicable. For a partially treated wastewater stream that is stored, conveyed, treated, or managed in a waste management unit meeting the requirements of 40 CFR 63.133 through 63.137, the owner or operator shall follow the procedures in paragraph (i)(2)(i)(B) of this section to calculate mass flow

rate. A wastewater stream, either untreated or partially treated, where the mass flow rate has been calculated following the procedures in paragraph (i)(2)(i)(A) of this section, is exempt from the requirements of 40 CFR 63.133 through 63.137.

(3) Wastewater streams included in this option shall be identified in the Notification of Compliance Status required by 40 CFR 63.152(b).

(j) Design evaluations or performance tests for treatment processes. Except as provided in paragraph (j)(3) or (h) of this section, the owner or operator shall demonstrate by the procedures in either paragraph (j)(1) or (j)(2) of this section that each nonbiological treatment process used to comply with paragraphs (b)(1), (c)(1), (e), and/or (f) of this section achieves the conditions specified for compliance. The owner or operator shall demonstrate by the procedures in either paragraph (j)(1) or (j)(2) of this section that each closed biological treatment process used to comply with paragraphs (f) or (g) of this section achieves the conditions specified for compliance. If an open biological treatment unit is used to comply with paragraph (f) or (g) of this section, the owner or operator shall comply with 40 CFR 63.145(f) or 40 CFR 63.145(g), respectively, of this subpart. Some biological treatment processes may not require a performance test. Refer to 40 CFR 63.145(h) and table 36 of this subpart to determine whether the open biological treatment process meets the criteria that exempt the owner or operator from conducting a performance test.

(1) A design evaluation and supporting documentation that addresses the operating characteristics of the treatment process and that is based on operation at a representative wastewater stream flow rate and a concentration under which it would be most difficult to demonstrate compliance. For closed biological treatment processes, the actual mass removal shall be determined by a mass balance over the unit. The mass flow rate of Table 8 or Table 9 compounds exiting the treatment process shall be the sum of the mass flow rate of Table 8 or Table 9 compounds in the wastewater stream exiting the biological treatment process and the mass flow rate of the vented gas stream exiting the control device. The mass flow rate entering the treatment process minus the mass flow rate exiting the process determines the actual mass removal.

(2) Performance tests conducted using test methods and procedures that meet the applicable requirements specified in 40 CFR 63.145 of this subpart.

(3) The provisions of paragraphs (j)(1) and (j)(2) of this section do not apply to design stream strippers which meet the requirements of paragraph (d) of this section.

(k) Residuals. For each residual removed from a Group 1 wastewater stream, the owner or operator shall control for air emissions by complying with 40 CFR 63.133-137 of this subpart and by complying with one of the provisions in paragraphs (k)(1) through (k)(4) of this section.

(1) Recycle the residual to a production process or sell the residual for the purpose of recycling. Once a residual is returned to a production process, the residual is no longer subject to this section.

(2) Return the residual to the treatment process.

(3) Treat the residual to destroy the total combined mass flow rate of Table 8 and/or Table 9 compounds by 99 percent or more, as determined by the procedures specified in 40 CFR 63.145(c) or (d) of this subpart.

(4) Comply with the requirements for RCRA treatment options specified in 40 CFR 63.138(h) of this subpart.

§§ 63.139 Process wastewater provisions -- control devices.

(a) For each control device or combination of control devices used to comply with the provisions in 40 CFR 63.133 through 63.138 of this subpart, the owner or operator shall operate and maintain the control device or combination of control devices in accordance with the requirements of paragraphs (b) through (f) of this section.

(b) Whenever organic hazardous air pollutants emissions are vented to a control device which is used to comply with the provisions of this subpart, such control device shall be operating.

(c) The control device shall be designed and operated in accordance with paragraph (c)(1), (c)(2), (c)(3), (c)(4), or (c)(5) of this section.

(1) An enclosed combustion device (including but not limited to a vapor incinerator, boiler, or process heater) shall meet the conditions in paragraph (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this section, alone or in combination with other control devices. If a boiler or process heater is used as the control device, then the vent stream shall be introduced into the flame zone of the boiler or process heater.

(i) Reduce the total organic compound emissions, less methane and ethane, or total organic hazardous air pollutants emissions vented to the control device by 95 percent by weight or greater;

(ii) Achieve an outlet total organic compound concentration, less methane and ethane, or total organic hazardous air pollutants concentration of 20 parts per million by volume on a dry basis corrected to 3 percent oxygen. The owner or operator shall use either Method 18 of 40 CFR part 60, appendix A, or any other method or data that has been validated according to the applicable procedures in Method 301 of appendix A of this part; or

(iii) Provide a minimum residence time of 0.5 seconds at a minimum temperature of 760 degrees C.

(2) A vapor recovery system (including but not limited to a carbon adsorption system or condenser), alone or in combination with other control devices, shall reduce the total organic compound emissions, less methane and ethane, or total organic hazardous air

pollutants emissions vented to the control device of 95 percent by weight or greater or achieve an outlet total organic compound concentration, less methane and ethane, or total organic hazardous air pollutants concentration of 20 parts per million by volume, whichever is less stringent. The 20 parts per million by volume performance standard is not applicable to compliance with the provisions of 40 CFR 63.134 or 40 CFR 63.135 of this subpart.

(3) A flare shall comply with the requirements of 40 CFR 63.11(b) of subpart A of this part.

(4) A scrubber, alone or in combination with other control devices, shall reduce the total organic compound emissions, less methane and ethane, or total organic hazardous air pollutants emissions in such a manner that 95 weight-percent is either removed, or destroyed by chemical reaction with the scrubbing liquid or achieve an outlet total organic compound concentration, less methane and ethane, or total organic hazardous air pollutants concentration of 20 parts per million by volume, whichever is less stringent. The 20 parts per million by volume performance standard is not applicable to compliance with the provisions of 40 CFR 63.134 or 40 CFR 63.135 of this subpart.

(5) Any other control device used shall, alone or in combination with other control devices, reduce the total organic compound emissions, less methane and ethane, or total organic hazardous air pollutants emissions vented to the control device by 95 percent by weight or greater or achieve an outlet total organic compound concentration, less methane and ethane, or total organic hazardous air pollutants concentration of 20 parts per million by volume, whichever is less stringent. The 20 parts per million by volume performance standard is not applicable to compliance with the provisions of 40 CFR 63.134 or40 CFR 63.135 of this subpart.

(d) Except as provided in paragraph (d)(4) of this section, an owner or operator shall demonstrate that each control device or combination of control devices achieves the appropriate conditions specified in paragraph (c) of this section by using one or more of the methods specified in paragraphs (d)(1), (d)(2), or (d)(3) of this section.

(1) Performance tests conducted using the test methods and procedures specified in 40 CFR 63.145(i) of this subpart for control devices other than flares; or

(2) A design evaluation that addresses the vent stream characteristics and control device operating parameters specified in paragraphs (d)(2)(i) through (d)(2)(vii) of this section.

(i) For a thermal vapor incinerator, the design evaluation shall consider the vent stream composition, constituent concentrations, and flow rate and shall establish the design

minimum and average temperature in the combustion zone and the combustion zone residence time.

(ii) For a catalytic vapor incinerator, the design evaluation shall consider the vent stream composition, constituent concentrations, and flow rate and shall establish the design minimum and average temperatures across the catalyst bed inlet and outlet.

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

(iv) For a condenser, the design evaluation shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature and shall establish the design outlet organic compound concentration level, design average temperature of the condenser exhaust vent stream, and the design average temperatures of the coolant fluid at the condenser inlet and outlet.

(v) For a carbon adsorption system that regenerates the carbon bed directly on-site in the control device such as a fixed-bed adsorber, the design evaluation shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature and shall establish the design exhaust vent stream organic compound concentration level, adsorption cycle time, number and capacity of carbon beds, type and working capacity of activated carbon used for carbon beds, design total regeneration stream mass or volumetric flow over the period of each complete carbon bed regeneration cycle, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of carbon.

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

(vii) For a scrubber, the design evaluation shall consider the vent stream composition; constituent concentrations; liquid-to-vapor ratio; scrubbing liquid flow rate and concentration; temperature; and the reaction kinetics of the constituents with the scrubbing liquid. The design evaluation shall establish the design exhaust vent stream organic compound concentration level and will include the additional information in paragraphs (d)(2)(vii)(A) and (d)(2)(vii)(B) of this section for trays and a packed column scrubber.

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

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

(3) For flares, the compliance determination specified in 40 CFR 63.11(b) of subpart A of this part and 40 CFR 63.145(j) of this subpart.

(4) An owner or operator using any control device specified in paragraphs (d)(4)(i) through (d)(4)(iv) of this section is exempt from the requirements in paragraphs (d)(1) through (d)(3) of this section and from the requirements in 40 CFR 63.6(f) of subpart A of this part, and from the requirements of paragraph (e) of this section.

(i) A boiler or process heater with a design heat input capacity of 44 megawatts or greater.

(ii) A boiler or process heater into which the emission stream is introduced with the primary fuel.

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

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

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

(iv) 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.

(e) The owner or operator of a control device that is used to comply with the provisions of this section shall monitor the control device in accordance with 40 CFR 63.143 of this subpart.

(f) Except as provided in 40 CFR 63.140 of this subpart, if gaps, cracks, tears, or holes are observed in ductwork, piping, or connections to covers and control devices during an inspection, a first effort to repair shall be made as soon as practical but no later than 5 calendar days after identification. Repair shall be completed no later than 15 calendar days after identification or discovery of the defect.

§§ 63.140 Process wastewater provisions -- delay of repair.

(a) Delay of repair of equipment for which a control equipment failure or a gap, crack, tear, or hole has been identified, is allowed if the repair is technically infeasible without a shutdown, as defined in 40 CFR 63.101 of subpart F of this part, or if the owner or operator determines that

emissions of purged material from immediate repair would be greater than the emissions likely to result from delay of repair. Repair of this equipment shall occur by the end of the next shutdown.

(b) Delay of repair of equipment for which a control equipment failure or a gap, crack, tear, or hole has been identified, is allowed if the equipment is emptied or is no longer used to treat or manage Group 1 wastewater streams or residuals removed from Group 1 wastewater streams.

(c) Delay of repair of equipment for which a control equipment failure or a gap, crack, tear, or hole has been identified is also allowed if additional time is necessary due to the unavailability of parts beyond the control of the owner or operator. Repair shall be completed as soon as practical. The owner or operator who uses this provision shall comply with the requirements of 40 CFR 63.147(b)(7) to document the reasons that the delay of repair was necessary.

§§ 63.141 [Reserved]

§§ 63.142 [Reserved]

§§ 63.143 Process wastewater provisions -- inspections and monitoring of operations.

(a) For each wastewater tank, surface impoundment, container, individual drain system, and oil-water separator that receives, manages, or treats a Group 1 wastewater stream, a residual removed from a Group 1 wastewater stream, a recycled Group 1 wastewater stream, or a recycled residual removed from a Group 1 wastewater stream, the owner or operator shall comply with the inspection requirements specified in table 11 of this subpart.

(b) For each design steam stripper and biological treatment unit used to comply with 40 CFR 63.138 of this subpart, the owner or operator shall comply with the monitoring requirements specified in table 12 of this subpart.

(c) If the owner or operator elects to comply with Item 1 in table 12 of this subpart, the owner or operator shall request approval to monitor appropriate parameters that demonstrate proper operation of the biological treatment unit. The request shall be submitted according to the procedures specified in 40 CFR 63.151(f) of this subpart, and shall include a description of planned reporting and recordkeeping procedures. The owner or operator shall include as part of the submittal the basis for the selected monitoring frequencies and the methods that will be used. The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the permit application or by other appropriate means.

(d) If the owner or operator elects to comply with Item 3 in table 12 of this subpart, the owner or operator shall request approval to monitor appropriate parameters that demonstrate proper operation of the selected treatment process. The request shall be submitted according to the procedures specified in 40 CFR 63.151(f) of this subpart, and shall include a description of planned reporting and recordkeeping procedures. The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the permit application or by other appropriate means.

(e) Except as provided in paragraphs (e)(4) and (e)(5) of this section, for each control device used to comply with the requirements of 40 CFR 63.133 through 63.139 of this subpart, the owner or operator shall comply with the requirements in 40 CFR 63.139(d) of this subpart, and with the requirements specified in paragraph (e)(1), (e)(2), or (e)(3) of this section.

(1) The owner or operator shall comply with the monitoring requirements specified in table 13 of this subpart; or

(2) The owner or operator shall use an organic monitoring device installed at the outlet of the control device and equipped with a continuous recorder. Continuous recorder is defined in 40 CFR 63.111 of this subpart; or

(3) The owner or operator shall request approval to monitor parameters other than those specified in paragraphs (e)(1) and (e)(2) of this section. The request shall be submitted according to the procedures specified in 40 CFR 63.151(f) of this subpart, and shall include a description of planned reporting and recordkeeping procedures. The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the permit application or by other appropriate means.

(4) For a boiler or process heater in which all vent streams are introduced with primary fuel, the owner or operator shall comply with the requirements in 40 CFR 63.139(d) of this subpart but the owner or operator is exempt from the monitoring requirements specified in paragraphs (e)(1) through (e)(3) of this section.

(5) For a boiler or process heater with a design heat input capacity of 44 megawatts or greater, the owner or operator shall comply with the requirements in 40 CFR 63.139(d) of this subpart but the owner or operator is exempt from the monitoring requirements specified in paragraphs (e)(1) through (e)(3) of this section.

(f) For each parameter monitored in accordance with paragraph (c), (d), or (e) of this section, the owner or operator shall establish a range that indicates proper operation of the treatment process or control device. In order to establish the range, the owner or operator shall comply with the requirements specified in 40 CFR 63.146(b)(7)(ii)(A) and (b)(8)(ii) of this subpart.

(g) Monitoring equipment shall be installed, calibrated, and maintained according to the manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

§§ 63.144 Process wastewater provisions -- test methods and procedures for determining applicability and Group 1/Group 2 determinations (determining which wastewater streams require control).

(a) Procedures to determine applicability. An owner or operator shall comply with paragraph (a)(1) or (a)(2) of this section for each wastewater stream to determine which wastewater streams require control for Table 8 and/or Table 9 compounds. The owner or operator may use a

combination of the approaches in paragraphs (a)(1) and (a)(2) of this section for different wastewater streams generated at the source.

(1) Determine Group 1 or Group 2 status. Determine whether a wastewater stream is a Group 1 or Group 2 wastewater stream in accordance with paragraphs (b) and (c) of this section.

(2) Designate as Group 1. An owner or operator may designate as a Group 1 wastewater stream a single wastewater stream or a mixture of wastewater streams. The owner or operator is not required to determine the concentration or flow rate for each designated Group 1 wastewater stream for the purposes of this section.

(b) Procedures to establish concentrations, when determining Group status under paragraph (a)(1) of this section. An owner or operator who elects to comply with the requirements of paragraph (a)(1) of this section shall determine the annual average concentration for Table 8 and/or Table 9 compounds according to paragraph (b)(1) of this section for existing sources or paragraph (b)(2) of this section for new sources. The annual average concentration shall be a flow weighted average representative of actual or anticipated operation of the chemical manufacturing process unit generating the wastewater over a designated 12 month period. For flexible operation units, the owner or operator shall consider the anticipated production over the designated 12 month period and include all wastewater streams generated by the process equipment during this period. The owner/operator is not required to determine the concentration of Table 8 or Table 9 compounds that are not reasonably expected to be in the process.

(1) Existing sources. An owner or operator of an existing source who elects to comply with the requirements of paragraph (a)(1) of this section shall determine the flow weighted total annual average concentration for Table 9 compounds. For the purposes of this section, the term concentration, whether concentration is used alone or with other terms, may be adjusted by multiplying by the compound-specific fraction measured (Fm) factors listed in table 34 of this subpart unless determined by the methods in 40 CFR 63.144(b)(5)(i)(A) and/or (B). When concentration is determined by Method 305 as specified in 40 CFR 63.144(b)(5)(i)(B), concentration may be adjusted by dividing by the compound-specific Fm factors listed in table 34 of this subpart. When concentration is determined by Method 25D as specified in ? 63.144(b)(5)(i)(A), concentration may not be adjusted by the compound-specific Fm factors listed in table 34 of this subpart. Compound-specific Fm factors may be used only when concentrations of individual compounds are determined or when only one compound is in the wastewater stream. Flow weighted total annual average concentration for Table 9 compounds means the total mass of Table 9 compounds occurring in the wastewater stream during the designated 12-month period divided by the total mass of the wastewater stream during the same designated 12-month period. The total annual average concentration shall be determined for each wastewater stream either at the point of determination, or downstream of the point of determination with adjustment for concentration changes made according to paragraph (b)(6) of this section. The procedures specified in paragraphs (b)(3), (b)(4), and (b)(5) of this section are considered acceptable procedures for determining the annual

average concentration. They may be used in combination, and no one procedure shall take precedence over another.

(2) New sources. An owner or operator of a new source who elects to comply with the requirements of paragraph (a)(1) of this section shall determine both the flow weighted total annual average concentration for Table 9 compounds and the flow weighted annual average concentration for each Table 8 compound. For the purposes of this section, the term concentration, whether concentration is used alone or with other terms, may be adjusted by multiplying by the compound-specific Fm factors listed in table 34 of this subpart unless determined by the methods in ? 63.144(b)(5)(i)(A) and/or (B). When concentration is determined by Method 305 as specified in 40 CFR 63.144(b)(5)(i)(B), concentration may be adjusted by dividing by the compound-specific Fm factors listed in table 34 of this subpart. When concentration is determined by Method 25D as specified in 40 CFR 63.144(b)(5)(i)(A), concentration may not be adjusted by the compound-specific Fm factors listed in table 34 of this subpart. Compound-specific fraction measured factors are compound specific and shall be used only when concentration of individual compounds are determined or when only one compound is in the wastewater stream.
The flow weighted annual average concentration of each Table 8 compound means the mass of each Table 8 compound occurring in the wastewater stream during the designated 12-month period divided by the total mass of the wastewater stream during the same designated 12-month period. Flow weighted total annual average concentration for Table 9 compounds means the total mass of Table 9 compounds occurring in the wastewater stream during the designated 12-month period divided by the total mass of the wastewater stream during the same designated 12-month period. The annual average concentration shall be determined for each wastewater stream either at the point of determination, or downstream of the point of determination with adjustment for concentration changes made according to paragraph (b)(6) of this section. Procedures specified in paragraphs (b)(3), (b)(4), and (b)(5) of this section are considered acceptable procedures for determining the annual average concentration. They may be used in combination, and no one procedure shall take precedence over another.

(3) Knowledge of the wastewater. Where knowledge is used to determine the annual average concentration, the owner or operator shall provide sufficient information to document the annual average concentration for wastewater streams determined to be Group 2 wastewater streams. Documentation to determine the annual average concentration is not required for Group 1 streams. Examples of acceptable documentation include material balances, records of chemical purchases, process stoichiometry, or previous test results. If test data are used, the owner or operator shall provide documentation describing the testing protocol and the means by which any losses of volatile compounds during sampling, and the bias and accuracy of the analytical method, were accounted for in the determination.

(4) Bench-scale or pilot-scale test data. Where bench-scale or pilot-scale test data are used to determine the annual average concentration, the owner or operator shall provide sufficient

information to document that the data are representative of the actual annual average concentration, or are reliably indicative of another relevant characteristic of the wastewater stream that could be used to predict the annual average concentration. For concentration data, the owner or operator shall also provide documentation describing the testing protocol, and the means by which any losses of volatile compounds during sampling, and the bias and accuracy of the analytical method, were accounted for in the determination of annual average concentration.

(5) Test data from sampling at the point of determination or at a location downstream of the point of determination. Where an owner or operator elects to comply with paragraph (a)(1) of this section by measuring the concentration for the relevant Table 8 or Table 9 compounds, the owner or operator shall comply with the requirements of this paragraph. For each wastewater stream, measurements shall be made either at the point of determination, or downstream of the point of determination with adjustment for concentration changes made according to paragraph (b)(6) of this section. A minimum of three samples from each wastewater stream shall be taken. Samples may be grab samples or composite samples.

(i) Methods. The owner or operator shall use any of the methods specified in paragraphs (b)(5)(i)(A) through (b)(5)(i)(F) of this section.

(A) Method 25D. Use procedures specified in Method 25D of 40 CFR part 60, appendix A.

(B) Method 305. Use procedures specified in Method 305 of 40 CFR part 63, appendix A.

(C) Methods 624 and 625. Use procedures specified in Methods 624 and 625 of 40 CFR part 136, appendix A and comply with the sampling protocol requirements specified in paragraph (b)(5)(ii) of this section. If these methods are used to analyze one or more compounds that are not on the method's published list of approved compounds, the Alternative Test Procedure specified in 40 CFR 136.4 and 136.5 shall be followed. For Method 625, make corrections to the compounds for which the analysis is being conducted based on the accuracy as recovery factors in Table 7 of the method.

(D) Method 1624 and Method 1625. Use procedures specified in Method 1624 and Method 1625 of 40 CFR part 136, appendix A and comply with the requirements specified in paragraph (b)(5)(ii) of this section. If these methods are used to analyze one or more compounds that are not on the method's published list of approved compounds, the Alternative Test Procedure specified in 40 CFR 136.4 and 136.5 shall be followed.

(E) Other EPA method(s). Use procedures specified in the method and comply with the requirements specified in paragraphs (b)(5)(ii) and either paragraph (b)(5)(iii)(A) or (b)(5)(iii)(B) of this section.

(F) Method(s) other than EPA method. Use procedures specified in the method and comply with the requirements specified in paragraphs (b)(5)(ii) and (b)(5)(iii)(A) of this section.

(ii) Sampling plan. The owner or operator who is expressly referred to this paragraph by provisions of this subpart shall prepare a sampling plan. Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity. The sample plan shall include procedures for determining recovery efficiency of the relevant hazardous air pollutants listed in table 8 or table 9 of this subpart. An example of an acceptable sampling plan would be one that incorporates similar sampling and sample handling requirements to those of Method 25D of 40 CFR part 60, appendix A. The sampling plan shall be maintained at the facility.

(iii) Validation of methods. The owner or operator shall validate EPA methods other than Methods 25D, 305, 624, 625, 1624, and 1625 using the procedures specified in paragraph (b)(5)(iii)(A) or (b)(5)(iii)(B) of this section. The owner or operator shall validate other methods as specified in paragraph (b)(5)(iii)(A) of this section.

(A) Validation of EPA methods and other methods. The method used to measure organic hazardous air pollutants concentrations in the wastewater shall be validated according to section 5.1 or 5.3, and the corresponding calculations in section 6.1 or 6.3, of Method 301 of appendix A of this part. The data are acceptable if they meet the criteria specified in section 6.1.5 or 6.3.3 of Method 301 of appendix A of this part. If correction is required under section 6.3.3 of Method 301 of appendix A of this part, the data are acceptable if the correction factor is within the range 0.7 to 1.30. Other sections of Method 301 of appendix A of this part are not required. The concentrations of the individual organic hazardous air pollutants measured in the water may be corrected to their concentrations had they been measured by Method 305 of appendix A of this part, by multiplying each concentration by the compound-specific fraction measured (Fm) factor listed in table 34 of this subpart.

(B) Validation for EPA methods. Follow the procedures as specified in "Alternative Validation Procedure for EPA Waste Methods" 40 CFR part 63, appendix D.

(iv) Calculations of average concentration. The average concentration for each individually speciated Table 8 compound shall be calculated by adding the individual values determined for the specific compound in each sample and dividing by the number of samples. The total average concentration of Table 9 compounds shall be calculated by first summing the concentration of the individual compounds to obtain a total hazardous air pollutants concentration for the sample; add the sample totals and then divide by the number of samples in the run to obtain the sample average for the run. If the method used does not speciate the compounds, the sample results should be added and this total divided by the number of samples in the run to obtain the sample average for the run.

(6) Adjustment for concentrations determined downstream of the point of determination. The owner or operator shall make corrections to the annual average concentration or total annual average concentration when the concentration is determined downstream of the point of determination at a location where: two or more wastewater streams have been

mixed; one or more wastewater streams have been treated; or, losses to the atmosphere have occurred. The owner or operator shall make the adjustments either to the individual data points or to the final annual average concentration.

(c) Procedures to determine flow rate, when evaluating Group status under paragraph (a)(1) of this section. An owner or operator who elects to comply with paragraph (a)(1) of this section shall determine the annual average flow rate of the wastewater stream either at the point of determination for each wastewater stream, or downstream of the point of determination with adjustment for flow rate changes made according to paragraph (c)(4) of this section. These procedures may be used in combination for different wastewater streams at the source. The annual average flow rate for the wastewater stream shall be representative of actual or anticipated operation of the chemical manufacturing process unit generating the wastewater over a designated 12-month period. The owner or operator shall consider the total annual wastewater volume generated by the chemical manufacturing process unit. If the chemical manufacturing process unit is a flexible operation unit, the owner or operator shall consider all anticipated production in the process equipment over the designated 12-month period. The procedures specified in paragraphs (c)(1), (c)(2), and (c)(3) of this section are considered acceptable procedures for determining the flow rate. They may be used in combination, and no one procedure shall take precedence over another.

(1) Knowledge of the wastewater. The owner or operator may use knowledge of the wastewater stream and/or the process to determine the annual average flow rate. The owner or operator shall use the maximum expected annual average production capacity of the process unit, knowledge of the process, and/or mass balance information to either: Estimate directly the annual average wastewater flow rate; or estimate the total annual wastewater volume and then divide total volume by 525,600 minutes in a year. Where knowledge is used to determine the annual average flow rate, the owner or operator shall provide sufficient information to document the flow rate for wastewater streams determined to be Group 2 wastewater streams. Documentation to determine the annual average flow rate is not required for Group 1 streams.

(2) Historical Records. The owner or operator may use historical records to determine the annual average flow rate. Derive the highest annual average flow rate of wastewater from historical records representing the most recent 5 years of operation or, if the process unit has been in service for less than 5 years but at least 1 year, from historical records representing the total operating life of the process unit. Where historical records are used to determine the annual average flow rate, the owner or operator shall provide sufficient information to document the flow rate for wastewater streams determined to be Group 2 wastewater streams. Documentation to determine the annual average flow rate is not required for Group 1 streams.

(3) Measurements of flow rate. Where an owner or operator elects to comply with paragraph (a)(1) of this section by measuring the flow rate, the owner or operator shall comply with the requirements of this paragraph. Measurements shall be made at the point of determination, or at a location downstream of the point of determination with adjustments

for flow rate changes made according to paragraph (c)(4) of this section. Where measurement data are used to determine the annual average flow rate, the owner or operator shall provide sufficient information to document the flow rate for wastewater streams determined to be Group 2 wastewater streams. Documentation to determine the annual average flow rate is not required for Group 1 streams.

(4) Adjustment for flow rates determined downstream of the point of determination. The owner or operator shall make corrections to the annual average flow rate of a wastewater stream when it is determined downstream of the point of determination at a location where two or more wastewater streams have been mixed or one or more wastewater streams have been treated. The owner or operator shall make corrections for such changes in the annual average flow rate.

§§ 63.145 Process wastewater provisions -- test methods and procedures to determine compliance.

(a) General. This section specifies the procedures for performance tests that are conducted to demonstrate compliance of a treatment process or a control device with the control requirements specified in 40 CFR 63.138 of this subpart. Owners or operators conducting a design evaluation shall comply with the requirements of paragraph (a)(1) or (a)(2) of this section. Owners or operators conducting a performance test shall comply with the applicable requirements in paragraphs (a) through (i) of this section.

(1) Performance tests and design evaluations for treatment processes. If design steam stripper option (?63.138(d)) or RCRA option (40 CFR 63.138(h)) is selected to comply with 40 CFR 63.138, neither a design evaluation nor a performance test is required. For any other non-biological treatment process, the owner or operator shall conduct either a design evaluation as specified in 40 CFR 63.138(j), or a performance test as specified in this section. For closed biological treatment processes, the owner or operator shall conduct either a design evaluation as specified in 40 CFR 63.138(j), or a performance test as specified in this section. For each open biological treatment process, the owner or operator shall conduct a performance test as specified in this section.

Note: Some open biological treatment processes may not require a performance test. Refer to 40 CFR 63.145(h) and table 36 of this subpart to determine whether the biological treatment process meets the criteria that exempt the owner or operator from conducting a performance test.

(2) Performance tests and design evaluations for control devices. The owner or operator shall conduct either a design evaluation as specified in ?63.139(d), or a performance test as specified in paragraph (i) of this section for control devices other than flares and paragraph (j) of this section for flares.

(3) Representative process unit operating conditions. Compliance shall be demonstrated for representative operating conditions. Operations during periods of startup, shutdown, or

malfunction and periods of nonoperation shall not constitute representative conditions. The owner or operator shall record the process information that is necessary to document operating conditions during the test.

(4) Representative treatment process or control device operating conditions. Performance tests shall be conducted when the treatment process or control device is operating at a representative inlet flow rate and concentration. If the treatment process or control device will be operating at several different sets of representative operating conditions, the owner or operator shall comply with paragraphs (a)(4)(i) and (a)(4)(ii) of this section. The owner or operator shall record information that is necessary to document treatment process or control device operating conditions during the test.

(i) Range of operating conditions. If the treatment process or control device will be operated at several different sets of representative operating conditions, performance testing over the entire range is not required. In such cases, the performance test results shall be supplemented with modeling and/or engineering assessments to demonstrate performance over the operating range.

(ii) Consideration of residence time. If concentration and/or flow rate to the treatment process or control device are not relatively constant (i.e., comparison of inlet and outlet data will not be representative of performance), the owner or operator shall consider residence time, when determining concentration and flow rate.

(5) Testing equipment. All testing equipment shall be prepared and installed as specified in the applicable test methods, or as approved by the Administrator.

(6) Compounds not required to be considered in performance tests or design evaluations. Compounds that meet the requirements specified in paragraph (a)(6)(i), (a)(6)(ii), or (a)(6)(iii) of this section are not required to be included in the performance test. Concentration measurements based on Method 305 shall be adjusted by dividing each concentration by the compound-specific Fm factor listed in table 34 of this subpart. Concentration measurements based on methods other than Method 305 shall not be adjusted by the compound-specific Fm factor listed in table 34 of this subpart.

(i) Compounds not used or produced by the chemical manufacturing process unit; or

(ii) Compounds with concentrations at the point of determination that are below 1 part per million by weight; or

(iii) Compounds with concentrations at the point of determination that are below the lower detection limit where the lower detection limit is greater than 1 part per million by weight. The method shall be an analytical method for wastewater which has that compound as a target analyte.

(7) Treatment using a series of treatment processes. In all cases where the wastewater provisions in this subpart allow or require the use of a treatment process to comply with emissions limitations, the owner or operator may use multiple treatment processes. The owner or operator complying with the requirements of 40 CFR 63.138(a)(7)(i), when wastewater is conveyed by hard-piping, shall comply with either 40 CFR 63.145(a)(7)(i) or 40 CFR 63.145(a)(7)(ii) of this subpart. The owner or operator complying with the requirements of 40 CFR 63.138(a)(7)(ii) of this subpart shall comply with the requirements of 40 CFR 63.145(a)(7)(ii) of this subpart.

(i) The owner or operator shall conduct the performance test across each series of treatment processes. For each series of treatment processes, inlet concentration and flow rate shall be measured either where the wastewater stream enters the first treatment process in a series of treatment processes, or prior to the first treatment process as specified in 40 CFR 63.145(a)(9) of this subpart. For each series of treatment processes, outlet concentration and flow rate shall be measured where the wastewater stream exits the last treatment process in the series of treatment processes, except when the last treatment process is an open or a closed aerobic biological treatment process demonstrating compliance by using the procedures in 40 CFR 63.145 (f) or (g) of this subpart. When the last treatment process is either an open or a closed aerobic biological treatment process demonstrating compliance by using the procedures in 40 CFR 63.145 (f) or (g) of this subpart, inlet and outlet concentrations and flow rates shall be measured as provided in paragraphs (a)(7)(i)(A) and (a)(7)(i)(B) of this section. The mass flow rates removed or destroyed by the series of treatment processes and by the biological treatment process are all used to calculate actual mass removal (AMR) as specified in 40 CFR 63.145(f)(5)(ii) of this subpart.

(A) The inlet and outlet to the series of treatment processes prior to the biological treatment process are the points at which the wastewater enters the first treatment process and exits the last treatment process in the series, respectively, except as provided in paragraph (a)(9)(ii) of this section.

(B) The inlet to the biological treatment process shall be the point at which the wastewater enters the biological treatment process or the outlet from the series of treatment processes identified in paragraph (a)(7)(i)(A) of this section, except as provided in paragraph (a)(9)(ii) of this section.

(ii) The owner or operator shall conduct the performance test across each treatment process in the series of treatment processes. The mass flow rate removed or destroyed by each treatment process shall be added together to determine whether compliance has been demonstrated using 40 CFR 63.145 (c), (d), (e), (f), and (g), as applicable. If a biological treatment process is one of the treatment processes in the series of treatment processes, the inlet to the biological treatment process shall be the point at which the wastewater enters the biological treatment process, or the inlet to the equalization tank if all the criteria of paragraph (a)(9)(ii) of this section are met.

(8) When using a biological treatment process to comply with 40 CFR 63.138 of this subpart, the owner or operator may elect to calculate the AMR using a subset of Table 8 and/or Table 9 compounds determined at the point of determination or downstream of the point of determination with adjustment for concentration and flowrate changes made according to 40 CFR 63.144(b)(6) and 40 CFR 63.144(c)(4) of this subpart, respectively. All Table 8 and/or Table 9 compounds measured to determine the RMR, except as provided by 40 CFR 63.145(a)(6), shall be included in the RMR calculation.

(9) The owner or operator determining the inlet for purposes of demonstrating compliance with 40 CFR 63.145 (e), (f), or (g) of this subpart may elect to comply with paragraph (a)(9)(i) or (a)(9)(ii) of this section.

(i) When wastewater is conveyed exclusively by hard-piping from the point of determination to a treatment process that is either the only treatment process or the first in a series of treatment processes (i.e., no treatment processes or other waste management units are used upstream of this treatment process to store, handle, or convey the wastewater), the inlet to the treatment process shall be at any location from the point of determination to where the wastewater stream enters the treatment process. When samples are taken upstream of the treatment process and before wastewater streams have converged, the owner or operator shall ensure that the mass flow rate of all Group 1 wastewater streams is accounted for when using 40 CFR 63.138 (e) or (f) to comply and that the mass flow rate of all Group 1 and Group 2 wastewater streams is accounted for when using 40 CFR 63.138(g) to comply, except as provided in 40 CFR 63.145(a)(6).

(ii) The owner or operator may consider the inlet to the equalization tank as the inlet to the biological treatment process if all the criteria in paragraphs (a)(9)(ii)(A) through (a)(9)(ii)(C) of this section are met. The outlet from the series of treatment processes prior to the biological treatment process is the point at which the wastewater exits the last treatment process in the series prior to the equalization tank, if the equalization tank and biological treatment process are part of a series of treatment processes. The owner or operator shall ensure that the mass flow rate of all Group 1 wastewater streams is accounted for when using 40 CFR 63.138 (e) or (f) to comply and that the mass flow rate of all Group 1 and Group 2 wastewater streams is accounted for when using 40 CFR 63.138(g) to comply, except as provided in 40 CFR 63.145(a)(6).

(A) The wastewater is conveyed by hard-piping from either the last previous treatment process or the point of determination to the equalization tank.

(B) The wastewater is conveyed from the equalization tank exclusively by hard-piping to the biological treatment process and no treatment processes or other waste management units are used to store, handle, or convey the wastewater between the equalization tank and the biological treatment process.

(C) The equalization tank is equipped with a fixed roof and a closed vent system that routes emissions to a control device that meets the requirements of 40 CFR 63.133(a)(2)(i) and 40 CFR 63.133 (b)(1) through (b)(4) of this subpart.

(b) Noncombustion treatment process -- concentration limits. This paragraph applies to performance tests that are conducted to demonstrate compliance of a noncombustion treatment process with the parts per million by weight wastewater stream concentration limits at the outlet of the treatment process. This compliance option is specified in 40 CFR 63.138(b)(1) and 40 CFR 63.138(c)(1). Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity per 40 CFR 63.144(b)(5)(ii). Samples shall be collected and analyzed using the procedures specified in 40 CFR 63.144 (b)(5)(i), (b)(5)(ii), and (b)(5)(iii) of this subpart. Samples may be grab samples or composite samples. Samples shall be taken at approximately equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs. Concentration measurements based on Method 305 may be adjusted by dividing each concentration by the compound-specific Fm factor listed in Table 34 of this subpart. Concentration measurements based on methods other than Method 305 may be adjusted by multiplying each concentration by the compound-specific Fm factor listed in table 34 of this subpart. (For wastewater streams that are Group 1 for both Table 8 and Table 9 compounds, compliance is demonstrated only if the sum of the concentrations of Table 9 compounds is less than 50 ppmw, and the concentration of each Table 8 compound is less than 10 ppmw.)

(c) Noncombustion, nonbiological treatment process: Percent mass removal/destruction option. This paragraph applies to performance tests that are conducted to demonstrate compliance of a noncombustion, nonbiological treatment process with the percent mass removal limits specified in 40 CFR 63.138(e) (1) and (2) for Table 8 and/or Table 9 compounds. The owner or operator shall comply with the requirements specified in 40 CFR 63.145 (c)(1) through (c)(6) of this subpart.

(1) Concentration. The concentration of Table 8 and/or Table 9 compounds entering and exiting the treatment process shall be determined as provided in this paragraph. Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity per 40 CFR 63.144(b)(5)(ii). The method shall be an analytical method for wastewater which has that compound as a target analyte. Samples may be grab samples or composite samples. Samples shall be taken at approximately equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs. Concentration measurements based on Method 305 shall be adjusted by dividing each concentration by the compound-specific Fm factor listed in Table 34 of this subpart. Concentration measurements based on methods other than Method 305 shall not adjust by the compound-specific Fm factor listed in Table 34 of this subpart.

(2) Flow rate. The flow rate of the entering and exiting wastewater streams shall be determined using inlet and outlet flow measurement devices, respectively. Where the outlet flow is not greater than the inlet flow, a flow measurement device shall be used, and may be used at either the inlet or outlet. Flow rate measurements shall be taken at the same time as the concentration measurements.

(3) Calculation of mass flow rate -- for noncombustion, nonbiological treatment processes. The mass flow rates of Table 8 and/or Table 9 compounds entering and exiting the treatment process are calculated as follows.

QMWa = [p / p * 10^6] [(sum) p to k=1 Qak * CTak] (Eqn WW1)

QMWb = [p / p * 10^6] [(sum) p to k=1 Qbk * CTbk] (Eqn WW2)

Where:

QMWa, QMWb=Mass flow rate of Table 8 or Table 9 compounds, average of all runs, in wastewater entering (QMWa) or exiting (QMWb) the treatment process, kilograms per hour.

p=Density of the wastewater, kilograms per cubic meter.

Qa,k, Qbb,k=Volumetric flow rate of wastewater entering (Qa,k) or exiting (Qb,k) the treatment process during each run k, cubic meters per hour.

CT,a,k, CT,b,k=Total concentration of Table 8 or Table 9 compounds in wastewater entering (CT,a,k) or exiting (CT,b,k) the treatment process during each run k, parts per million by weight.

p=Number of runs.

k=Identifier for a run.

10^6=conversion factor, mg/kg

(4) Percent removal calculation for mass flow rate. The percent mass removal across the treatment process shall be calculated as follows:

E = [QMWa - QMWb / QMWa] (100) (Eqn WW3)

Where:

E=Removal or destruction efficiency of the treatment process, percent.

QMWa, QMWb=Mass flow rate of Table 8 or Table 9 compounds in wastewater entering (QMWa) and exiting (QMWb) the treatment process, kilograms per hour (as calculated using Equations WW1 and WW2).

(5) Calculation of flow-weighted average of Fr values. If complying with 40 CFR 63.138(e)(2), use Equation WW8 to calculate the flow-weighted average of the Fr values listed in Table 9 of this subpart. When the term "combustion" is used in Equation WW8, the term "treatment process" shall be used for the purposes of this paragraph.

(6) Compare mass removal efficiency to required efficiency. Compare the mass removal efficiency (calculated in Equation WW3) to the required efficiency as specified in 40 CFR 63.138(e) of this subpart. If complying with 40 CFR 63.138(e)(1), compliance is demonstrated if the mass removal efficiency is 99 percent or greater. If complying with 40 CFR 63.138(e)(2), compliance is demonstrated if the mass removal efficiency is greater than or equal to the flow-weighted average of the Fr values calculated in Equation WW8.

(d) Combustion treatment processes: percent mass removal/destruction option. This paragraph applies to performance tests that are conducted to demonstrate compliance of a combustion treatment process with the percent mass destruction limits specified in 40 CFR 63.138(e) (1) and (2) for Table 9 compounds, and/or 40 CFR 63.138(e)(1) for Table 8 compounds. The owner or operator shall comply with the requirements specified in 40 CFR 63.145 (d)(1) through (d)(9) of this subpart. (Wastewater streams that are Group 1 for both Table 8 and Table 9 compounds need only do the compliance demonstration for Table 9 compounds.)

(1) Concentration in wastewater stream entering the combustion treatment process. The concentration of Table 8 and/or Table 9 compounds entering the treatment process shall be determined as provided in this paragraph. Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity per 40 CFR 63.144(b)(5)(ii). The method shall be an analytical method for wastewater which has that compound as a target analyte. Samples may be grab samples or composite samples. Samples shall be taken at approximately equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs. Concentration measurements based on Method 305 of appendix A of this part shall be adjusted by dividing each concentration by the compound-specific Fm factor listed in table 34 of this subpart. Concentration measurements based on methods other than Method 305 shall not adjust by the compound-specific Fm factor listed in table 34 of this subpart.

(2) Flow rate of wastewater entering the combustion treatment process. The flow rate of the wastewater stream entering the combustion treatment process shall be determined using an inlet flow meter. Flow rate measurements shall be taken at the same time as the concentration measurements.

(3) Calculation of mass flow rate in wastewater stream entering combustion treatment processes. The mass flow rate of Table 8 and/or Table 9 compounds entering the treatment process is calculated as follows:

QMWa = [p / p * 10^6] [(sum) p to k=1 Qak *CTak] (Eqn WW4)

Where:

QMWa=Mass flow rate of Table 8 or Table 9 compounds entering the combustion unit, kilograms per hour.

p=Density of the wastewater stream, kilograms per cubic meter.

Qa,k=Volumetric flow rate of wastewater entering the combustion unit during run k, cubic meters per hour.

CT,a,k=Total concentration of Table 8 or Table 9 compounds in the wastewater stream entering the combustion unit during run k, parts per million by weight.

p=Number of runs.

k=Identifier for a run.

(4) Concentration in vented gas stream exiting the combustion treatment process. The concentration of Table 8 and/or Table 9 compounds exiting the combustion treatment process in any vented gas stream shall be determined as provided in this paragraph. Samples may be grab samples or composite samples. Samples shall be taken at approximately equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs. Concentration measurements shall be determined using Method 18 of 40 CFR part 60, appendix A. Alternatively, any other test method validated according to the procedures in Method 301 of appendix A of this part may be used.

(5) Volumetric flow rate of vented gas stream exiting the combustion treatment process. The volumetric flow rate of the vented gas stream exiting the combustion treatment process shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate. Volumetric flow rate measurements shall be taken at the same time as the concentration measurements.

(Eqn WW5) [Reserved]

QMGb = k2 [(sum) n to i=1 CGbj * Mi] [QGb] (Eqn WW6)

Where:

CGa,i, CGb,i=Concentration of total organic compounds (TOC) (minus methane and ethane) or total organic hazardous air pollutants, in vented gas stream, entering (CGa,i) and exiting (CGb,i) the control device, dry basis, parts per million by volume.

QMGa, QMGb=Mass rate of TOC (minus methane and ethane) or total organic hazardous air pollutants, in vented gas stream, entering (QMGa) and exiting (QMGb) the control device, dry basis, kilograms per hour.

MWi=Molecular weight of a component, kilogram/kilogram-mole.

QGa,QGb=Flow rate of gas stream entering (QGa) and exiting (QGb) the control device, dry standard cubic meters per hour.

K2=Constant, 41.57 x 10-9 (parts per million)-1 (gram-mole per standard cubic meter) (kilogram/gram), where standard temperature (gram-mole per standard cubic meter) is 20 degrees Celsius.

i=Identifier for a compound.

n=Number of components in the sample.

(7) Destruction efficiency calculation. The destruction efficiency of the combustion unit for Table 8 and/or Table 9 compounds shall be calculated as follows:

E = [QMWa - QMGb / QMWa] [100] (Eqn WW7)

Where:

E=Destruction efficiency of Table 8 or Table 9 compounds for the combustion unit, percent.

QMWa=Mass flow rate of Table 8 or Table 9 compounds entering the combustion unit, kilograms per hour.

QMGb=Mass flow rate of Table 8 or Table 9 compounds in vented gas stream exiting the combustion treatment process, kilograms per hour.

(8) Calculation of flow-weighted average of Fr values. Use Equation WW8 to calculate the flow-weighted average of the Fr values listed in table 9 of this subpart.

Fr(avg) = [(sum) n to i=1 (sum) P to k=1 Fri * Ciak * Qak /
(sum) p to k=1 (sum) n to i=1 Ciak * Qak] [100] (Eqn WW8)

Where:

Fravg=Flow-weighted average of the Fr values.

Ci,a,k=Concentration of Table 8 and/or Table 9 compounds in wastewater stream entering the combustion unit, during run k, parts per million by weight.

Qa,k=Volumetric flow rate of wastewater entering the combustion unit during run k, cubic meters per hour.

Fri=Compound-specific Fr value listed in table 9 of this subpart.

(9) Calculate flow-weighted average of Fr values and compare to mass destruction efficiency. Compare the mass destruction efficiency (calculated in Equation WW 7) to the required efficiency as specified in 40 CFR 63.138(e). If complying with 40 CFR 63.138(e)(1), compliance is demonstrated if the mass destruction efficiency is 99 percent or greater. If complying with ? 63.138(e)(2), compliance is demonstrated if the mass destruction efficiency is greater than or equal to the flow-weighted average of the Fr value calculated in Equation WW8.

(e) Non-combustion treatment processes including closed biological treatment processes: RMR option. This paragraph applies to performance tests for non-combustion treatment processes other than open biological treatment processes to demonstrate compliance with the mass removal provisions for Table 8 and/or Table 9 compounds. Compliance options for noncombustion treatment processes are specified in 40 CFR 63.138(f) of this subpart. Compliance options for closed aerobic or anaerobic biological treatment processes are specified in 40 CFR 63.138(f) and 40 CFR 63.138(g) of this subpart. When complying with 40 CFR 63.138(f), the owner or operator shall comply with the requirements specified in 40 CFR 63.145(e)(1) through (e)(6) of this subpart. When complying with 40 CFR 63.138(g), the owner or operator shall comply with the requirements specified in 40 CFR 63.145(e)(1) through (e)(6) of this subpart. (Wastewater streams that are Group 1 for both Table 8 and Table 9 compounds need only do the compliance demonstration for Table 9 compounds.)

(1) Concentration in wastewater stream. The concentration of Table 8 and/or Table 9 compounds shall be determined as provided in this paragraph. Concentration measurements to determine RMR shall be taken at the point of determination or downstream of the point of determination with adjustment for concentration change made according to 40 CFR 63.144(b)(6) of this subpart. Concentration measurements to determine AMR shall be taken at the inlet and outlet to the treatment process and as provided in 40 CFR 63.145(a)(7) for a series of treatment processes. Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity per 40 CFR 63.144(b)(5)(ii). The method shall be an analytical method for wastewater which has that compound as a target analyte. Samples may be grab samples or composite samples. Samples shall be taken at approximately equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs. Concentration measurements based on Method 305 shall be adjusted

by dividing each concentration by the compound-specific Fm factor listed in table 34 of this subpart. Concentration measurements based on methods other than Method 305 shall not adjust by the compound-specific Fm factor listed in table 34 of this subpart.

(2) Flow rate. Flow rate measurements to determine RMR shall be taken at the point of determination or downstream of the point of determination with adjustment for flow rate change made according to 40 CFR 63.144(c)(4) of this subpart. Flow rate measurements to determine AMR shall be taken at the inlet and outlet to the treatment process and as provided in 40 CFR 63.145(a)(7) for a series of treatment processes. Flow rate shall be determined using inlet and outlet flow measurement devices. Where the outlet flow is not greater than the inlet flow, a flow measurement device shall be used, and may be used at either the inlet or outlet. Flow rate measurements shall be taken at the same time as the concentration measurements.

(3) Calculation of RMR for non-combustion treatment processes including closed biological treatment processes. When using 40 CFR 63.138(f) to comply, the required mass removal of Table 8 and/or Table 9 compounds for each Group 1 wastewater stream shall be calculated as specified in paragraph (e)(3)(i) of this section. When using 40 CFR 63.138(g) to comply, the required mass removal shall be calculated as specified in paragraph (e)(3)(ii) of this section.

(i) When using 40 CFR 63.138(f) to comply, the required mass removal of Table 8 and/or Table 9 compounds for each Group 1 wastewater stream shall be calculated using Equation WW9.

RMR = [p / 10^9] * Q * (sum) n to i=1 (Ci * Fri) (Eqn WW9)

Where:

RMR=Required mass removal for treatment process or series of treatment processes, kilograms per hour.

p=Density of the Group 1 wastewater stream, kilograms per cubic meter.

Q=Volumetric flow rate of wastewater stream at the point of determination, liters per hour.

i=Identifier for a compound.

n=Number of Table 8 or Table 9 compounds in stream.

Ci=Concentration of Table 8 or Table 9 compounds at the point of determination, parts per million by weight.

Fri=Fraction removal value of a Table 8 or Table 9 compound. Fr values are listed in table 9 of this subpart.

10^9=Conversion factor, mg/kg * l/m3

(ii) When using 40 CFR 63.138(g) to comply, the required mass removal is 95 percent of the mass flow rate for all Group 1 and Group 2 wastewater streams combined for treatment. The required mass removal of Table 8 and/or Table 9 compounds for all Group 1 and Group 2 wastewater streams combined for treatment when complying with 40 CFR 63.138(g) shall be calculated using the following equation:

RMR = [0.95p / 10^9] * Q * (sum) n to i=1 (Ci) (Eqn WW9a)

Where:

RMR=Required mass removal for treatment process or series of treatment processes, kilograms per hour.

p=Density of the Group 1 wastewater stream, kilograms per cubic meter.

Q=Volumetric flow rate of wastewater stream at the point of determination, liters per hour.

i=Identifier for a compound.

n=Number of Table 8 or Table 9 compounds in stream.

Ci=Concentration of Table 8 or Table 9 compounds at the point of determination, parts per million by weight.

10^9=Conversion factor, mg/kg * l/m 3

(4) (i) The required mass removal is calculated by summing the required mass removal for each Group 1 wastewater stream to be combined for treatment when complying with 40 CFR 63.138(f).

(ii) The required mass removal is calculated by summing the required mass removal for all Group 1 and Group 2 wastewater streams combined for treatment when complying with 40 CFR 63.138(g).

(5) The AMR calculation procedure for non-combustion treatment processes including closed biological treatment processes. The AMR shall be calculated as follows:

AMR = (QMWa - QMWb) (Eqn WW10)

Where:

AMR=Actual mass removal of Table 8 or Table 9 compounds achieved by treatment process or series of treatment processes, kilograms per hour.

QMWa=Mass flow rate of Table 8 or Table 9 compounds in wastewater entering the treatment process or first treatment process in a series of treatment processes, kilograms per hour.

QMWb=Mass flow rate of Table 8 or Table 9 compounds in wastewater exiting the last treatment process in a series of treatment processes, kilograms per hour.

(6) Compare RMR to AMR. When complying with 40 CFR 63.138(f), compare the RMR calculated in Equation WW9 to the AMR calculated in Equation WW10. Compliance is demonstrated if the AMR is greater than or equal to the RMR. When complying with 40 CFR 63.138(g), compare the RMR calculated in Equation WW-9a to the AMR calculated in Equation WW10. Compliance is demonstrated if the AMR is greater than or equal to 95-percent mass removal.

(f) Open or closed aerobic biological treatment processes: Required mass removal (RMR) option. This paragraph applies to the use of performance tests that are conducted for open or closed aerobic biological treatment processes to demonstrate compliance with the mass removal provisions for Table 8 and/or Table 9 compounds. These compliance options are specified in 63.138(f) of this subpart. The owner or operator shall comply with the requirements specified in 40 CFR 63.145 (f)(1) through (f)(6) of this subpart. Some compounds may not require a performance test. Refer to 40 CFR 63.145(h) and table 36 of this subpart to determine which compounds may be exempt from the requirements of this paragraph.

(1) Concentration in wastewater stream. The concentration of Table 8 and/or Table 9 compounds shall be determined as provided in this paragraph. Concentration measurements to determine RMR shall be taken at the point of determination or downstream of the point of determination with adjustment for concentration change made according to 40 CFR 63.144(b)(6) of this subpart. Concentration measurements to determine AMR shall be taken at the inlet and outlet to the treatment process and as provided in 40 CFR 63.145(a)(7) for a series of treatment processes. Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity per 40 CFR 63.144(b)(5)(ii). The method shall be an analytical method for wastewater which has that compound as a target analyte. Samples may be grab samples or composite samples. Samples shall be taken at approximately equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs. Concentration measurements based on Method 305 shall be adjusted by dividing each concentration by the compound-specific Fm factor listed in table 34 of this subpart. Concentration measurements based on methods other than Method 305 shall not adjust by the compound-specific Fm factor listed in table 34 of this subpart.

(2) Flow rate. Flow rate measurements to determine RMR shall be taken at the point of determination or downstream of the point of determination with adjustment for flow rate change made according to 40 CFR 63.144(c)(4) of this subpart. Flow rate measurements to determine AMR shall be taken at the inlet and outlet to the treatment process and as provided in 40 CFR 63.145(a)(7) for a series of treatment processes. Flow rate shall be determined using inlet and outlet flow measurement devices. Where the outlet flow is not greater than the inlet flow, a flow measurement device shall be used, and may be used at either the inlet or outlet. Flow rate measurements shall be taken at the same time as the concentration measurements.

(3) Calculation of RMR for open or closed aerobic biological treatment processes. The required mass removal of Table 8 and/or Table 9 compounds for each Group 1 wastewater stream shall be calculated using the following equation:

RMR = [p / 10^9] *Q* (sum) n to i=1 (Ci * Fri) (Eqn WW11)

Where:

RMR=Required mass removal for treatment process or series of treatment processes, kilograms per hour.

p=Density of the Group 1 wastewater stream, kilograms per cubic meter.

Q=Volumetric flow rate of wastewater stream at the point of determination, liters per hour.

i=Identifier for a compound.

n=Number of Table 8 or Table 9 compounds in stream.

Ci=Concentration of Table 8 or Table 9 compounds at the point of determination, parts per million by weight.

Fri=Fraction removal value of a Table 8 or Table 9 compound. Fr values are listed in table 9 of this subpart.

10^9=Conversion factor, mg/kg * l/m3.

(4) The required mass removal is calculated by adding together the required mass removal for each Group 1 wastewater stream to be combined for treatment.

(5) Actual mass removal calculation procedure for open or closed aerobic biological treatment processes. The actual mass removal (AMR) shall be calculated using Equation WW12 as specified in paragraph (f)(5)(i) of this section when the performance test is performed across the open or closed aerobic biological treatment process only. If

compliance is being demonstrated in accordance with 40 CFR 63.145(a)(7)(i), the AMR for the series shall be calculated using Equation WW13 in 40 CFR 63.145(f)(5)(ii). (This equation is for situations where treatment is performed in a series of treatment processes connected by hard-piping.) If compliance is being demonstrated in accordance with 40 CFR 63.145(a)(7)(ii), the AMR for the biological treatment process shall be calculated using Equation WW12 in 40 CFR 63.145(f)(5)(i). The AMR for the biological treatment process used in a series of treatment processes calculated using Equation WW12 shall be added to the AMR determined for each of the other individual treatment processes in the series of treatment processes.

(i) Calculate AMR for the open or closed aerobic biological treatment process as follows:

AMR = QMWa * Fbio (Eqn WW12)

Where:

AMR=Actual mass removal of Table 8 or Table 9 compounds achieved by open or closed biological treatment process, kilograms per hour.

QMWa=Mass flow rate of Table 8 or Table 9 compounds in wastewater entering the treatment process, kilograms per hour.

Fbio=Site-specific fraction of Table 8 or Table 9 compounds biodegraded. Fbio shall be determined as specified in 40 CFR 63.145(h) and appendix C of this subpart.

(ii) Calculate AMR across a series of treatment units where the last treatment unit is an open or closed aerobic biological treatment process as follows:

AMR = QMWa - (QMWb)(1- Fbio) (Eqn WW13)

Where:

AMR=Actual mass removal of Table 8 or Table 9 compounds achieved by a series of treatment processes, kilograms per hour.

QMWa=Mass flow rate of Table 8 or Table 9 compounds in wastewater entering the first treatment process in a series of treatment processes, kilograms per hour.

QMWb=Mass flow rate of Table 8 or Table 9 compounds in wastewater exiting the last treatment process in a series of treatment processes prior to the biological treatment process, kilograms per hour.

Fbio=Site-specific fraction of Table 8 or Table 9 compounds biodegraded. Fbio shall be determined as specified in 40 CFR 63.145(h) and appendix C of this subpart.

(6) Compare RMR to AMR. Compare the RMR calculated in Equation WW11 to the AMR calculated in either Equation WW12 or WW13, as applicable. Compliance is demonstrated if the AMR is greater than or equal to the RMR.

(g) Open or closed aerobic biological treatment processes: 95-percent mass removal option. This paragraph applies to performance tests that are conducted for open or closed aerobic biological treatment processes to demonstrate compliance with the 95-percent mass removal provisions for Table 8 and/or Table 9 compounds. This compliance option is specified in 40 CFR 63.138(g) of this subpart. The RMR for this option is 95-percent mass removal. The owner or operator shall comply with the requirements specified in 40 CFR 63.145(g)(1) to determine AMR, 40 CFR 63.145 (e)(3)(ii) and (e)(4)(ii) to determine RMR, and (g)(2) of this subpart to determine whether compliance has been demonstrated. Some compounds may not require a performance test. Refer to 40 CFR 63.145(h) and table 36 of this subpart to determine which compounds may be exempt from the requirements of this paragraph. (Wastewater streams that are Group 1 for both Table 8 and Table 9 compounds need only do the compliance demonstration for Table 9 compounds.)

(1) The owner or operator shall comply with the requirements specified in paragraphs (f)(1), (f)(2), and (f)(5) of this section to determine AMR. References to Group 1 wastewater streams shall be deemed Group 1 and Group 2 wastewater streams for the purposes of this paragraph.

(2) Compare RMR to AMR. Compliance is demonstrated if the AMR is greater than or equal to RMR.

(h) Site-specific fraction biodegraded (Fbio). The compounds listed in table 9 of this subpart are divided into two sets for the purpose of determining whether Fbio must be determined, and if Fbio must be determined, which procedures may be used to determine compound-specific kinetic parameters. These sets are designated as lists 1 and 2 in table 36 of this subpart.

(1) Performance test exemption. If a biological treatment process meets the requirements specified in paragraphs (h)(1)(i) and (h)(1)(ii) of this section, the owner or operator is not required to determine Fbio and is exempt from the applicable performance test requirements specified in 40 CFR 63.138 of this subpart.

(i) The biological treatment process meets the definition of "enhanced biological treatment process" in 40 CFR 63.111 of this subpart.

(ii) At least 99 percent by weight of all compounds on table 36 of this subpart that are present in the aggregate of all wastewater streams using the biological treatment process to comply with 40 CFR 63.138 of this subpart are compounds on list 1 of table 36 of this subpart.

(2) Fbio determination. If a biological treatment process does not meet the requirement specified in paragraph (h)(1)(i) of this section, the owner or operator shall determine Fbio for the biological treatment process using the procedures in appendix C to part 63, and

paragraph (h)(2)(ii) of this section. If a biological treatment process meets the requirements of paragraph (h)(1)(i) of this section but does not meet the requirement specified in paragraph (h)(1)(ii) of this section, the owner or operator shall determine Fbio for the biological treatment process using the procedures in appendix C to part 63, and paragraph (h)(2)(i) of this section.

(i) Enhanced biological treatment processes. If the biological treatment process meets the definition of "enhanced biological treatment process" in 40 CFR 63.111 of this subpart and the wastewater streams include one or more compounds on list 2 of table 36 of this subpart that do not meet the criteria in paragraph (h)(1)(ii) of this section, the owner or operator shall determine fbio for the list 2 compounds using any of the procedures specified in appendix C of 40 CFR part 63. (The symbol "fbio" represents the site specific fraction of an individual Table 8 or Table 9 compound that is biodegraded.) The owner or operator shall calculate fbio for the list 1 compounds using the defaults for first order biodegradation rate constants (K1) in table 37 of subpart G and follow the procedure explained in form III of appendix C, 40 CFR part 63, or any of the procedures specified in appendix C, 40 CFR part 63.

(ii) Biological treatment processes that are not enhanced biological treatment processes. For biological treatment processes that do not meet the definition for "enhanced biological treatment process" in 40 CFR 63.111 of this subpart, the owner or operator shall determine the fbio for the list 1 and 2 compounds using any of the procedures in appendix C to part 63, except procedure 3 (inlet and outlet concentration measurements). (The symbol "fbio" represents the site specific fraction of an individual Table 8 or Table 9 compound that is biodegraded.)

(i) Performance tests for control devices other than flares. This paragraph applies to performance tests that are conducted to demonstrate compliance of a control device with the efficiency limits specified in 40 CFR 63.139(c). If complying with the 95-percent reduction efficiency requirement, comply with the requirements specified in paragraphs (i)(1) through (i)(9) of this section. If complying with the 20 ppm by volume requirement, comply with the requirements specified in paragraphs (i)(1) through (i)(6) and (i)(9) of this section. The 20 ppm by volume limit or 95-percent reduction efficiency requirement shall be measured as either total organic hazardous air pollutants or as TOC minus methane and ethane.

(1) Sampling sites. Sampling sites shall be selected using Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate. For determination of compliance with the 95 percent reduction requirement, sampling sites shall be located at the inlet and the outlet of the control device. For determination of compliance with the 20 parts per million by volume limit, the sampling site shall be located at the outlet of the control device.

(2) Concentration in gas stream entering or exiting the control device. The concentration of total organic hazardous air pollutants or TOC in a gas stream shall be determined as provided in this paragraph. Samples may be grab samples or composite samples (i.e., integrated samples). Samples shall be taken at approximately equally spaced time

intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs. Concentration measurements shall be determined using Method 18 of 40 CFR part 60, appendix A. Alternatively, any other test method validated according to the procedures in Method 301 of appendix A of this part may be used.

(3) Volumetric flow rate of gas stream entering or exiting the control device. The volumetric flow rate of the gas stream shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate. Volumetric flow rate measurements shall be taken at the same time as the concentration measurements.

(4) Calculation of TOC concentration. The TOC concentration (CGT) is the sum of the concentrations of the individual components. If compliance is being determined based on TOC, the owner or operator shall compute TOC for each run using the following equation:

CGT = [1 / m] (sum) m to j=1 [(sum) n to i=1 CGSij] (Eqn WW14)

Where:

CGT=Total concentration of TOC (minus methane and ethane) in vented gas stream, average of samples, dry basis, parts per million by volume.

CGSi,j=Concentration of sample components in vented gas stream for sample j, dry basis, parts per million by volume.

i=Identifier for a compound.

n=Number of components in the sample.

j=Identifier for a sample.

m=Number of samples in the sample run.

(5) Calculation of total organic hazardous air pollutants concentration. The owner or operator determining compliance based on total organic hazardous air pollutants concentration (CHAP) shall compute CHAP according to the Equation WW14, except that only Table 9 compounds shall be summed.

(6) Percent oxygen correction for combustion control devices. If the control device is a combustion device, comply with the requirements specified in paragraph (i)(6)(i) of this section to determine oxygen concentration, and in paragraph (i)(6)(ii) of this section to calculate the percent oxygen correction.

(i) Oxygen concentration. The concentration of TOC or total organic hazardous air pollutants shall be corrected to 3 percent oxygen if the control device is a combustion device. The emission rate correction factor for excess air, composite sampling (i.e., integrated sampling) and analysis procedures of Method 3B of 40 CFR part 60, appendix A shall be used to determine the actual oxygen concentration (%02d). The samples shall be taken during the same time that the TOC (minus methane or ethane) or total organic hazardous air pollutants samples are taken.

(ii) 3 percent oxygen calculation. The concentration corrected to 3 percent oxygen (CGc), when required, shall be computed using the following equation:

CGc = CGT [17.9 / 20.9 - %o2d] (Eqn WW15)

Where:

CGc=Concentration of TOC or organic hazardous air pollutants corrected to 3 percent oxygen, dry basis, parts per million by volume.

CGT=Total concentration of TOC (minus methane and ethane) in vented gas stream, average of samples, dry basis, parts per million by volume.

%02d=Concentration of oxygen measured in vented gas stream, dry basis, percent by volume.

(7) Mass rate calculation. The mass rate of either TOC (minus methane and ethane) or total organic hazardous air pollutants shall be calculated using the following equations. Where the mass rate of TOC is being calculated, all organic compounds (minus methane and ethane) measured by methods specified in paragraph (i)(2) of this section are summed using Equations WW16 and WW17. Where the mass rate of total organic hazardous air pollutants is being calculated, only Table 9 compounds shall be summed using Equations WW16 and WW17.

QMGa = K2 [(sum) n to i=1 CGai * MWi] QGa (Eqn WW16)

QMGb = K2 [(sum) n to i=1 CGbi * MWi] QGb (Eqn WW17)

Where:

CGa,i, CGb,i=Concentration of TOC (minus methane and ethane) or total organic hazardous air pollutants, in vented gas stream, entering (CGa,i) and exiting (CGb,i) the control device, dry basis, parts per million by volume.

QMGa, QMGb=Mass rate of TOC (minus methane and ethane) or total organic hazardous air pollutants, in vented gas stream, entering (QMGa) and exiting (QMGb) the control device, dry basis, kilograms per hour.

MWi=Molecular weight of a component, kilogram/kilogram-mole.

QGa, QGb=Flow rate of gas stream entering (QGa) and exiting (QGb) the control device, dry standard cubic meters per hour.

K2=Constant, 41.57 x 10-9 (parts per million)-1 (gram-mole per standard cubic meter) (kilogram/gram), where standard temperature (gram-mole per standard cubic meter) is 20 ?Celsius.

i=Identifier for a compound.

n=Number of components in the sample.

(8) Percent reduction calculation. The percent reduction in TOC (minus methane and ethane) or total organic hazardous air pollutants shall be calculated as follows:

E = [QMGa - QMGb / QMGa] [100] (Eqn WW18)

Where:

E=Destruction efficiency of control device, percent.

QMGa, QMGb=Mass rate of TOC (minus methane and ethane) or total organic hazardous air pollutants, in vented gas stream entering and exiting (QMGb) the control device, dry basis, kilograms per hour.

(9) Compare mass destruction efficiency to required efficiency. If complying with the 95 percent reduction efficiency requirement, compliance is demonstrated if the mass destruction efficiency (calculated in Equation WW18) is 95 percent or greater. If complying with the 20 parts per million by volume limit in 40 CFR 63.139 (c)(1)(ii) of this subpart, compliance is demonstrated if the outlet total organic compound concentration, less methane and ethane, or total organic hazardous air pollutants concentration is 20 parts per million by volume, or less. For combustion control devices, the concentration shall be calculated on a dry basis, corrected to 3 percent oxygen.

(j) When a flare is used to comply with 40 CFR 63.139(c), the owner or operator shall comply with paragraphs (j)(1) through (3) of this section. The owner or operator is not required to conduct a performance test to determine percent emission reduction or outlet organic HAP or TOC concentration.

(1) Conduct a visible emission test using the techniques specified in 40 CFR 63.11(b)(4).

(2) Determine the net heating value of the gas being combusted using the techniques specified in ? 63.11(b)(6).

(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.

§§ 63.146 Process wastewater provisions -- reporting.

(a) For each waste management unit, treatment process, or control device used to comply with 40 CFR 63.138 (b)(1), (c)(1), (d), (e), (f), or (g) of this subpart for which the owner or operator seeks to monitor a parameter other than those specified in table 11, table 12, or table 13 of this subpart, the owner or operator shall submit a request for approval to monitor alternative parameters according to the procedures specified in 40 CFR 63.151(f) or (g) of this subpart.

(b) The owner or operator shall submit the information specified in paragraphs (b)(1) through (b)(9) of this section as part of the Notification of Compliance Status required by 40 CFR 63.152(b) of this subpart.

(1) Requirements for Group 2 wastewater streams. This paragraph does not apply to Group 2 wastewater streams that are used to comply with 40 C 63.138(g). For Group 2 wastewater streams, the owner or operator shall include the information specified in paragraphs (b)(1)(i) through (iv) of this section in the Notification of Compliance Status Report. This information may be submitted in any form. Table 15 of this subpart is an example.

(i) Process unit identification and description of the process unit.

(ii) Stream identification code.

(iii) For existing sources, concentration of table 9 compound(s) in parts per million, by weight. For new sources, concentration of table 8 and/or table 9 compound(s) in parts per million, by weight. Include documentation of the methodology used to determine concentration.

(iv) Flow rate in liter per minute.

(2) For each new and existing source, the owner or operator shall submit the information specified in table 15 of this subpart for Table 8 and/or Table 9 compounds.

(3) [Reserved]

(4) For each treatment process identified in table 15 of this subpart that receives, manages, or treats a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream, the owner or operator shall submit the information specified in table 17 of this subpart.

(5) For each waste management unit identified in table 15 of this subpart that receives or manages a Group 1 wastewater stream or residual removed from a Group 1 wastewater

stream, the owner or operator shall submit the information specified in table 18 of this subpart.

(6) For each residual removed from a Group 1 wastewater stream, the owner or operator shall report the information specified in table 19 of this subpart.

(7) For each control device used to comply with 40 CFR 63.133 through 63.139 of this subpart, the owner or operator shall report the information specified in paragraphs (b)(7)(i) and (b)(7)(ii) of this section.

(i) For each flare, the owner or operator shall submit the information specified in paragraphs (b)(7)(i)(A) through (b)(7)(i)(C) of this section.

(A) Flare design (i.e., steam-assisted, air-assisted, or non-assisted);

(B) All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the compliance determination required by 40 CFR 63.139(c)(3) of this subpart; and

(C) Reports of the times and durations of all periods during the compliance determination when the pilot flame is absent or the monitor is not operating.

(ii) For each control device other than a flare, the owner or operator shall submit the information specified in paragraph (b)(7)(ii)(A) of this section and in either paragraph (b)(7)(ii)(B) or (b)(7)(ii)(C) of this section.

(A) The information on parameter ranges specified in 40 CFR 63.152(b)(2) of this subpart for the applicable parameters specified in table 13 of this subpart, unless the parameter range has already been established in the operating permit; and either

(B) The design evaluation specified in 40 CFR 63.139(d)(2) of this subpart; or

(C) Results of the performance test specified in 40 CFR 63.139(d)(1) of this subpart. Performance test results shall include operating ranges of key process and control parameters during the performance test; the value of each parameter being monitored in accordance with 40 CFR 63.143 of this subpart; and applicable supporting calculations.

(8) For each treatment process used to comply with 40 CFR 63.138(b)(1), (c)(1), (d), (e), (f), or (g) of this subpart, the owner or operator shall submit the information specified in paragraphs (b)(8)(i) and (b)(8)(ii) of this section.

(i) For Items 1 and 2 in table 12 of this subpart, the owner or operator shall submit the information specified in paragraphs (b)(8)(i)(A) and (b)(8)(i)(B) of this section. An owner or operator using the design steam stripper compliance option specified 40 CFR 63.138(d) of this subpart does not have to submit the information specified in paragraph

(b)(8)(i)(A) or (b)(8)(i)(B) of this section. However, the monitoring requirements specified in Item 2 of table 12 of this subpart still apply.

(A) The information on parameter ranges specified in 40 CFR 63.152(b)(2) of this subpart for the parameters approved by the Administrator, unless the parameter range has already been established in the operating permit.

(B) Results of the initial measurements of the parameters approved by the Administrator and any applicable supporting calculations.

(ii) For Item 3 in table 12 of this subpart, the owner or operator shall submit the information on parameter ranges specified in 40 CFR 63.152(b)(2) of this subpart for the parameters specified in Item 3 of table 12 of this subpart, unless the parameter range has already been established in the operating permit.

(9) For each waste management unit or treatment process used to comply with 40 CFR 63.138(b)(1), (c)(1), (e), (f), or (g), the owner or operator shall submit the information specified in either paragraph (b)(9)(i) or (ii) of this section.

(i) The design evaluation and supporting documentation specified in 40 CFR 63.138(j)(1) of this subpart.

(ii) Results of the performance test specified in 40 CFR 63.138(j)(2) of this subpart. Performance test results shall include operating ranges of key process and control parameters during the performance test; the value of each parameter being monitored in accordance with 40 CFR 63.143 of this subpart; and applicable supporting calculations.

(c) For each waste management unit that receives, manages, or treats a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream, the owner or operator shall submit as part of the next Periodic Report required by 40 CFR 63.152(c) of this subpart the results of each inspection required by 40 CFR 63.143(a) of this subpart in which a control equipment failure was identified. Control equipment failure is defined for each waste management unit in 40 CFR 63.133 through 63.137 of this subpart. Each Periodic Report shall include the date of the inspection, identification of each waste management unit in which a control equipment failure was detected, description of the failure, and description of the nature of and date the repair was made.

(d) Except as provided in paragraph (f) of this section, for each treatment process used to comply with 40 CFR 63.138(b)(1), (c)(1), (d), (e) , (f), or (g), the owner or operator shall submit as part of the next Periodic Report required by 40 CFR 63.152(c) the information specified in paragraphs (d)(1), (2), and (3) of this section for the monitoring required by 40 CFR 63.143(b), (c), and (d).

(1) For Item 1 in table 12, the owner or operator shall submit the results of measurements that indicate that the biological treatment unit is outside the range established in the Notification of Compliance Status or operating permit.

(2) For Item 2 in table 12, the owner or operator shall submit the monitoring results for each operating day during which the daily average value of a continuously monitored parameter is outside the range established in the Notification of Compliance Status or operating permit.

(3) For Item 3 in table 12 of this subpart, the owner or operator shall submit the monitoring results for each operating day during which the daily average value of any monitored parameter approved in accordance with 40 CFR 63.151 (f) was outside the range established in the Notification of Compliance Status or operating permit.

(e) Except as provided in paragraph (f) of this section, for each control device used to comply with 40 CFR 63.133 through 63.139 of this subpart, the owner or operator shall submit as part of the next Periodic Report required by 40 CFR 63.152(c) of this subpart the information specified in either paragraph (e)(1) or (e)(2) of this section.

(1) The information specified in table 20 of this subpart, or

(2) If the owner or operator elects to comply with 40 CFR 63.143(e)(2) of this subpart, i.e., an organic monitoring device installed at the outlet of the control device, the owner or operator shall submit the monitoring results for each operating day during which the daily average concentration level or reading is outside the range established in the Notification of Compliance Status or operating permit.

(f) Where the owner or operator obtains approval to use a treatment process or control device other than one for which monitoring requirements are specified in 40 CFR 63.143 of this subpart, or to monitor parameters other than those specified in table 12 or 13 of this subpart, the Administrator will specify appropriate reporting requirements.

(g) If an extension is utilized in accordance with 40 CFR 63.133(e)(2) or 40 CFR 63.133(h) of this subpart, the owner or operator shall include in the next periodic report the information specified in 40 CFR 63.133 (e)(2) or 40 CFR 63.133(h).

§§ 63.147 Process wastewater provisions -- recordkeeping.

(a) The owner or operator transferring a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream in accordance with 40 CFR 63.132(g) of this subpart shall keep a record of the notice sent to the treatment operator stating that the wastewater stream or residual contains organic hazardous air pollutants which are required to be managed and treated in accordance with the provisions of this subpart.

(b) The owner or operator shall keep in a readily accessible location the records specified in paragraphs (b)(1) through (8) of the section.

(1) A record that each waste management unit inspection required by ?? 63.133 through 63.137 of this subpart was performed.

(2) A record that each inspection for control devices required by 40 CFR 63.139 of this subpart was performed.

(3) A record of the results of each seal gap measurement required by 40 CFR 63.133(d) and 63.137(c) of this subpart. The records shall include the date of the measurement, the raw data obtained in the measurement, and the calculations described in 40 CFR 63.120(b)(2), (3), and (4) of this subpart.

(4) For Item 1 and Item 3 of table 12 of this subpart, the owner or operator shall keep the records approved by the Administrator.

(5) Except as provided in paragraph (e) of this section, continuous records of the monitored parameters specified in Item 2 of table 12 and table 13 of this subpart, and in 40 CFR 63.143(e)(2) of this subpart.

(6) Documentation of a decision to use an extension, as specified in 40 CFR 63.133(e)(2) or (h) of this subpart, which shall include a description of the failure, documentation that alternate storage capacity is unavailable, and specification of a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be emptied as soon as practical.

(7) Documentation of a decision to use a delay of repair due to unavailability of parts, as specified in 40 CFR 63.140(c), shall include a description of the failure, the reason additional time was necessary (including a statement of why replacement parts were not kept on site and when the manufacturer promised delivery), and the date when repair was completed.

(8) Requirements for Group 2 wastewater streams. This paragraph (b)(8) does not apply to Group 2 wastewater streams that are used to comply with 40 CFR 63.138(g). For all other Group 2 wastewater streams, the owner or operator shall keep in a readily accessible location the records specified in paragraphs (b)(8)(i) through (iv) of this section.

(i) Process unit identification and description of the process unit.

(ii) Stream identification code.

(iii) For existing sources, concentration of table 9 compound(s) in parts per million, by weight. For new sources, concentration of table 8 and/or table 9 compound(s) in parts per

million, by weight. Include documentation of the methodology used to determine concentration.

(iv) Flow rate in liter per minute.

(c) For each boiler or process heater used to comply with 40 CFR 63.133 through 63.139 of this subpart, the owner or operator shall keep a record of any changes in the location at which the vent stream is introduced into the flame zone as required in 40 CFR 63.139(c)(1) of this subpart.

(d) The owner or operator shall keep records of the daily average value of each continuously monitored parameter for each operating day as specified in 40 CFR 63.152(f), except as provided in paragraphs (d)(1) through (3) of this section.

(1) For flares, records of the times and duration of all periods during which the pilot flame is absent shall be kept rather than daily averages.

(2) Regenerative carbon adsorbers. For regenerative carbon adsorbers, the owner or operator shall keep the records specified in paragraphs (d)(2)(i) and (ii) of this section instead of daily averages.

(i) Records of the total regeneration stream mass flow for each carbon bed regeneration cycle.

(ii) Records of the temperature of the carbon bed after each regeneration cycle.

(3) Non-regenerative carbon adsorbers. For non-regenerative carbon adsorbers using organic monitoring equipment, the owner or operator shall keep the records specified in paragraph (d)(3)(i) of this section instead of daily averages. For non-regenerative carbon adsorbers replacing the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval that is determined by the maximum design flow rate and organic concentration in the gas stream vented to the carbon adsorption system, the owner or operator shall keep the records specified in paragraph (d)(3)(ii) of this section instead of daily averages.

(i) (A) Record of how the monitoring frequency, as specified in table 13 of this subpart, was determined.

(B) Records of when organic compound concentration of adsorber exhaust was monitored.

(C) Records of when the carbon was replaced.

(ii) (A) Record of how the carbon replacement interval, as specified in table 13 of this subpart, was determined.

(B) Records of when the carbon was replaced.

(e) Where the owner or operator obtains approval to use a control device other than one for which monitoring requirements are specified in 40 CFR 63.143 of this subpart, or to monitor parameters other than those specified in table 12 or table 13 of this subpart, the Administrator will specify appropriate recordkeeping requirements.

(f) If the owner or operator uses process knowledge to determine the annual average concentration of a wastewater stream as specified in 40 CFR 63.144(b)(3) of this subpart and/or uses process knowledge to determine the annual average flow rate as specified in 40 CFR 63.144(c)(1) of this subpart, and determines that the wastewater stream is not a Group 1 wastewater stream, the owner or operator shall keep in a readily accessible location the documentation of how process knowledge was used to determine the annual average concentration and/or the annual average flow rate of the wastewater stream.

§§ 63.148 Leak inspection provisions.

(a) Except as provided in paragraph (k) of this section, for each vapor collection system, closed-vent system, fixed roof, cover, or enclosure required to comply with this section, the owner or operator shall comply with the requirements of paragraphs (b) through (j) of this section.

(b) Except as provided in paragraphs (g) and (h) of this section, each vapor collection system and closed-vent system shall be inspected according to the procedures and schedule specified in paragraphs (b)(1) and (b)(2) of this section and each fixed roof, cover, and enclosure shall be inspected according to the procedures and schedule specified in paragraph (b)(3) of this section.

(1) If the vapor collection system or closed vent system is constructed of hard-piping, the owner or operator shall:

(i) Conduct an initial inspection according to the procedures in paragraph (c) of this section, and

(ii) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

(2) If the vapor collection system or closed vent system is constructed of ductwork, the owner or operator shall:

(i) Conduct an initial inspection according to the procedures in paragraph (c) of this section, and

(ii) Conduct annual inspections according to the procedures in paragraph (c) of this section.

(iii) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

(3) For each fixed roof, cover, and enclosure, the owner or operator shall conduct initial visual inspections and semi-annual visual inspections for visible, audible, or olfactory indications of leaks as specified in 40 CFR 63.133 through 63.137 of this subpart.

(c) Each vapor collection system and closed vent system shall be inspected according to the procedures specified in paragraphs (c)(1) through (c)(5) of this section.

(1) Inspections shall be conducted in accordance with Method 21 of 40 CFR part 60, appendix A.

(2) (i) Except as provided in paragraph (c)(2)(ii) of this section, 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 paragraph (c)(2)(i) of this section, 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 paragraph (c)(2)(i) of this section.

(3) 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.

(4) 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 paragraph (c)(2)(i) of this section. In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air.

(5) An owner or operator may elect to adjust or not adjust instrument readings for background. If an owner or operator 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 an owner or operator elects to adjust instrument readings for background, the owner or operator shall measure background concentration using the procedures in 40 CFR 63.180(b) and (c) of subpart H of this part. The owner or

operator shall subtract background reading from the maximum concentration indicated by the instrument.

(6) 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.

(d) 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 paragraph (e) of this section.

(1) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(2) Repair shall be completed no later than 15 calendar days after the leak is detected, except as provided in paragraph (d)(3) of this section.

(3) 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.

(e) 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, as defined in ? 63.101 of subpart F of this part, or if the owner or operator 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.

(f) 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 owner or operator shall comply with the provisions of either paragraph (f)(1) or (f)(2) of this section, except as provided in paragraph (f)(3) of this section.

(1) Install, calibrate, maintain, and operate a flow indicator that determines whether vent stream flow is present at least once every 15 minutes. Records shall be generated as specified in 40 CFR 63.118(a)(3) of this subpart. The flow indicator shall be installed at the entrance to any bypass line; or

(2) 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.

(3) 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.

(g) Any parts of the vapor collection system, closed vent system, fixed roof, cover, or enclosure that are designated, as described in paragraph (i)(1) of this section, as unsafe to inspect are exempt from the inspection requirements of paragraphs (b)(1), (b)(2), and (b)(3)(i) of this section if:

(1) The owner or operator 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 paragraphs (b)(1), (b)(2), or (b)(3)(i) of this section; and

(2) The owner or operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

(h) Any parts of the vapor collection system, closed vent system, fixed roof, cover, or enclosure that are designated, as described in paragraph (i)(2) of this section, as difficult to inspect are exempt from the inspection requirements of paragraphs (b)(1), (b)(2), and (b)(3)(i) of this section if:

(1) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

(2) The owner or operator has a written plan that requires inspection of the equipment at least once every 5 years.

(i) The owner or operator shall record the information specified in paragraphs (i)(1) through (i)(5) of this section.

(1) 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.

(2) 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.

(3) 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 owner or operator shall keep a record of the information specified in either paragraph (i)(3)(i) or (i)(3)(ii) of this section.

(i) Hourly records of whether the flow indicator specified under paragraph (f)(1) of this section 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 paragraph (f)(2) of this section, hourly records of flow are not required. In such cases, the owner or operator shall record whether the monthly visual inspection of the seals or closure mechanisms has been done, and shall record the occurrence of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type configuration has been checked out, and records of any car-seal that has broken.

(4) For each inspection during which a leak is detected, a record of the information specified in paragraphs (i)(4)(i) through (i)(4)(viii) of this section.

(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 paragraph (d) of this section 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 owner or operator (or designee) 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.

(viii) The date of successful repair of the leak.

(5) For each inspection conducted in accordance with paragraph (c) of this section 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.

(6) For each visual inspection conducted in accordance with paragraph (b)(1)(ii) or (b)(3)(ii) of this section 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.

(j) The owner or operator shall submit with the reports required by 40 CFR63.182(b) of subpart H of this part or with the reports required by 40 CFR 63.152(c) of this subpart, the information specified in paragraphs (j)(1) through (j)(3) of this section.

(1) The information specified in paragraph (i)(4) of this section;

(2) Reports of the times of all periods recorded under paragraph (i)(3)(i) of this section when the vent stream is diverted from the control device through a bypass line; and

(3) Reports of all periods recorded under paragraph (i)(3)(ii) of this section in which the seal mechanism is broken, the bypass line valve position has changed, or the key to unlock the bypass line valve was checked out.

(k) If a closed-vent system subject to this section is also subject to 40 CFR 63.172 of subpart H of this part, the owner or operator shall comply with the provisions of 40 CFR 63.172 of subpart H of this part and is exempt from the requirements of this section.

§§ 63.149 Control requirements for certain liquid streams in open systems within a chemical manufacturing process unit.

(a) The owner or operator shall comply with the provisions of table 35 of this subpart, for each item of equipment meeting all the criteria specified in paragraphs (b) through (d) and either paragraph (e)(1) or (e)(2) of this section.

(b) The item of equipment is of a type identified in table 35 of this subpart;

(c) The item of equipment is part of a chemical manufacturing process unit that meets the criteria of 40 CFR 63.100(b) of subpart F of this part;

(d) The item of equipment is controlled less stringently than in table 35 and is not listed in 40 CFR 63.100(f) of subpart F of this part, and the item of equipment is not otherwise exempt from controls by the provisions of subparts A, F, G, or H of this part; and

§§ 63.150 Emissions averaging provisions.

(a) This section applies to owners or operators of existing sources who seek to comply with the emission standard in 40 CFR 63.112(a) of this subpart by using emissions averaging according to 40 CFR 63.112(f) of this subpart rather than following the provisions of 40 CFR 63.113 through 63.148 of this subpart. Notwithstanding the definition of process vent in 40 CFR 63.101 and the sampling site designation in 40 CFR 63.115(a), for purposes of this section the location of a process vent shall be defined, and the characteristics of its gas stream shall be determined, consistent with paragraph (g)(2)(i) of this section.

(b) Unless an operating permit application has been submitted, the owner or operator shall develop and submit for approval an Implementation Plan containing all of the information required in 40 CFR 63.151(d) of this subpart for all points to be included in an emissions average. The Implementation Plan or operating permit application shall identify all emission points to be included in the emissions average. This must include any Group 1 emission points to

which the reference control technology (defined in 40 CFR 63.111 of this subpart) is not applied and all other emission points being controlled as part of the average.

(c) The following emission points can be used to generate emissions averaging credits, if control was applied after November 15, 1990 and if sufficient information is available to determine the appropriate value of credits for the emission point:

(1) Group 2 emission points.

(2) Group 1 emission points that are controlled by a technology that the Administrator or permitting authority agrees has a higher nominal efficiency than the reference control technology. Information on the nominal efficiencies for such technologies must be submitted and approved as provided in paragraph (i) of this section.

(3) Emission points from which emissions are reduced by pollution prevention measures. Percent reductions for pollution prevention measures shall be determined as specified in paragraph (j) of this section.

(i) For a Group 1 emission point, the pollution prevention measure must reduce emissions more than the reference control technology would have had the reference control technology been applied to the emission point instead of the pollution prevention measure except as provided in paragraph (c)(3)(ii) of this section.

(ii) If a pollution prevention measure is used in conjunction with other controls for a Group 1 emission point, the pollution prevention measure alone does not have to reduce emissions more than the reference control technology, but the combination of the pollution prevention measure and other controls must reduce emissions more than the reference control technology would have had it been applied instead.

(d) The following emission points cannot be used to generate emissions averaging credits:

(1) Emission points already controlled on or before November 15, 1990, unless the level of control is increased after November 15, 1990, in which case credit will be allowed only for the increase in control after November 15, 1990.

(2) Group 1 emission points that are controlled by a reference control technology, 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. For example, it is not allowable to claim that an internal floating roof meeting the specifications of 40 CFR 63.119(b) of this subpart applied to a storage vessel is achieving greater than 95 percent control.

(3) Emission points on shut-down process units. Process units that are shut down cannot be used to generate credits or debits.

(4) Wastewater that is not process wastewater or wastewater streams treated in biological treatment units. 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, unless the level of control has been increased after November 15, 1990 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 point is subsequently made subject to a State or Federal rule other than this subpart, the point can continue to generate emissions averaging credit for the purpose of complying with the previously approved average.

(e) For all points included in an emissions average, the owner or operator shall:

(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 for those emission points. Equations in paragraph (g) of this section shall be used to calculate debits.

(2) Calculate and record monthly credits for all Group 1 or Group 2 emission points that are overcontrolled 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 average in order to increase the likelihood of being in compliance.

(ii) The initial demonstration in the Implementation Plan or operating permit application that credit-generating emission points will be capable of generating sufficient credits to offset the debits from the debit-generating emission points must be made under representative operating conditions. After the compliance date, actual operating data will be used for all debit and credit calculations.

(4) Demonstrate that debits calculated for a quarterly (3-month) period according to paragraph (g) of this section are not more than 1.30 times the credits for the same period calculated according to paragraph (h) of this section. Compliance for the quarter shall be determined based on the ratio of credits and debits from that quarter, with 30 percent more debits than credits allowed on a quarterly basis.

(5) Record and report quarterly and annual credits and debits in the Periodic Reports as specified in 40 CFR 63.152(c) of this subpart. Every fourth Periodic Report shall include a certification of compliance with the emissions averaging provisions as required by 40 CFR 63.152(c)(5)(iv)(B) of this subpart.

(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 from the following:

(1) More than 20 individual Group 1 or Group 2 emission points. Where pollution prevention measures (as specified in paragraph (j)(1) of this section) are used to control emission points to be included in an emissions average, no more than 25 emission points may be included in the average. For example, if two emission points to be included in an emissions average are controlled by pollution prevention measures, the average may include up to 22 emission points.

(2) Periods of start-up, shutdown, and malfunction as described in the source's start-up, shutdown, and malfunction plan required by 40 CFR 63.6(e)(3) of subpart A of this part.

(3) Periods of monitoring excursions as defined in ? 63.152(c)(2)(ii)(A) of this subpart. For these periods, the calculation of monthly credits and debits shall be adjusted as specified in paragraphs (f)(3)(i) through (f)(3)(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 reference control technology, and the emissions allowed for the Group 1 emission point. Debits shall be calculated as follows:

(1) The overall equation for calculating source-wide debits is:

Debits = (sum) n to i=1 [EPViactual - (0.02)(EPViu)] + (sum) n to i=1 [ESiactual - (0.05)(ESiu)] + (sum) n to i=1 [ETRiactual - (0.02)(ETRiu)] + (sum) n to i=1 [EWWiactual - (EWWic)

where:

Debits and all terms of the equation are in units of megagrams per month, and

EPViACTUAL=Emissions from each Group 1 process vent i that is uncontrolled or is controlled to a level less stringent than the reference control technology. This is calculated according to paragraph (g)(2) of this section.

(0.02) EPViu=Emissions from each Group 1 vent i if the reference control technology had been applied to the uncontrolled emissions, calculated according to paragraph (g)(2) 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 reference control technology. This is calculated according to paragraph (g)(3) of this section.

(0.05) ESiu=Emissions from each Group 1 storage vessel i if the reference control technology had been applied to the uncontrolled emissions, calculated according to paragraph (g)(3) of this section.

ETRiACTUAL=Emissions from each Group 1 transfer rack i that is uncontrolled or is controlled to a level less stringent than the reference control technology. This is calculated according to paragraph (g)(4) of this section.

(0.02) ETRiu=Emissions from each Group 1 transfer rack i if the reference control technology had been applied to the uncontrolled emissions, calculated according to paragraph (g)(4) of this section.

EWWiACTUAL=Emissions from each Group 1 wastewater stream i that is uncontrolled or is controlled to a level less stringent than the reference control technology. This is calculated according to paragraph (g)(5) of this section.

EWWic=Emissions from each Group 1 wastewater stream i if the reference control technology had been applied to the uncontrolled emissions. This is calculated according to paragraph (g)(5) of this section.

n=The number of emission points being included in the emissions average. The value of n is not necessarily the same for process vents, storage vessels, transfer racks, and wastewater.

(2) Emissions from process vents shall be calculated according to paragraphs (g)(2)(i) through (iii) of this section.

(i) The location of a process vent shall be defined, and the characteristics of its gas stream shall be determined at a point that meets the conditions in either paragraph (g)(2)(i)(A) or (B) of this section and the conditions in paragraphs (g)(2)(i)(C) through (E) of this section.

(A) The point is after the final recovery device (if any recovery devices are present).

(B) If a gas stream included in an emissions average is combined with one or more other gas streams after a final recovery device (if any recovery devices are present), then for each gas stream, the point is at a representative point after any final recovery device and as near as feasible to, but before, the point of combination of the gas streams.

(C) The point is before any control device (for process vents, recovery devices shall not be considered control devices).

(D) The point is before discharge to the atmosphere.

(E) The measurement site for determination of the characteristics of the gas stream was selected using Method 1 or 1A of 40 CFR part 60, appendix A.

(ii) The following equation shall be used for each process vent i to calculate EPViu:

EPViu = (2.494 X 10^-9) Qh[(sum) n to j=1 Cj * Mj]

where:

EPViu=Uncontrolled process vent emission rate from 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 of part 60, appendix A, as appropriate.

h=Monthly hours of operation during which positive flow is present in the vent, hours per month.

Cj=Concentration, parts per million by volume, dry basis, of organic HAP j as measured by Method 18 of part 60, appendix A.

Mj=Molecular weight of organic HAP j, gram per gram-mole.

n=Number of organic HAP's.

(A) The values of Q, Cj, and Mj shall be determined during a performance test conducted under representative operating conditions. The values of Q, Cj, and Mj shall be established in the Notification of Compliance Status and must be updated as provided in paragraph (g)(2)(ii)(B) of this section.

(B) If there is a change in capacity utilization other than a change in monthly operating hours, or if any other change is made to the process or product recovery equipment or operation such that the previously measured values of Q, Cj, and Mj are no longer representative, a new performance test shall be conducted to determine new representative values of Q, Cj,

and Mj. 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 EPViACTUAL:

(A) If the vent is not controlled by a control device or pollution prevention measure, EPViACTUAL = EPViu, where EPViu is calculated according to the procedures in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(B) If the vent is controlled using a control device or a pollution prevention measure achieving less than 98-percent reduction,

EPViactual = EPViu x {1 - [% reduction / 100%]}

(1) The percent reduction shall be measured according to the procedures in ? 63.116 of this subpart if a combustion control device is used. For a flare meeting the criteria in 40 CFR 63.116(a) of this subpart, or a boiler or process heater meeting the criteria in 40 CFR 63.116(b) of this subpart, the percent reduction shall be 98 percent. If a non-combustion control device is used, percent reduction shall be demonstrated by a performance test at the inlet and outlet of the device, or, if testing is not feasible, by a control design evaluation and documented engineering calculations.

(2) For determining debits from Group 1 process vents, recovery devices shall not be considered control devices and cannot be assigned a percent reduction in calculating EPViACTUAL. The sampling site for measurement of uncontrolled emissions is after the final recovery device. However, as provided in 40 CFR 63.113(a)(3), a Group 1 process vent may add sufficient recovery to raise the TRE index value above 1.0, thereby becoming a Group 2 process vent.

(3) Procedures for calculating the percent reduction of pollution prevention measures are specified in paragraph (j) of this section.

(3) Emissions from storage vessels shall be calculated as follows:

(i) The following equation shall be used for each storage vessel i to calculate ESiu:

ESiu = LB + LW / 12

where:

ESiu=Uncontrolled emissions, defined as emissions from a fixed roof vessel having identical dimensions and vessel color as vessel i, megagrams per month.

LB=Breathing loss emissions, megagrams per year, calculated according to paragraph (g)(3)(i)(A) of this section.

LW=Working loss emissions, megagrams per year, calculated according to paragraph (g)(3)(i)(B) of this section.

12=Constant, months per year.

(A) Breathing loss emissions shall be calculated using the following equation:

LB = 1.02 x 10^-5 *Mv[P / PA - P] 0.68D * 1.73H * 0.51(delta)T * 0.5FpCKC

where:

Mv=Molecular weight of vapor in storage vessel, pound per pound-mole.

PA=Average atmospheric pressure, pounds per square inch absolute.

P=True vapor pressure of the HAP at liquid storage temperature, pounds per square inch absolute. See table 21 of this subpart.

D = Tank diameter, feet.

H=Average vapor space height, feet. Use vessel-specific values or an assumed value of one-half the height.

degrees T=Average ambient diurnal temperature change, degrees F. A typical value of 20 ?F may be used.

Fp=Paint factor, dimensionless, from table 22 of this subpart; use Fp=1 for vessels located indoors.

C=Adjustment factor for small diameter tanks, dimensionless; use C=1 for diameter =30 feet; use C = 0.0771D - 0.0013D2 - 0.1334 for diameter <30 feet.

KC=Product factor, dimensionless. Use 1.0 for organic HAP's.

(B) Working losses shall be calculated using the following equation: LW=1.089 x 10-8 Mv (P)(V)(N) (KN) (KC) where:

V=Tank capacity, gallon.

N=Number of turnovers per year.

KN=Turnover factor, dimensionless, and

KN = 180 + N / 6N for turnovers >36

KN=1 for turnovers<36

Mv, P, and KC as defined in paragraph (g)(3)(i)(A) of this section.

(C) The owner or operator may elect to calculate ESiu in accordance with the methods described in American Petroleum Institute Publication 2518, Evaporative Loss from Fixed-Roof Tanks (incorporated by reference as specified in 40 CFR 63.14 of this part).

(1) The owner or operator who elects to use these alternative methods must use them for all storage vessels included in the emissions average as debit or credit generating points.

(2) The equations of paragraphs (g)(3)(i)(A) and (g)(3)(i)(B) of this section shall not be used in conjunction with the alternative methods provided under paragraph (g)(3)(i)(C) of this section.

(ii) The following procedures and equations shall be used for each fixed roof storage vessel i that is not controlled with a floating roof to calculate ESiACTUAL:

(A) If the vessel is not controlled, ESiACTUAL = ESiu, where ESiu is calculated according to the procedures in paragraph (g)(3)(i) of this section.

(B) Except as provided in paragraph (g)(3)(ii)(C) of this section, if the vessel is controlled using a control device or pollution prevention measure achieving less than 95-percent reduction,

ESiactual = ESiu * [1 - % reduction / 100]

(1) The percent reduction for a control device shall be determined through a design evaluation according to the procedures specified in 40 CFR 63.120(d) of this subpart.

(2) Procedures for calculating the percent reduction for pollution prevention measures are specified in paragraph (j) of this section.

(B) Rim seal loss emissions shall be calculated using the following equation:

LR = [K5 x Vn x P* x D x Mv x Ks / 2205]

where:

Mv=Molecular weight of vapor in storage vessel, pound per pound-mole.

D=Tank diameter, feet.

Kc=Product factor, dimensionless; use 1.0 for organic HAP's.

Ks=Seal factor, pound-mole per [foot (miles per hour)n year], see table 26 of this subpart.

V=Average wind speed at the source, miles per hour. A value of 10 miles per hour may be assumed if source-specific data are not available.

n=Seal related wind speed exponent, dimensionless, see table 26 of this subpart.

2,205=Constant, pounds per megagram.

P*=Vapor pressure function, dimensionless, and

P* = [P / PA] / [1 + (1 - P/PA) * 0.5](squared)

where:

PA=Average atmospheric pressure, pounds per square inch absolute.

P=True vapor pressure at liquid storage temperature, pounds per square inch absolute.

(C) Fitting loss emissions shall be calculated using the following equation:

LF = [Ff x P* x Mv x Kc / 2205]

where:

Ff=The total deck fitting loss factor, pound-mole per year, and where:

Ff = (sum) n to i=1 (NFi * Kfi) = [(NF1 * Kf1) + (NF2 * Kf2) + ... + (NFn * Kfn)

NFi=Number of fittings of a particular type, dimensionless. NFi is determined for the specific tank or estimated from tables 24 and 27 of this subpart.

KFi=Deck fitting loss factor for a particular type fitting, pound-mole per year. KFi is determined for each fitting type from table 27 of this subpart.

n=Number of different types of fittings, dimensionless. P*, Mv, Kc, and 2,205 as defined in paragraph (g)(3)(iii)(B) of this section.

(D) Deck seam loss emissions shall be calculated using the following equation:

LD = [KD x SD x D2 x P* x Mv x Kc / 2205]

where:

KD=Deck seam loss factor, pound-mole per foot per year, and

KD=0.34 for non-welded decks.

KD=0 for welded decks.

SD=Deck seam length factor, feet per square foot, see table 28 of this subpart. D, P*, Mv, Kc, and 2,205 as defined in paragraph (g)(3)(iii)(B) of this section.

(iv) The following equation shall be used for each external floating roof vessel i that does not meet the specifications of 40 CFR 63.119(c) of this subpart to calculate ESiACTUAL:

ESiactual = LW + LR + LF / 12

where:

LW=Withdrawal loss emissions, megagrams per year, calculated according to paragraph (g)(3)(iv)(A) of this section.

LR=Rim seal loss emissions, megagrams per year, calculated according to paragraph (g)(3)(iv)(B) of this section.

LF=Fitting loss emissions, megagrams per year, calculated according to paragraph (g)(3)(iv)(C) of this section.

12=Constant, months per year.

(A) Withdrawal loss emissions shall be calculated using the following equation:

LW = 4.28 x 10^4 * Q * C * WL / D

where:

Q=Throughput, gallons per year.

C=Shell clingage factor, barrel per 1,000 square foot, see table 23 of this subpart.

WL=Average liquid density, pound per gallon.

D=Vessel diameter, feet.

(B) Rim seal loss emissions shall be calculated using the following equation:

LR = K5 x VN x P* x D x MV x Kc / 2205

where:

Ks=Seal factor, pound-mole per [foot (miles per hour)N year], see table 29 of this subpart.

V=Average wind speed, miles per hour, at the source. A value of 10 miles per hour may be assumed if source-specific data are not available.

N=Seal wind speed exponent, dimensionless, see table 29 of this subpart.

P*=Vapor pressure function, dimensionless, as defined in paragraph (g)(3)(iii)(B) of this section.

D=Vessel diameter, feet.

MV=Molecular weight of the HAP, pound per pound-mole.

Kc=Product factor, dimensionless; use 1.0 for organic HAP's.

2,205=Constant, pounds per megagram.

(C) Fitting loss emissions shall be calculated using the following equation:

LF = FF x P* x Mv x Kc / 2205

where:

FF=The total deck fitting loss factor, pound-mole per year, and

FF = (sum) n to i=1 (NFi * KFi) = [(NF1 * KF1) + (NF2 * KF) + ... + (NFn * KFn)

where:

NFi=Number of fittings of a particular type, dimensionless. NFi is determined for the specific tank or estimated from tables 30 through 32 of this subpart.

KFi=Deck fitting loss factor for a particular type fitting, pound-mole per year, and

KFi=KFai+KFbi Vmi, pound-mole per year, see table 30 of this subpart for the appropriate values of KFa, KFb, and m for each fitting type. V, P*, Mv, Kc, and 2,205 as defined in paragraph (g)(3)(iv)(B) of this section.

(4) Emissions from transfer racks shall be calculated as follows:

(i) The following equation shall be used for each transfer rack i to calculate ETRiu:

ETRiu = (1.20 x 10^-7) [SPMG / T]

where:

ETRiu=Uncontrolled transfer HAP emission rate from transfer rack i, megagrams per month.

S=Saturation factor, dimensionless (see table 33 of this subpart).

P=Weighted average rack partial pressure of organic HAP's transferred at the rack during the month, kilopascals.

M = Weighted average molecular weight of organic HAP's transferred at the transfer rack during the month, gram per gram-mole.

G = Monthly volume of organic HAP's transferred, liters per month.

T = Weighted rack bulk liquid loading temperature during the month, Kelvin (degrees C + 273).

(ii) The following equation shall be used for each transfer rack i to calculate the weighted average rack partial pressure:

P = [(sum) j=n to 1 Pj * Gj] / G

where:

Pj = Maximum true vapor pressure of individual organic HAP transferred at the rack, kilopascals.

G = Monthly volume of organic HAP transferred, liters per month, and

G = (sum) j=n to 1 Gj

Gj = Monthly volume of individual organic HAP transferred at the transfer rack, liters per month.

n = Number of organic HAP's transferred at the transfer rack.

(iii) The following equation shall be used for each transfer rack i to calculate the weighted average rack molecular weight:

M = (sum) j=n to 1 Mj * Gj / G

where:

Mj = Molecular weight of individual organic HAP transferred at the rack, gram per gram-mole. G, Gj, and n as defined in paragraph (g)(4)(ii) of this section.

(iv) The following equation shall be used for each transfer rack i to calculate the monthly weighted rack bulk liquid loading temperature:

T = (sum j=n to 1 Tj * Gj / G

where:

Tj = Average annual bulk temperature of individual organic HAP loaded at the transfer rack, Kelvin (degrees C + 273). G, Gj, and n as defined in paragraph (g)(4)(ii) of this section.

(v) The following procedures and equations shall be used to calculate ETRiACTUAL:

(A) If the transfer rack is not controlled, ETRiACTUAL = ETRiu, where ETRiu is calculated using the equations specified in paragraphs (g)(4)(i) through (g)(4)(iv) of this section.

(B) If the transfer rack is controlled using a control device or a pollution prevention measure achieving less than the 98-percent reduction,

ETRiuactual = ETRiu [1- % reduction / 100%]

(1) The percent reduction for a control device shall be measured according to the procedures and test methods specified in 40 CFR 63.128(a) of this subpart. For a flare meeting the criteria in 40 CFR 63.128(b) of this subpart or a boiler or process heater meeting the criteria in 40 CFR 63.128(c) of this subpart, the percent reduction shall be 98 percent. If testing is not feasible, percent reduction shall be determined through a design evaluation according to the procedures specified in 40 CFR 63.128(h) of this subpart.

(2) Procedures for calculating the percent reduction for pollution prevention measures are specified in paragraph (j) of this section.

(5) Emissions from wastewater shall be calculated as follows:

(i) The following equation shall be used for each wastewater stream i to calculate EWWic:

EWWic = [(6.0 x 10^-8) Qi *Hi * (sum) s to m=1 FEm * HAPim] + [(0.05) (6.0 x 10^-8) Qi * Hi * (sum) s to m=1 Frm *HAPim]

where:

EWWic = Monthly wastewater stream emission rate if wastewater stream i is controlled by the reference control technology, megagrams per month.

Qi = Average flow rate for wastewater stream i, as determined by the procedure in 40 CFR 63.144(c)(3), liters per minute.

Hi = Number of hours during the month that wastewater stream i was generated, hours per month.

s = Total number of table 9 HAP in wastewater stream i.

Frm = Fraction removed of table 9 HAP m in wastewater, from table 9, dimensionless.

Fem = Fraction emitted of table 9 HAP m in wastewater, from table 34, dimensionless.

HAPim = Average concentration of table 9 HAP m in wastewater stream i, parts per million by weight.

(A) HAPim shall be determined for the point of determination or, at a location downstream of the point of determination and adjusted according as specified in 40 CFR 63.144(b)(6) of this subpart, by developing and using the sampling plan specified in 40 CFR 63.144(b)(5)(ii) of this subpart. The samples collected may be analyzed by any of the methods specified in 40 CFR 63.144(b)(5)(i)(B) through (b)(5)(i)(F) of this subpart. Concentration measurements based on Method 305 shall be adjusted by dividing each concentration by the compound-specific Fm factor listed on table 34 of this subpart. Concentration measurements other than Method 305 shall not be adjusted by the compound-specific Fm factor listed in table 34 of this subpart.

(B) Values for Qi, HAPim, and Cim shall be determined during a performance test conducted under representative conditions as specified in 40 CFR 63.145(a)(3) and (a)(4) of this subpart. The average value obtained from three test runs shall be used. The values of Qi, HAPim, and Cim shall be established in the Notification of Compliance Status and must be updated as provided in paragraph (g)(5)(i)(C) of this section.

(C) If there is a change to the process or operation such that the previously measured values of Qi, HAPim, and Cim are no longer representative, a new performance test shall be conducted to determine new representative values of Qi, HAPim, and Cim. 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.

(ii) The following equation shall be used to calculate EWWiACTUAL for each wastewater stream i that is not managed according to the provisions for waste management units of 40 CFR 63.133 through 63.137 of this subpart, as applicable, which specify equipment and work practices for suppressing and controlling vapors. Qi, Hi, s, Fem, and HAPim are as defined and determined according to paragraph (g)(5)(i) of this section.

EWWiactual = (6.0 x 10^-8) Qi * Hi * (sum) Fem * HAPim

Where:

EWWiACTUAL = Monthly wastewater stream emission rate if wastewater stream i is uncontrolled or is controlled to a level less stringent than the reference control technology, megagrams per month.

(iii) The following equation shall be used to calculate EWWiACTUAL for each wastewater stream i that is managed according to the requirements of 40 CFR 63.133 through 63.137 of this subpart, as applicable, and wastewater stream i is uncontrolled or is controlled to a level less stringent than the reference control technology (for the purposes of the wastewater emissions averaging provisions, the term control is used to mean treatment). Qi, Hi, s, Fem, and HAPim are as defined and determined according to paragraph (g)(5)(i) of this section.

EWWiactual = (6.0 x 10^-8) Qi * H* * (sum) s to m=1 [Fem * HAPim (1-PRim)] + [1-(Ri/100%)] * (6.0 x 10^-8) Qi * Hi * (sum) s to m=1 (HAPim * PRim)

Where:

EWWiACTUAL = Monthly wastewater stream emission rate if wastewater stream i is uncontrolled or is controlled to a level less stringent than the reference control technology, megagrams per month.

PRim = The efficiency of the treatment process, or series of treatment processes, which treat wastewater stream i, in reducing the emission potential of table 9 HAP m in wastewater, dimensionless, as calculated by:

PRim = [HAPim-in - HAPim-out / HAPim-in

Where:

HAPim-in = Average concentration of table 9 HAP m, parts per million by weight, as defined and determined according to paragraph (g)(5)(i) of this section, in the wastewater entering the first treatment process in the series.

HAPim-out = Average concentration of table 9 HAP m, parts per million by weight, as defined and determined according to paragraph (g)(5)(i) of this section, in the wastewater exiting the last treatment process in the series.

Ri = Reduction efficiency of the device used to control any vapor streams emitted and collected from wastewater stream i during treatment, dimensionless, as determined according to the procedures in 40 CFR 63.145(i) or (j) of this subpart.

(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 a 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. Credits shall be calculated as follows:

(1) The overall equation for calculating source-wide credits is:

Credits = D (sum) n to i=1 [(0.02) EPV1iu - EPV1iactual] + D (sum) m to i=1 [EPV2ibase - EPV2iactual] + D (sum) n to i=1 [(0.05) ES1iu - ES1actual] + D (sum) m to i-1 [ES2ibase - ES2actual] + D (sum) [(0.02) ETR1iu - ETR1iactual] + D (sum) m to i=1 (ETR2ibase - ETR2iactual] + D (sum) n to i=1 [EWW1ic - EWWiacutal] + D (sum) m to i=1 [EWW2ibase - EWW2iactual]

where: Credits and all terms of the equation are in units of megagrams per month, the baseline date is November 15, 1990, and:

D=Discount factor=0.9 for all credit generating emission points except those controlled by a pollution prevention measure, which will not be discounted.

EPV1iACTUAL=Emissions for each Group 1 process vent i that is controlled to a level more stringent than the reference control technology, calculated according to paragraph (h)(2) of this section.

(0.02) EPV1iu=Emissions from each Group 1 process vent i if the reference control technology had been applied to the uncontrolled emissions. EPV1iu is calculated according to paragraph (h)(2) of this section.

EPV2iACTUAL=Emissions from each Group 2 process vent i that is controlled, calculated according to paragraph (h)(2) of this section.

EPV2iBASE=Emissions from each Group 2 process vent i at the baseline date, as calculated in paragraph (h)(2) of this section.

where: Credits and all terms of the equation are in units of megagrams per month, the baseline date is November 15, 1990, and:

D=Discount factor=0.9 for all credit generating emission points except those controlled by a pollution prevention measure, which will not be discounted.

EPV1iACTUAL=Emissions for each Group 1 process vent i that is controlled to a level more stringent than the reference control technology, calculated according to paragraph (h)(2) of this section.

(0.02) EPV1iu=Emissions from each Group 1 process vent i if the reference control technology had been applied to the uncontrolled emissions. EPV1iu is calculated according to paragraph (h)(2) of this section.

EPV2iACTUAL=Emissions from each Group 2 process vent i that is controlled, calculated according to paragraph (h)(2) of this section.

EPV2iBASE=Emissions from each Group 2 process vent i at the baseline date, as calculated in paragraph (h)(2) of this section.

ES1iACTUAL=Emissions from each Group 1 storage vessel i that is controlled to a level more stringent than the reference control technology, calculated according to paragraph (h)(3) of this section.

(0.05) ES1iu=Emissions from each Group 1 storage vessel i if the reference control technology had been applied to the uncontrolled emissions. ES1iu is calculated according to paragraph (h)(3) of this section.

ES2iACTUAL=Emissions from each Group 2 storage vessel i that is controlled, calculated according to paragraph (h)(3) of this section.

ES2iBASE=Emissions from each Group 2 storage vessel i at the baseline date, as calculated in paragraph (h)(3) of this section.

ETR1iACTUAL=Emissions from each Group 1 transfer rack i that is controlled to a level more stringent than the reference control technology, calculated according to paragraph (h)(4) of this section

(i) 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.

(2) Emissions from process vents shall be determined as follows:

(i) Uncontrolled emissions from Group 1 process vents, EPV1iu, shall be calculated according to the procedures and equation for EPViu in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(ii) Actual emissions from Group 1 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, EPV1iACTUAL, shall be calculated according to the following equation:

EPV1iactual = EPV1iu [1 - (nominal efficiency %/100%]

(iii) The following procedures shall be used to calculate actual emissions from Group 2 process vents, EPV2iACTUAL:

(A) For a Group 2 process vent controlled by a control device, a recovery device applied as a pollution prevention project, or a pollution prevention measure, if the control achieves a percent reduction less than or equal to 98 percent reduction,

EPV2iactual = EPV2iu x [1- (% reduction/100%]

(1) EPV2iu shall be calculated according to the equations and procedures for EPViu 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, EPV2iu shall be calculated prior to that recovery device. The equation for EPViu in paragraph (g)(2)(ii) of this section shall be used to calculate EPV2iu; 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 process vent controlled using a technology with an approved nominal efficiency greater than 98 percent or a pollution prevention measure achieving greater than 98 percent reduction,

EPViactual = EPViu [1 - (nominal efficiency %/100%)]

(iv) Emissions from Group 2 process vents at baseline, EPV2iBASE, shall be calculated as follows:

(A) If the process vent was uncontrolled on November 15, 1990, EPV2iBASE=EPV2iu and shall be calculated according to the procedures and equation for EPViu in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(B) If the process vent was controlled on November 15, 1990,

EPV2ibase = EPV2iu [1 -(% reduction/100%)]

where EPV2iu is calculated according to the procedures and equation for EPViu in paragraphs (g)(2)(i) and (g)(2)(ii) of this section. 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 to a process vent as part of a pollution prevention project initiated after November 15, 1990, EPV2iBASE=EPV2iu, where EPV2iu is calculated according to paragraph (h)(2)(iii)(A)(3) of this section.

(3) Emissions from storage vessels shall be determined as follows:

(i) Uncontrolled emissions from Group 1 storage vessels, ES1iu, shall be calculated according to the equations and procedures for ESiu in paragraph (g)(3)(i) of this section.

(ii) Actual emissions from Group 1 storage vessels controlled using a technology with an approved nominal efficiency greater than 95 percent or a pollution prevention measure achieving greater than 95 percent emission reduction, ES1iACTUAL, shall be calculated according to the following equation:

ES1iactual = ES1iu {1 - (nominal efficiency %/100%)]

(iii) The following procedures shall be used to calculate actual emissions from Group 2 storage vessels, ES2iACTUAL:

(A) For a Group 2 storage vessel controlled using a control device or a pollution prevention measure (other than an internal or external floating roof) achieving a percent reduction less than or equal to 95-percent reduction,

ES2iactual = ES2iu [1 - (% reduction/100%)]

(1) ES2iu is calculated according to the equations and procedures for ESiu in paragraph (g)(3)(i) of this section.

(2) The percent reduction shall be calculated according to the procedures in paragraphs (g)(3)(ii)(B)(1) and (g)(3)(ii)(B)(2) of this section.

(3) If an internal or external floating roof meeting the specifications of ? 63.119 (b), (c), or (d) of this subpart is used to control the vessel, the percent reduction shall be 95 percent.

(B) If a Group 2 storage vessel is controlled with an internal or external floating roof not meeting the specifications of 40 CFR 63.119 (b), (c), or (d) of this subpart, ES2iACTUAL shall be calculated as specified for ESiACTUAL in paragraph (g)(3)(iii) or (g)(3)(iv) of this section.

(C) For a Group 2 storage vessel controlled using a technology with an approved nominal efficiency greater than 95 percent or a pollution prevention measure achieving greater than 95 percent reduction,

ES2iacutal = ES2iu [1 - (nominal efficiency %/100%)]

(iv) Emissions from Group 2 storage vessels at baseline, ES2iBASE, shall be calculated as follows:

(A) If the fixed-roof vessel was uncontrolled on November 15, 1990, ES2iBASE=ES2iu and shall be calculated according to the procedures and equations for ESiu in paragraph (g)(3)(i) of this section.

(B) If the storage vessel was controlled on November 15, 1990:

(1) The equations for ESiACTUAL in paragraph (g)(3)(iii) of this section shall be used to calculate ES2iBASE for vessels controlled with an internal floating roof that does not meet the specifications of 40 CFR 63.119 (b) or (d) of this subpart.

(2) The equations for ESiACTUAL in paragraph (g)(3)(iv) of this section shall be used to calculate ES2iBASE for vessels controlled with an external floating roof that does not meet the specifications of 40 CFR 63.119(c) of this subpart.

(3) The following equations shall be used to calculate ES2iBASE for vessels controlled with a control device,

ES2ibase = ES2iu [1- (% reduction/100%)]

where ES2iu shall be calculated according to the equations for ESiu in paragraph (g)(3)(i) of this section. The percent reduction shall be calculated according to the procedures in paragraphs (g)(3)(ii)(B)(1) and (g)(3)(ii)(B)(2) of this section.

(4) Emissions from transfer racks shall be determined as follows:

(i) Uncontrolled emissions from Group 1 transfer racks, ETR1iu, shall be calculated according to the procedures and equations for ETRiu as described in paragraphs (g)(4)(i) through (g)(4)(iv) of this section.

(ii) Actual emissions from Group 1 transfer racks 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, ETRiACTUAL, shall be calculated according to the following equation:

ETR1iactual = ETR1iu [1 - (nominal efficiency %/100%)]

(iii) The following procedures shall be used to calculate actual emissions from Group 2 transfer racks, ETR2iACTUAL:

(A) For a Group 2 transfer rack controlled by a control device or a pollution prevention measure achieving a percent reduction less than or equal to 98 percent reduction,

ETR2 iactual = ETR2iu [1- (% reduction/100%)]

(1) ETR2iu shall be calculated according to the equations and procedures for ETRiu in paragraphs (g)(4)(i) through (g)(4)(iv) of this section.

(2) The percent reduction shall be calculated according to the procedures in paragraph (g)(4)(v)(B)(1) and (g)(4)(v)(B)(2) of this section.

(B) For a Group 2 transfer rack controlled using a technology with an approved nominal efficiency greater than 98 percent or a pollution prevention measure achieving greater than 98 percent reduction,

ETR2iactual = ETR2iu [1- (nominal efficiency %/100%)]

(iv) Emissions from Group 2 transfer racks at baseline, ETR2iBASE, shall be calculated as follows:

(A) If the transfer rack was uncontrolled on November 15, 1990, ETR2iBASE=ETR2iu and shall be calculated according to the procedures and equations for ETRiu in paragraphs (g)(4)(i) through (g)(4)(iv) of this section.

(B) If the transfer rack was controlled on November 15, 1990,

ETR2base = ETR2iu [1- (% reduction/100%)]

where ETR2iu is calculated according to the procedures and equations for ETRiu in paragraphs (g)(4)(i) through (g)(4)(iv) of this section. Percent reduction shall be calculated according to the procedures in paragraphs (g)(4)(v)(B)(1) and (g)(4)(v)(B)(2) of this section.

(5) Emissions from wastewater shall be determined as follows:

(i) EWW1ic shall be calculated according to the equation for EWWic in paragraph (g)(5)(i) of this section.

(ii) EWW2iBASE shall be calculated according to the equation for EWWiACTUAL in paragraph (g)(5)(ii) of this section for each Group 2 wastewater stream i, which on November 15, 1990, was not managed according to the requirements of 40 CFR 63.133 through 63.137 of this subpart, as applicable.

(iii) EWW2iBASE shall be calculated according to the equation for EWWiACTUAL in paragraph (g)(5)(iii) of this section for each Group 2 wastewater stream i, which on November 15, 1990, was managed according to the requirements of 40 CFR 63.133 through 63.137 of this subpart, as applicable, and was uncontrolled or controlled to a level less stringent than the reference control technology.

(iv) For Group 2 wastewater streams that are managed according to the requirements of 40 CFR 63.133 through 63.137 of this subpart, as applicable, EWW2iACTUAL shall be calculated as follows:

(A) EWW2iACTUAL shall be calculated according to the equation for EWWiACTUAL in paragraph (g)(5)(iii) of this section for each Group 2 wastewater stream i that is controlled to a level less stringent than, or equivalent to, the reference control technology.

(B) EWW2iACTUAL shall be calculated according to the procedures for calculating EWW1iACTUAL in paragraph (h)(5)(v) of this section for each Group 2 wastewater stream that is controlled to a level more stringent than the reference control technology.

(v) The following equations for EWW1iACTUAL shall be used to calculate emissions from each Group 1 wastewater stream i that is managed according to the requirements of 40 CFR 63.133 through 63.137 of this subpart, as applicable, and is controlled to a level more stringent than the reference control technology.

(A) If the Group 1 wastewater stream i is controlled using a treatment process or series of treatment processes with an approved nominal reduction efficiency in the concentration of table 9 HAP for stream i greater than that of the design steam stripper specified in 40 CFR 63.138(d) of this subpart, and the control device used to reduce table 9 HAP emissions from the vapor stream(s) vented from the treatment process(es) achieves a percent reduction equal to 95 percent, the following equation shall be used. All terms in this equation are as defined and determined in paragraph (g)(5) of this section.

EWW1iactual = (6.0 x 10^-8) * Qi * Hi * (sum) s to m=1 [FEm * HAPim (1-Frm] + [1-(nominal efficiency %/100%] (6.0 x 10^-8) * Qi * Hi * (sum s to m=1 [HAPim * Frm]

(B) If the Group 1 wastewater stream i is not controlled using a treatment process or series of treatment processes with a nominal reduction efficiency in the table 9 HAP concentration greater than that of the design steam stripper specified in 40 CFR 63.138(d) of this

subpart, but the vapor stream(s) vented from the treatment process(es) are controlled using a device with an approved nominal efficiency greater than 95 percent, the following equation shall be used. All terms other than nominal efficiency are as defined and determined in paragraph (g)(5) of this section.

EWW1iactual = (6.0 x 10^-8) * Qi * Hi (sum) s to m=1 [Fem * HAPim (1 - Frm)] + [1 - (nominal efficiency %/100%)] * (6.0 x 10^-8) * Qi * Hi * (sum) s to m=1 [HAPim * Frm]

(C) If the Group 1 wastewater stream i is controlled using a treatment process or series of treatment processes with an approved nominal reduction efficiency in the table 9 HAP concentration greater than that of the design steam stripper specified in 40 CFR 63.138(d) of this subpart, and the vapor stream(s) vented from the treatment process are controlled using a device with an approved nominal efficiency greater than 95 percent, the following equation shall be used. All terms other than nominal efficiency are as defined and determined in paragraph (g)(5) of this section.

EWW1iactual = (6.0 x 10^1-8) * Qi * Hi * (sum) s to m=1 [Fem * HAPim (1-PRim)] + [1 - (nominal efficiency %/100%] (6.0 x 10^-8) * Qi * Hi * (sum) s to m=1 [SAPim *PRim]

(i) The following procedures shall be followed to establish nominal efficiencies. 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 40 CFR 63.111 of this subpart.

(1) In those cases where the owner or operator is seeking permission to take credit for use of a control technology that is different in use or design from the reference control technology, and the different control technology will be used in more than three applications at a single plant-site, the owner or operator shall submit the information specified in paragraphs (i)(1)(i) through (i)(1)(iv) of this section to the Director of the EPA Office of Air Quality Planning and Standards in writing:

(i) Emission stream characteristics of each emission point to which the control technology is or will be applied including the kind of emission point, flow, organic HAP concentration, and all other stream characteristics necessary to design the control technology or determine its performance.

(ii) Description of the control technology including design specifications.

(iii) Documentation demonstrating to the Administrator's satisfaction the control efficiency of the control technology. This may include performance test data collected using an appropriate EPA method or any other method validated according to Method 301 of appendix A of this part. If it is infeasible to obtain test data, documentation may include a

design evaluation and calculations. The engineering basis of the calculation procedures and all inputs and assumptions made in the calculations shall be documented.

(iv) A description of the parameter or parameters to be monitored to ensure that the control technology will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

(2) The Administrator shall determine within 120 calendar 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 calendar 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 condition permission to take emission credits for use of the control technology on requirements that may be necessary to ensure operation and maintenance to achieve the specified nominal efficiency.

(5) In those cases where the owner or operator is seeking permission to take credit for use of a control technology that is different in use or design from the reference control technology and the different control technology will be used in no more than three applications at a single plant site, the information listed in paragraphs (i)(1)(i) through (i)(1)(iv) can be submitted to the permitting authority for the source for approval instead of the Administrator.

(i) In these instances, use and conditions for use of the control technology can be approved by the permitting authority as part of an operating permit application or modification. The permitting authority shall follow the procedures specified in paragraphs (i)(2) through (i)(4) of this section except that, in these instances, a Federal Register notice is not required to establish the nominal efficiency for the different technology.

(ii) If, in reviewing the application, the permitting authority believes the control technology has broad applicability for use by other 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:

(1) A pollution prevention measure is any practice which 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 HAP emissions; alterations to the production process to reduce the volume of materials released to the environment; equipment modifications; housekeeping measures; and in-process recycling that returns waste materials directly to production as raw materials. Production cutbacks do not qualify as pollution prevention.

(2) The emission reduction efficiency of pollution prevention measures implemented after November 15, 1990, can be used in calculating the actual emissions from an emission point in the debit and credit equations in paragraphs (g) and (h) of this section. When the term "organic HAP" is used in ? 63.150(j)(2) in reference to wastewater emission points, the term "table 9 HAP" shall apply for the purposes of this paragraph.

(i) For pollution prevention measures, the percent reduction used in the equations in paragraphs (g)(2) through (g)(5) of this section and paragraphs (h)(2) through (h)(5) of this section is the percent difference between the monthly organic HAP emissions for each emission point after the pollution prevention measure for the most recent month versus monthly emissions from the same emission point before the pollution prevention measure, adjusted by the volume of product produced during the two monthly periods.

(ii) The following equation shall be used to calculate the percent reduction of a pollution prevention measure for each emission point.

% reduction = [EB - (Epp x Pb)/Ppp / EB] (100%)

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.

Epp=Monthly emissions after the pollution prevention measure, megagrams per month, as determined for the most recent month, determined as specified in paragraphs (j)(2)(ii)(D) or (j)(2)(ii)(E) of this section.

PB=Monthly production before the pollution prevention measure, megagrams per month, during the same period over which EB is calculated.

Ppp=Monthly production after the pollution prevention measure, megagrams per month, as determined for the most recent month.

(B) For wastewater, EB shall be calculated as follows:

EB = (sum) n to i=1 [(6.0 x 10^-8) * QBi * HBi * (sum) Fem * HAPBim]

Where:

n = Number of wastewater streams.

QBi = Average flow rate for wastewater stream i before the pollution prevention measure, defined and determined according to paragraph (g)(5)(i) of this section, liters per minute, before implementation of the pollution prevention measure.

HBi = Number of hours per month that wastewater stream i was discharged before the pollution prevention measure, hours per month.

s = Total number of table 9 HAP in wastewater stream i.

Fem = Fraction emitted of table 9 HAP m in wastewater of this subpart, dimensionless.

HAPBim = Average concentration of table 9 HAP m in wastewater stream i, defined and determined according to paragraph (g)(5)(i) of this section, before the pollution prevention measure, parts per million by weight, as measured before the implementation of the pollution measure.

(C) If the pollution prevention measure was implemented prior to April 22, 1994, records may be used to determine EB.

(D) The monthly emissions after the pollution prevention measure, Epp, 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, Epp shall be calculated using the following equation:

Epp = (sum) n to i=1 [(6.0 x 10^-8) * Qppi * Hppi *(sum) s to m=1 (Fem * HAPppim)]

where n, Qppi, Hppi, s, Fem, and HAPppim are defined and determined as described in paragraph (j)(2)(ii)(B) of this section except that Qppi, Hppi, and HAPppim shall be determined after the pollution prevention measure has been implemented.

(iii) All equations, calculations, test procedures, test results, and other information used to determine the percent reduction achieved by a pollution prevention measure for each emission point shall be fully documented.

(iv) The same pollution prevention measure may reduce emissions from multiple emission points. In such cases, the percent reduction in emissions for each emission point must be calculated.

(v) For the purposes of the equations in paragraphs (h)(2) through (h)(5) of this section, used to calculate credits for emission points controlled more stringently than the reference control technology, the nominal efficiency of a pollution prevention measure is equivalent to the percent reduction of the pollution prevention measure. When a pollution prevention measure is used, the owner or operator of a source is not required to apply to the Administrator for a nominal efficiency and is not subject to paragraph (i) of this section.

(k) The owner or operator must demonstrate that the emissions from the emission points proposed to be included in the average will not result in greater hazard or, at the option of the operating permit authority, greater risk to human health or the environment than if the emission points were controlled according to the provisions in 40 CFR 63.113 through 63.148.

(1) This demonstration of hazard or risk equivalency shall be made to the satisfaction of the operating permit authority.

(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 Implementation 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 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 ?? 63.113 through 63.148 of this subpart.

(4) A hazard or risk equivalency demonstration must:

(i) Be a quantitative, bona fide chemical hazard or risk assessment;

(ii) Account for differences in chemical hazard or risk to human health or the environment; and

(iii) Meet any requirements set by the Administrator for such demonstrations.

(l) For periods of excursions, an owner or operator may request that the provisions of paragraphs (l)(1) through (l)(4) of this section be followed instead of the procedures in paragraphs (f)(3)(i) and (f)(3)(ii) of this section.

(1) The owner or operator shall notify the Administrator of excursions in the Periodic Reports as required in 40 CFR 63.152 of this subpart.

(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 Group 1 or Group 2 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 40 CFR 63.113 through 63.148 of this subpart. The specific requirements for process vents, storage vessels, transfer racks, and wastewater are identified in paragraphs (m)(1) through (m)(6) of this section.

(1) The source shall implement the following testing, monitoring, recordkeeping, and reporting procedures for each process vent equipped with a flare, incinerator, boiler, or process heater.

(i) Determine, consistent with paragraph (g)(2)(i) of this section, whether the process vent is Group 1 or Group 2 according to the procedures in 40 CFR 63.115.

(ii) Conduct initial performance tests to determine percent reduction as specified in 40 CFR 63.116 of this subpart;

(iii) Monitor the operating parameters, keep records, and submit reports specified in 40 CFR 63.114, 40 CFR 63.117(a), and 40 CFR 63.118 (a), (f), and (g) of this subpart, as appropriate for the specific control device.

(2) The source shall implement the following procedures for each process vent equipped with a carbon adsorber, absorber, or condenser but not equipped with a control device:

(i) Determine, consistent with paragraph (g)(2)(i) of this section, the flow rate, organic HAP concentration, and TRE index value using the methods specified in 40 CFR 63.115;

(ii) Monitor the operating parameters, keep records, and submit reports specified in 40 CFR 63.114, 40 CFR 63.117(a), and 40 CFR 63.118(b), (f), and (g) of this subpart, as appropriate for the specific recovery device.

(3) The source shall implement the following procedures 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 in 40 CFR 63.120 of this subpart,

(ii) Perform the reporting and recordkeeping procedures in 40 CFR 63.122 and 63.123 of this subpart, and

(iii) For closed vent systems with control devices, conduct an initial design evaluation and submit an operating plan as specified in 40 CFR 63.120(d) and 40 CFR 63.122(a)(2) and (b) of this subpart.

(4) The source shall implement the following procedures for each transfer rack controlled with a vapor balancing system, or a vapor collection system and an incinerator, flare, boiler, process heater, adsorber, condenser, or absorber, as appropriate to the control technique:

(i) The monitoring and inspection procedures in 40 CFR 63.127 of this subpart,

(ii) The testing and compliance procedures in 40 CFR 63.128 of this subpart, and

(iii) The reporting and recordkeeping procedures in 40 CFR 63.129 and 40 CFR 63.130 of this subpart.

(5) The source shall implement the following procedures for wastewater emission points, as appropriate to the control techniques:

(i) For wastewater treatment processes, conduct tests as specified in 40 CFR 63.138(j) of this subpart.

(ii) Conduct inspections and monitoring as specified in 40 CFR 63.143 of this subpart.

(iii) A recordkeeping program as specified in 40 CFR 63.147 of this subpart.

(iv) A reporting program as specified in 40 CFR 63.146 of this subpart.

(6) 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 specified in 40 CFR 63.114, 40 CFR 63.120, 40 CFR 63.127, or 40 CFR 63.143 of this subpart, the owner or operator shall submit the information specified in 40 CFR 63.151(f) of this subpart in the Implementation Plan or operating permit application.

(n) Records of all information required to calculate emission debits and credits shall be retained for five years.

(o) Initial Notifications, Implementation Plans, Notifications of Compliance Status, Periodic Reports, and other reports shall be submitted as required by 40 CFR 63.151 and 40 CFR 63.152 of this subpart.

§§ 63.151 Initial notification.

(a) Each owner or operator of a source subject to this subpart shall submit the reports listed in paragraphs (a)(1) through (a)(5) of this section. Owners or operators requesting an extension of compliance shall also submit the report listed in paragraph (a)(6) of this section.

(1) An Initial Notification described in paragraph (b) of this section, and

(2) An Implementation Plan for new sources subject to this subpart or for emission points to be included in an emissions average, unless an operating permit application has been submitted prior to the date the Implementation Plan is due and the owner or operator has elected to include the information specified in 40 CFR 63.152(e) in that application. The submittal date and contents of the Implementation Plan are specified in paragraphs (c) and (d) of this section.

(3) A Notification of Compliance Status described in 40 CFR 63.152 of this subpart,

(4) Periodic Reports described in 40 CFR 63.152 of this subpart, and

(5) Other reports described in 40 CFR 63.152 of this subpart.

(6) Pursuant to section 112(i)(3)(B) of the Act, an owner or operator may request an extension allowing the existing source up to 1 additional year to comply with section 112(d) standards.

(i) 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 as part of the Initial Notification or as a separate submittal. Requests for extensions shall be submitted no later than 120 days prior to the compliance dates specified in 40 CFR 63.100(k)(2), 40 CFR 63.100(l)(4), and 40 CFR 63.100(m) of subpart F of this part, except as provided for in paragraph (a)(6)(iv) of this section. The dates specified in 40 CFR 63.6(i) of subpart A of this part for submittal of requests for extensions shall not apply to sources subject to this subpart G.

(ii) A request for an extension of compliance must include the data described in ? 63.6(i)(6)(i) (A), (B), and (D) of subpart A of this part.

(iii) The requirements in 40 CFR 63.6(i)(8) through (i)(14) of subpart A will govern the review and approval of requests for extensions of compliance with this subpart.

(iv) An owner or operator may submit a compliance extension request after the date specified in paragraph (a)(6)(i) of this section provided the need for the compliance extension arose after that date and before the otherwise applicable compliance 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 in paragraph (a)(6)(ii) of this section, a statement of the reasons additional time is needed and the date when the owner or operator first learned of the problem.

(7) The reporting requirements for storage vessels are located in 40 CFR 63.122 of this subpart.

(b) Each owner or operator of an existing or new source subject to subpart G shall submit a written Initial Notification to the Administrator, containing the information described in paragraph (b)(1) of this section, according to the schedule in paragraph (b)(2) of this section. The Initial Notification provisions in 40 CFR 63.9(b)(2), (b)(3), and (b)(6) of subpart A shall not apply to owners or operators of sources subject to subpart G.

(1) The Initial Notification shall include the following information:

(i) The name and address of the owner or operator;

(ii) The address (physical location) of the affected source;

(iii) An identification of the kinds of emission points within the source that are subject to this subpart;

(iv) An identification of the chemical manufacturing processes subject to subpart G; and

(v) A statement of whether the source can achieve compliance by the relevant compliance date specified in 40 CFR 63.100 of subpart F.

(2) The Initial Notification shall be submitted according to the schedule in paragraph (b)(2)(i), (b)(2)(ii), or (b)(2)(iii) of this section, as applicable.

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

(ii) For a new source that has an initial start-up 90 calendar days after the date of promulgation of this subpart or later, the application for approval of construction or reconstruction required by 40 CFR 63.5(d) of subpart A shall be submitted in lieu of the Initial Notification. The application shall be submitted as soon as practicable before construction or reconstruction is planned to commence (but it need not be sooner than 90 calendar days after the date of promulgation of this subpart).

(iii) For a new source that has an initial start-up prior to 90 calendar days after the date of promulgation, the Initial Notification shall be submitted within 90 calendar days after the date of promulgation of this subpart. The application for approval of construction or reconstruction described in 40 CFR 63.5(d) of subpart A is not required for these sources.

(c) Each owner or operator of an existing source with emission points that will be included in an emissions average or new source subject to this subpart must submit an Implementation Plan to the Administrator by the dates specified in paragraphs (c)(1) and (c)(2) of this section, unless an operating permit application accompanied by the information specified in 40 CFR 63.152(e) of this subpart has been submitted. The Implementation Plan for emissions averaging is subject to Administrator approval.

(1) Each owner or operator of an existing source subject to this subpart who elects to comply with 40 CFR 63.112 of this subpart by using emissions averaging for any emission points, and who has not submitted an operating permit application accompanied by the information specified in 40 CFR 63.152(e) of this subpart at least 18 months prior to the compliance dates specified in 40 CFR 63.100 of subpart F of this part, shall develop an Implementation Plan for emissions averaging. For existing sources, the Implementation Plan for those emission points to be included in an emissions average shall be submitted no later than 18 months prior to the compliance dates in 40 CFR 63.100 of subpart F of this part.

(2) Each owner or operator of a new source shall submit an Implementation Plan by the date specified in paragraphs (c)(2)(i) or (c)(2)(ii) of this section, as applicable, unless an operating permit application containing the information in paragraph (e) of this section has been submitted by that date.

(i) For a new source that has an initial start-up 90 calendar days after the date of promulgation of this subpart or later, the Implementation Plan shall be submitted with the application for approval of construction or reconstruction by the date specified in paragraph (b)(2)(ii) of this section.

(ii) For a new source that has an initial start-up prior to 90 calendar days after the date of promulgation, the Implementation Plan shall be submitted within 90 calendar days after the date of promulgation of this subpart.

(3) The Administrator shall determine within 120 calendar days whether the Implementation Plan submitted by sources using emissions averaging presents sufficient information. The Administrator shall either approve the Implementation 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 calendar days.

(d) Each owner or operator required to submit an Implementation Plan for emissions averaging shall include in the plan, for all emission points included in the emissions average, the information listed in paragraphs (d)(1) through (d)(8) of this section.

(1) The identification of all emission points in the planned emissions average and notation of whether each point is a Group 1 or Group 2 emission point as defined in 40 CFR 63.111 of this subpart.

(2) The projected emission debits and credits for each emission point and the sum for the emission points involved in the average calculated according to 40 CFR 63.150 of this subpart. The projected credits must be greater than the projected debits, as required under 40 CFR 63.150(e)(3) of this subpart.

(3) 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.

(4) The specific identification of each emission point affected by a pollution prevention measure. To be considered a pollution prevention measure, the criteria in 40 CFR 63.150(j)(1) of this subpart must be met. If the same pollution prevention measure reduces or eliminates emissions from multiple emission points in the average, the owner or operator must identify each of these emission points.

(5) A statement that the compliance demonstration, monitoring, inspection, recordkeeping, and reporting provisions in 40 CFR 63.150(m), (n), and (o) of this subpart that are applicable to each emission point in the emissions average will be implemented beginning on the date of compliance.

(6) Documentation of the information listed in paragraph (d)(6)(i) through (d)(6)(v) of this section for each process vent, storage vessel, or transfer rack included in the average.

(i) 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 process vent group determination, the estimated or measured values of the parameters used in the TRE equation in 40 CFR 63.115(d) of this subpart (flow rate, organic HAP emission rate, TOC emission rate, and net heating value) and the resulting TRE index value shall be submitted.

(ii) The estimated values of all parameters needed for input to the emission debit and credit calculations in 40 CFR 63.150 (g) and (h) of this subpart. These parameter values, or as appropriate, limited ranges for the parameter values, shall be specified in the source's Implementation Plan (or operating permit) as enforceable operating conditions. Changes to these parameters must be reported as required by paragraph (i)(2)(ii) of this section.

(iii) The estimated percent reduction if a control technology achieving a lower percent reduction than the efficiency of the reference control technology, as defined in 40 CFR 63.111 of this subpart, is or will be applied to the emission point.

(iv) 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 40 CFR 63.150(i) of this subpart shall be followed to apply for a nominal efficiency.

(v) The operating plan required in 40 CFR 63.122(a)(2) and (b) of this subpart for each storage vessel controlled with a closed-vent system with a control device other than a flare.

(7) The information specified in 40 CFR 63.151(f) of this subpart shall be included in the Implementation Plan for:

(i) Each process vent or transfer rack controlled by a pollution prevention measure or control technique for which monitoring parameters or inspection procedures are not specified in 40 CFR 63.114, 40 CFR 63.126(b)(3), or 40 CFR 63.127 of this subpart, and

(ii) 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.

(8) Documentation of the information listed in paragraph (d)(8)(i) through (d)(8)(iv) for each process wastewater stream included in the average.

(i) The information used to determine whether the wastewater stream is a Group 1 or Group 2 wastewater stream.

(ii) The estimated values of all parameters needed for input to the wastewater emission credit and debit calculations in 40 CFR 63.150 (g)(5) and (h)(5) of this subpart.

(iii) The estimated percent reduction if:

(A) A control technology that achieves an emission reduction less than or equal to the emission reduction achieved by the design steam stripper, as specified in 40 CFR 63.138(g) of this subpart, is or will be applied to the wastewater stream, or

(B) 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

(C) A pollution prevention measure is or will be applied.

(iv) The anticipated nominal efficiency if the owner or operator plans to apply for a nominal efficiency under 40 CFR 63.150(i) of this subpart. A nominal efficiency shall be applied for if:

(A) A control technology is or will be applied to the wastewater stream and achieves an emission reduction greater than the emission reduction achieved by the design steam stripper as specified in 40 CFR 63.138(g) of this subpart, or

(B) 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.

(v) For each pollution prevention measure, treatment process, or control device used to reduce air emissions of organic HAP's from wastewater and for which no monitoring parameters or inspection procedures are specified in 40 CFR 63.143 of this subpart, the information specified in 40 CFR 63.151(f) of this subpart shall be included in the Implementation Plan.

(e) An owner or operator expressly referred to this paragraph shall report, in an Implementation Plan, operating permit application, or as otherwise specified by the permitting authority, the information listed in paragraphs (e)(1) through (e)(5) of this section.

(1) A list designating each emission point complying with 40 CFR 63.113 through 63.149 and whether each emission point is Group 1 or Group 2, as defined in 40 CFR 63.111. For each process vent within the source, provide the information listed in paragraphs (e)(1)(i) through (iv) of this section.

(i) The chemical manufacturing process unit(s) that is the origin of all or part of the vent stream that exits the process vent.

(ii) The type(s) of unit operations (i.e., an air oxidation reactor, distillation unit, or reactor) that creates the vent stream that exits the process vent.

(iii) For a Group 2 process vent, the last recovery device, if any.

(iv) For a Group 1 process vent, the control device, or other equipment used for compliance.

(2) The control technology or method of compliance that will be applied to each Group 1 emission point.

(3) A statement that the compliance demonstration, monitoring, inspection, recordkeeping, and reporting provisions in 40 CFR 63.113 through 63.149 of this subpart that are applicable to each emission point will be implemented beginning on the date of compliance.

(4) The operating plan required in 40 CFR 63.122(a)(2) and (b) of this subpart for each storage vessel controlled with a closed vent system with a control device other than a flare.

(5) The monitoring information in 40 CFR 63.151(f) of this subpart if, for any emission point, the owner or operator of a source seeks to comply through use of a control technique other than those for which monitoring parameters are specified in 40 CFR 63.114 for process vents, 40 CFR 63.127 for transfer, and 40 CFR 63.143 for process wastewater.

(f) The owner or operator who has been directed by any section of this subpart that expressly references this paragraph to set unique monitoring parameters or who requests approval to monitor a different parameter than those listed in 40 CFR 63.114 for process vents, 40 CFR 63.127 for transfer, or 40 CFR 63.143 for process wastewater of this subpart shall submit the information specified in paragraphs (f)(1), (f)(2), and (f)(3) of this section with the operating permit application or as otherwise specified by the permitting authority.

(1) A description of the parameter(s) to be monitored to ensure the control technology 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) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device, the schedule for this demonstration, and a statement that the owner or operator will establish a range for the monitored parameter as part of the Notification of Compliance Status report required in ? 63.152(b) of this subpart, unless this information has already been included in the operating permit application.

(3) The frequency and content of monitoring, recording, and reporting if monitoring and recording is not continuous, or if reports of daily average values when the monitored parameter value is outside the range established in the operating permit or Notification of Compliance Status will not be included in Periodic Reports required under 40 CFR 63.152(c) of this subpart. The rationale for the proposed monitoring, recording, and reporting system shall be included.

(g) An owner or operator may request approval to use alternatives to the continuous operating parameter monitoring and recordkeeping provisions listed in 40 CFR 63.114, 63.117, and 63.118 for process vents, 40 CFR 63.127, 63.129, and 63.130 for transfer operations, and 40 CFR 63.143, 63.146, and 63.147 for wastewater.

(1) Requests shall be included in the operating permit application or as otherwise specified by the permitting authority and shall contain the information specified in paragraphs (g)(3) through (g)(5) of this section, as applicable.

(2) The provisions in 40 CFR 63.8(f)(5)(i) of subpart A shall govern the review and approval of requests.

(3) An owner or operator of a source that does not have an automated monitoring and recording system capable of measuring parameter values at least once every 15 minutes and generating continuous records may request approval to use a non-automated system with less frequent monitoring.

(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 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 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 device operating conditions considering typical variability of the specific process and control device operating parameter being monitored.

(4) An owner or operator may request approval to use an automated data compression recording system that does not record monitored operating parameter values at a set

frequency (for example once every 15 minutes) but records all values that meet set criteria for variation from previously recorded values.

(i) The requested system shall be designed to:

(A) Measure the operating parameter value at least once every 15 minutes.

(B) Record at least four values each hour during periods of operation.

(C) Record the date and time when monitors are turned off or on.

(D) Recognize unchanging data that may indicate the monitor is not functioning properly, alert the operator, and record the incident.

(E) Compute daily average values of the monitored operating parameter based on recorded data.

(F) If the daily average is not an excursion, as defined in 40 CFR 63.152(c)(2)(ii), 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 description of the monitoring system and data compression recording system, including the criteria used to determine which monitored values are recorded and retained, the method for calculating daily averages, and a demonstration that the system meets all criteria in paragraph (g)(4)(i) of this section.

(5) An owner or operator may request approval to use other alternative monitoring systems according to the procedures specified in ? 63.8(f) of subpart A of this part.

(h) The owner or operator required to prepare an Implementation Plan, or otherwise required to submit a report, under paragraph (c), (d), or (e) of this section shall also submit a supplement for any additional alternative controls or operating scenarios that may be used to achieve compliance.

(i) The owner or operator of a source required to submit an Implementation Plan for emissions averaging under paragraphs (c) and (d) of this section shall also submit written updates of the Implementation Plan to the Administrator for approval under the circumstances described in paragraphs (i)(1) and (i)(2) of this section unless the relevant information has been included and submitted in an operating permit application or amendment.

(1) The owner or operator who plans to make a change listed in paragraph (i)(1)(i) or (i)(1)(ii) of this section shall submit an Implementation Plan update at least 120 calendar days prior to making the change.

(i) Whenever an owner or operator elects to achieve compliance with the emissions averaging provisions in ? 63.150 of this subpart by using a control technique other than that specified in the Implementation Plan or plans to monitor a different parameter or operate a control device in a manner other than that specified in the Implementation Plan.

(ii) Whenever an emission point or a chemical manufacturing process unit is added to an existing 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 Implementation Plan is to be added to an emissions average. The information in paragraph (d) of this section shall be updated to include the additional emission point.

(2) The owner or operator who has made a change listed in paragraph (i)(2)(i) or (i)(2)(ii) of this section shall submit an Implementation Plan update within 90 calendar days after the information regarding the change is known to the 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.

(i) Whenever a process change is made such that the group status of any emission point in an emissions average changes.

(ii) Whenever a value of a parameter in the emission credit or debit equations in 40 CFR 63.150(g) or (h) changes such that it is outside the range specified in the Implementation Plan and causes a decrease in the projected credits or an increase in the projected debits.

(3) The Administrator shall approve or request changes to the Implementation Plan update within 120 calendar days of receipt of sufficient information regarding the change for emission points included in emissions averages.

(j) The owner or operator of a source subject to this subpart, for emission points that are not included in an emissions average, shall report to the Administrator under the circumstances described in paragraphs (j)(1), (j)(2), and (j)(3) of this section unless the relevant information has been included and submitted in an operating permit application or amendment, or as otherwise specified by the permitting authority. The information shall be submitted within 180 calendar days after the change is made or the information regarding the change is known to the source. The update may be submitted in the next Periodic Report if the change is made after the date the Notification of Compliance Status is due.

(1) Whenever a deliberate change is made such that the group status of any emission point changes. The information submitted shall include a compliance schedule as specified in 40 CFR 63.100 of subpart F of this part if the emission point becomes Group 1.

(2) Whenever an owner or operator elects to achieve compliance with this subpart by using a control technique other than that previously reported to the Administrator or to the permitting authority, or plans to monitor a different parameter, or operate a control device in a manner other than that previously reported.

(3) Whenever an emission point or a chemical manufacturing process unit is added to a source, written information specified under paragraphs (e)(1) through (e)(5) of this section, containing information on the new emission point(s) shall be submitted to the EPA regional office where the source is located.

§§ 63.152 General reporting and continuous records.

(a) The owner or operator of a source subject to this subpart shall submit the reports listed in paragraphs (a)(1) through (a)(5) of this section and keep continuous records of monitored parameters as specified in paragraph (f) of this section. Owners or operators requesting an extension of compliance shall also submit the report described in ? 63.151(a)(6) of this subpart.

(1) An Initial Notification described in 40 CFR 63.151(b) of this subpart.

(2) An Implementation Plan described in 40 CFR 63.151(c), (d), and (e) of this subpart for existing sources with emission points that are included in an emissions average or for new sources.

(3) A Notification of Compliance Status described in paragraph (b) of this section.

(4) Periodic Reports described in paragraph (c) of this section.

(5) Other reports described in paragraphs (d) and (e) of this section.

(b) Each owner or operator of a source subject to this subpart shall submit a Notification of Compliance Status within 150 calendar days after the compliance dates specified in 40 CFR 63.100 of subpart F of this part.

(1) The notification shall include the results of any emission point group determinations, performance tests, inspections, continuous monitoring system performance evaluations, values of monitored parameters established during performance tests, and any other information used to demonstrate compliance or required to be included in the Notification of Compliance Status under 40 CFR 63.110 (h) for regulatory overlaps, under ? 63.117 for process vents, 40 CFR 63.122 for storage vessels, 40 CFR 63.129 for transfer operations, 40 CFR 63.146 for process wastewater, and 40 CFR 63.150 for emission points included in an emissions average.

(i) For performance tests and group determinations that are based on measurements, the Notification of Compliance Status shall include one complete test report for each test method used for a particular kind of emission point. For additional tests performed for the same kind of emission point using the same method, the results and any other information required in 40 CFR 63.117 for process vents, 40 CFR 63.129 for transfer, and 40 CFR 63.146 for process wastewater shall be submitted, but a complete test report is not required.

(ii) 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.

(2) For each monitored parameter for which a range is required to be established under 40 CFR 63.114 for process vents, 40 CFR 63.127 for transfer, 40 CFR 63.143 for process wastewater, 40 CFR 63.150(m) for emission points in emissions averages, or 40 CFR 63.151(f), or 40 CFR 63.152(e), the Notification of Compliance Status shall include the information in paragraphs (b)(2)(i), (b)(2)(ii), and (b)(2)(iii) of this section, unless the range and the operating day definition have been established in the operating permit. The recordkeeping and reporting requirements applicable to storage vessels are located in 40 CFR 63.122 and 63.123.

(i) The specific range of the monitored parameter(s) for each emission point;

(ii) The rationale for the specific range for each parameter for each emission point, including any data and calculations used to develop the range and a description of why the range indicates proper operation of the control device.

(A) If a performance test is required by this subpart for a control device, the range shall be based on the parameter values measured during the performance test and may be supplemented by engineering assessments and/or manufacturer's recommendations. Performance testing is not required to be conducted over the entire range of permitted parameter values.

(B) If a performance test is not required by this subpart for a control device, the range may be based solely on engineering assessments and/or manufacturer's recommendations.

(iii) A definition of the source's operating day for purposes of determining daily average values of monitored parameters. The definition shall specify the times at which an operating day begins and ends.

(3) For emission points included in an emissions average, the Notification of Compliance Status shall include the values of all parameters needed for input to the emission credit and debit equations in 40 CFR 63.150 (g) and (h), calculated or measured according to

the procedures in 40 CFR 63.150 (g) and (h) of this subpart, and the resulting calculation of credits and debits for the first quarter of the year. The first quarter begins on the compliance date specified in 40 CFR 63.100 of subpart F.

(4) If any emission point is subject to this subpart and to other standards as specified in 40 CFR 63.110 of this subpart and if the provisions of 40 CFR 63.110 of this subpart 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.

(5) An owner or operator who transfers a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream for treatment pursuant to 40 CFR 63.132(g) shall include in the Notification of Compliance Status the name and location of the transferee and a description of the Group 1 wastewater stream or residual sent to the treatment facility.

(6) An owner or operator complying with 40 CFR 63.113(i) shall include in the Notification of Compliance Status, or where applicable, a supplement to the Notification of Compliance Status, the name and location of the transferee, and the identification of the Group 1 process vent

(c) The owner or operator of a source subject to this subpart shall submit Periodic Reports.

(1) Except as specified under paragraphs (c)(5) and (c)(6) of this section, a report containing the information in paragraphs (c)(2), (c)(3), and (c)(4) of this section shall be submitted semiannually no later than 60 calendar days after the end of each 6-month period. The first report shall be submitted no later than 8 months 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.

(2) Except as provided in paragraph (c)(2)(iv) of this section, for an owner or operator of a source complying with the provisions of 40 CFR 63.113 through 63.147 for any emission points, Periodic Reports shall include all information specified in 40 CFR 63.117 and 63.118 for process vents, 40 CFR 63.122 for storage vessels, 40 CFR 63.129 and 63.130 for transfer operations, and 40 CFR 63.146 for process wastewater, including reports of periods when monitored parameters are outside their established ranges.

(i) For each parameter or parameters required to be monitored for a control device, the owner or operator shall establish a range of parameter values to ensure that the device is being applied, operated and maintained properly. As specified in paragraph (b)(2) of this section, these parameter values and the definition of an operating day shall be approved as part of and incorporated into the source's Notification of Compliance Status or operating permit, as appropriate.

(ii) The parameter monitoring data for Group 1 emission points and emission points included in emissions averages that are required to perform continuous monitoring shall be used to determine compliance with the required operating conditions for the monitored control devices or recovery devices. For each excursion, except for excused excursions, the owner or operator shall be deemed to have failed to have applied the control in a manner that achieves the required operating conditions.

(A) An excursion means any of the three cases listed in paragraph (c)(2)(ii)(A)(1), (c)(2)(ii)(A)(2), or (c)(2)(ii)(A)(3) of this section. For a control device or recovery device where multiple parameters are monitored, if one or more of the parameters meets the excursion criteria in paragraph (c)(2)(ii)(A)(1), (c)(2)(ii)(A)(2), or (c)(2)(ii)(A)(3) of this section, this is considered a single excursion for the control device or recovery device.

(1) When the daily average value of one or more monitored parameters is outside the permitted range.

(2) When the period of control device or recovery device operation is 4 hours or greater in an operating day and monitoring data are insufficient to constitute a valid hour of data for at least 75 percent of the operating hours.

(3) When the period of control device or recovery device operation is less than 4 hours in an operating day and more than one of the hours during the period of operation does not constitute a valid hour of data due to insufficient monitoring data.

(4) Monitoring data are insufficient to constitute a valid hour of data, as used in paragraphs (c)(2)(ii)(A)(2) and (c)(2)(ii)(A)(3) of this section, if measured values are unavailable for any of the 15-minute periods within the hour. For data compression systems approved under 40 CFR 63.151(g)(4), monitoring data are insufficient to calculate a valid hour of data if there are less than 4 data values recorded during the hour.

(B) The number of excused excursions for each control device or recovery device for each semiannual period is specified in paragraphs (c)(2)(ii)(B)(1) through (c)(2)(ii)(B)(6) of this section. This paragraph applies to 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.

(C) A monitored parameter that is outside its established range or monitoring data that are not collected are excursions. However, if the conditions in paragraph (c)(2)(ii)(C)(1) or (c)(2)(ii)(C)(2) of this section are met, these excursions are not violations and do not count toward the number of excused excursions for determining compliance.

(1) Periods of start-up, shutdown, or malfunction. During periods of start-up, shutdown, or malfunction when the source is operated during such periods in accordance with the source's start-up, shutdown, and malfunction plan as required by 40 CFR 63.6(e)(3) of subpart A.

(2) Periods of nonoperation. During periods of nonoperation of the chemical manufacturing process unit, or portion thereof, that results in cessation of the emissions to which the monitoring applies.

(D) Nothing in paragraph (c)(2)(ii) of this section shall be construed to allow or excuse a monitoring parameter excursion caused by any activity that violates other applicable provisions of subpart A, F, or G of this part.

(E) Paragraph (c)(2)(ii) of this section, except paragraph (c)(2)(ii)(C) of this section, shall apply only to emission points and control devices or recovery devices for which continuous monitoring is required by 40 CFR 63.113 through 63.150.

(iii) Periodic Reports shall include the daily average values of monitored parameters for both excused and unexcused excursions, as defined in paragraph (c)(2)(ii)(A) of this section. For excursions caused by lack of monitoring data, the duration of periods when monitoring data were not collected shall be specified.

(iv) The provisions of paragraphs (c)(2), (c)(2)(i), (c)(2)(ii), and (c)(2)(iii) of this section do not apply to any storage vessel for which the owner or operator is not required, by the applicable monitoring plan established under 40 CFR 63.120(d)(2), to keep continuous records. If continuous records are required, the owner or operator shall specify, in the monitoring plan, whether the provisions of paragraphs (c)(2), (c)(2)(i), (c)(2)(ii), and (c)(2)(iii) of this section apply.

(3) If any performance tests are reported in a Periodic Report, the following information shall be included:

(i) 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 (b)(1)(ii) of this section.

(ii) For additional tests performed for the same kind of emission point using the same method, results and any other information required in 40 CFR 63.117 for process vents,

40 CFR 63.129 for transfer, and 40 CFR 63.146 for process wastewater shall be submitted, but a complete test report is not required.

(4) Periodic Reports shall include the information in paragraphs (c)(4)(i) through (c)(4)(iv) of this section, as applicable:

(i) For process vents, reports of process changes as required under ? 63.118 (g), (h), (i), and (j) of this subpart,

(ii) Any supplements required under 40 CFR 63.151(i) and (j) of this subpart,

(iii) Notification if any Group 2 emission point becomes a Group 1 emission point, including a compliance schedule as required in ? 63.100 of subpart F of this part, and

(iv) For gas streams sent for disposal pursuant to 40 CFR 63.113(i) or for process wastewater streams sent for treatment pursuant to ? 63.132(g), reports of changes in the identity of the transferee.

(5) The owner or operator of a source shall submit quarterly reports for all emission points included in an emissions average.

(i) The quarterly reports shall be submitted no later than 60 calendar days after the end of each quarter. The first report shall be submitted with the Notification of Compliance Status no later than 5 months after the compliance date specified in 40 CFR 63.100 of subpart F.

(ii) The quarterly reports shall include the information specified in this paragraph for all emission points included in an emissions average.

(A) The credits and debits calculated each month during the quarter;

(B) A demonstration that debits calculated for the quarter are not more than 1.30 times the credits calculated for the quarter, as required under 40 CFR 63.150(e)(4) of this subpart.

(C) The values of any inputs to the credit and debit equations in 40 CFR 63.150 (g) and (h) of this subpart that change from month to month during the quarter or that have changed since the previous quarter;

(D) 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 (c)(3) of this section;

(E) Reports of daily average values of monitored parameters for both excused and unexcused excursions as defined in paragraph (c)(2)(ii)(A) of this section. For excursions caused by

lack of monitoring data, the duration of periods when monitoring data were not collected shall be specified.

(iii) Paragraphs (c)(2)(i) through (c)(2)(iii) of this section shall govern the use of monitoring data to determine compliance for Group 1 and Group 2 points included in emissions averages. For storage vessels to which the provisions of paragraphs (c)(2)(i) through (c)(2)(iii) of this section do not apply (as specified in paragraph (c)(2)(iv) of this section), the owner or operator is required to comply with the provisions of the applicable monitoring plan, and monitoring records may be used to determine compliance.

(iv) Every fourth quarterly report shall include the following:

(A) A demonstration that annual credits are greater than or equal to annual debits as required by 40 CFR 63.150(e)(3) of this subpart; and

(B) A certification of compliance with all the emissions averaging provisions in 40 CFR 63.150 of this subpart.

(6) The owner or operator of a source shall submit reports quarterly for particular emission points not included in an emissions average under the circumstances described in paragraphs (c)(6)(i) through (c)(6)(v) of this section.

(i) The owner or operator of a source subject to this subpart shall submit quarterly reports for a period of one year for an emission point that is not included in an emissions average if:

(A) The emission point has more excursions, as defined in paragraph (c)(2)(ii) of this section, than the number of excused excursions allowed under paragraph (c)(2)(ii)(B) of this section for a semiannual reporting period; and

(B) The Administrator requests the owner or operator to submit quarterly reports for the emission point.

(ii) The quarterly reports shall include all information in paragraphs (c)(2), (c)(3), and (c)(4) of this section applicable to the emission point(s) for which quarterly reporting is required under paragraph (c)(6)(i) of this section. Information applicable to other emission points within the source shall be submitted in the semiannual reports required under paragraph (c)(1) of this section.

(iii) Quarterly reports shall be submitted no later than 60 calendar days after the end of each quarter.

(iv) After quarterly reports have been submitted for an emission point for one year, the owner or operator may return to semiannual reporting for the emission point unless the Administrator requests the owner or operator to continue to submit quarterly reports.

(v) Paragraphs (c)(2)(i) through (c)(2)(iii) of this section shall govern the use of monitoring data to determine compliance for Group 1 emission points. For storage vessels to which the provisions of paragraphs (c)(2)(i) through (c)(2)(iii) of this section do not apply (as specified in paragraph (c)(2)(iv) of this section), the owner or operator is required to comply with the provisions of the applicable monitoring plan, and monitoring records may be used to determine compliance.

(d) Other reports shall be submitted as specified in subpart A of this part or in 40 CFR 63.113 through 63.151 of this subpart. These reports are:

(1) Reports of start-up, shutdown, and malfunction required by 40 CFR 63.10(d)(5) of subpart A. The start-up, shutdown and malfunction reports may be submitted on the same schedule as the Periodic Reports required under paragraph (c) of this section instead of the schedule specified in 40 CFR 63.10(d)(5) of subpart A.

(2) For storage vessels, the notifications of inspections required by 40 CFR 63.122 (h)(1) and (h)(2) of this subpart.

(3) For owners or operators of sources required to request approval for a nominal control efficiency for use in calculating credits for an emissions average, the information specified in 40 CFR 63.150(i) of this subpart.

(4) If an owner or operator transfers for disposal a gas stream that has the characteristics specified in 40 63.107(b) through (h) or meets the criteria specified in 40 63.107(i) to an off-site location or an on-site location not owned or operated by the owner or operator of the source and the vent stream was not included in the information submitted with the Notification of Compliance Status or a previous periodic report, the owner or operator shall submit a supplemental report. The supplemental report shall be submitted no later than July 23, 2001 or with the next periodic report, whichever is later. The report shall provide the information listed in paragraphs (d)(4)(i) through (iv) of this section.

(i) The chemical manufacturing process unit(s) that is the origin of all or part of the vent stream that exits the process vent.

(ii) The type(s) of unit operations (i.e., an air oxidation reactor, distillation unit, or reactor) that creates the vent stream that exits the process vent.

(iii) For a Group 2 process vent, the last recovery device, if any.

(iv) For a Group 1 process vent, the identity of the transferee.

(e) An owner or operator subject to this subpart shall submit the information specified in paragraphs (e)(1) through (e)(4) of this section with the operating permit application or as otherwise specified by the permitting authority. The owner or operator shall submit written updates as amendments to the operating permit application on the schedule and under the

circumstances described in 40 CFR 63.151(j) of this subpart. Notwithstanding, if the owner or operator has an operating permit under 40 CFR part 70 or 71, the owner or operator shall follow the schedule and format required by the permitting authority.

(1) The information specified in 40 CFR 63.151 (f) or (g) of this subpart for any emission points for which the owner or operator requests approval to monitor a unique parameter or use an alternative monitoring and recording system, and

(2) The information specified in 40 CFR 63.151(d) of this subpart for points included in an emissions average.

(3) The information specified in 40 CFR 63.151(e) of this subpart for points not included in an emissions average.

(4) The information specified in 40 CFR 63.151(h) as applicable.

(f) Owners or operators required to keep continuous records by 40 CFR 63.118, 63.130, 63.147, 63.150, or other sections of this subpart shall keep records as specified in paragraphs (f)(1) through (f)(7) of this section, unless an alternative recordkeeping system has been requested and approved under 40 CFR 63.151(f) or (g) or 40 CFR 63.152(e) or under 40 CFR 63.8(f) of subpart A of this part, and except as provided in paragraph (c)(2)(ii)(C) of this section or in paragraph (g) of this section. If a monitoring plan for storage vessels pursuant to 40 CFR 63.120(d)(2)(i) requires continuous records, the monitoring plan shall specify which provisions, if any, of paragraphs (f)(1) through (f)(7) of this section apply.

(1) The monitoring system shall measure data values at least once every 15 minutes.

(2) The owner or operator shall record either:

(i) Each measured data value; or

(ii) Block average values for 15-minute or shorter periods calculated from all measured data values during each period or at least one measured data value per minute if measured more frequently than once per minute.

(3) If the daily average value of a monitored parameter for a given operating day is within the range established in the Notification of Compliance Status or operating permit, the owner or operator shall either:

(i) Retain block hourly average values for that operating day for 5 years and discard, at or after the end of that operating day, the 15-minute or more frequent average values and readings recorded under paragraph (f)(2) of this section; or

(ii) Retain the data recorded in paragraph (f)(2) of this section for 5 years.

(4) If the daily average value of a monitored parameter for a given operating day is outside the range established in the Notification of Compliance Status or operating permit, the owner or operator shall retain the data recorded that operating day under paragraph (f)(2) of this section for 5 years.

(5) Daily average values of each continuously monitored parameter shall be calculated for each operating day, and retained for 5 years, except as specified in paragraphs (f)(6) and (f)(7) of this section.

(i) The daily average shall be calculated as the average of all values for a monitored parameter recorded during the operating day. The 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 defined in the operating permit or the Notification of Compliance Status. It may be from midnight to midnight or another daily period.

(6) If all recorded values for a monitored parameter during an operating day are within the range established in the Notification of Compliance Status or operating permit, the owner or operator may record that all values were within the range and retain this record for 5 years rather than calculating and recording a daily average for that operating day. For these operating days, the records required in paragraph (f)(3) of this section shall also be retained for 5 years.

(7) Monitoring data recorded during periods identified in paragraphs (f)(7)(i) through (f)(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 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 chemical manufacturing process unit (or portion thereof), resulting in cessation of the emissions to which the monitoring applies.

(g) For any parameter with respect to any item of equipment, the owner or operator may implement the recordkeeping requirements in paragraph (g)(1) or (g)(2) of this section as alternatives to the continuous operating parameter monitoring and recordkeeping provisions listed in 40 CFR 63.114, 63.117, and 63.118 for process vents, 40 CFR 63.127, 63.129, and

63.130 for transfer operations, 40 CFR 63.143, 63.146, and 63.147 for wastewater, and/or 40 CFR 63.152(f), except that 40 CFR 63.152(f)(7) shall apply. The owner or operator shall retain each record required by paragraph (g)(1) or (g)(2) of this section as provided in 40 CFR 63.103(c) of subpart F of this part, except as provided otherwise in paragraph (g)(1) or (g)(2) of this section.

(1) The owner or operator may retain only the daily average value, and is not required to retain more frequent monitored operating parameter values, for a monitored parameter with respect to an item of equipment, if the requirements of paragraphs (g)(1)(i) through (g)(1)(vi) of this section are met. An owner or operator electing to comply with the requirements of paragraph (g)(1) of this section shall notify the Administrator in the Notification of Compliance Status or, if the Notification of Compliance Status has already been submitted, in the periodic report immediately preceding implementation of the requirements of paragraph (g)(1) of this section.

(i) The monitoring system is capable of detecting unrealistic or impossible data during periods of operation other than startups, shutdowns, or malfunctions (e.g., a temperature reading of -200 degrees 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 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 (g)(1)(ii)(A) through (g)(1)(iii)(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 6 1-hour average values; and

(C) The running average reflects a period of operation other than a startup, shutdown, or malfunction.

(iii) The monitoring system is capable of detecting unchanging data during periods of operation other than startups, 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 (g)(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 (g)(1) of this section, at the times specified in paragraphs (g)(1)(v)(A) through (g)(1)(v)(C) of this section. The owner or operator shall document that the required verifications occurred.

(A) Upon initial installation.

(B) Annually after initial installation.

(C) After any change to the programming or equipment constituting the monitoring system, which might reasonably be expected to alter the monitoring system's ability to comply with the requirements of this section.

(vi) The owner or operator shall retain the records identified in paragraphs (g)(1)(vi) (A) through (C) of this section.

(A) Identification of each parameter, for each item of equipment, for which the owner or operator has elected to comply with the requirements of paragraph (g) of this section.

(B) A description of the applicable monitoring system(s), and of how compliance will be achieved with each requirement of paragraph (g)(1)(i) through (g)(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. The description, and the most recent superseded description, shall be retained as provided in 40 CFR 63.103(c) of subpart F of this part, except as provided in paragraph (g)(1)(vi)(D) of this section.

(C) A description, and the date, of any change to the monitoring system that would reasonably be expected to affect its ability to comply with the requirements of paragraph (g)(1) of this section.

(D) Owners and operators subject to paragraph (g)(1)(vi)(B) of this section shall retain the current description of the monitoring system as long as the description is current, but not less than 5 years from the date of its creation. The current description shall, at all times, be retained on-site or be accessible from a central location by computer or other means that provides access within 2 hours after a request. The owner or operator shall retain the most recent superseded description at least until 5 years from the date of its creation. The superseded description shall be retained on-site (or accessible from a central location by computer that provides access within 2 hours after a request) at least 6 months after its creation. Thereafter, the superseded description may be stored off-site.

(2) If an owner or operator has elected to implement the requirements of paragraph (g)(1) of this section, and a period of 6 consecutive months has passed without an excursion as defined in paragraph (g)(2)(iv) of this section, the owner or operator is no longer required to record the daily average value for that parameter for that unit of equipment, for any operating day when the 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 was required and/or approved by the Administrator.

(i) If the owner or operator elects not to retain the daily average values, the owner or operator shall notify the Administrator in the next periodic report. The notification shall identify the parameter and unit of equipment.

(ii) If, on any operating day after the owner or operator has ceased recording daily averages as provided in paragraph (g)(2) of this section, there is an excursion as defined in paragraph (g)(2)(iv) of this section, the owner or operator shall immediately resume retaining the daily average value for each day, and shall notify the Administrator in the next periodic report. The owner or operator shall continue to retain each daily average value until another period of 6 consecutive months has passed without an excursion as defined in paragraph (g)(2)(iv) of this section.

(iii) The owner or operator shall retain the records specified in paragraphs (g)(1) (i), (ii), (iii), (iv), (v), and (vi) of this section. For any calendar week, if compliance with paragraphs (g)(1) (i), (ii), (iii), and (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 startup, shutdown, or malfunction.

(iv) For purposes of paragraph (g) of this section, an excursion means that the 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 (g)(2)(iv)(A) and (g)(2)(iv)(B) of this section.

(A) The daily average value during any start-up, shutdown, or malfunction shall not be considered an excursion for purposes of this paragraph (g)(2), if the owner or operator follows the applicable provisions of the startup, shutdown, and malfunction plan required by ? 63.6(e)(3) of subpart A of this part.

(B) An excused excursion, as described in 40 CFR 63.152(c)(2)(ii) (B) and (C), shall not be considered an excursion for purposes of this paragraph (g)(2).

§§ 63.153 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or Tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the requirements in §§§§ 63.110, 63.112 through 63.113, 63.119, 63.126, 63.132 through 63.140, 63.148 through 63.149, and 63.150(i)(1) through (4). Follow the requirements in §§ 63.121 to request permission to use an alternative means of emission limitation for storage vessels. Where these standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart. Where these standards reference another subpart and modify the requirements, the requirements shall be modified as described in this subpart. Delegation of the modified requirements will also occur according to the delegation provisions of the referenced subpart.

(2) Approval of major alternatives to test methods under §§ 63.7(e)(2)(ii) and (f), as defined in §§ 63.90, and as required in this subpart.

(3) Approval of major alternatives to monitoring under §§ 63.8(f), as defined in §§ 63.90, and as required in this subpart.

(4) Approval of major alternatives to recordkeeping and reporting under §§ 63.10(f), as defined in §§ 63.90, and as required in this subpart.

7. [40 CFR 63, Subpart H] National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks

The following emissions units are subject to this rule: J001, J002, N006**,** P035, P048, P050, P062, P074, P075, P079, P801, P806, T015, , T023, T024, T025, T026, T027, T028, T032, T033, T065, T066, T067, T068, T069, T070, , T073, T079, T080, T081, T082, T092, T093, T113, T114, T115 and T116.

§§ 63.160 Applicability and designation of source.

(a) The provisions of this subpart apply to pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, instrumentation systems, and control devices or closed vent systems

required by this subpart that are intended to operate in organic hazardous air pollutant service 300 hours or more during the calendar year within a source subject to the provisions of a specific subpart in 40 CFR part 63 that references this subpart.

(b) After the compliance date for a process unit, equipment to which this subpart applies that are also subject to the provisions of:

(1) 40 CFR part 60 will be required to comply only with the provisions of this subpart.

(2) 40 CFR part 61 will be required to comply only with the provisions of this subpart.

(c) If a process unit subject to the provisions of this subpart has equipment to which this subpart does not apply, but which is subject to a standard identified in paragraph (c)(1), (c)(2), or (c)(3) of this section, the owner or operator may elect to apply this subpart to all such equipment in the process unit. If the owner or operator elects this method of compliance, all VOC in such equipment shall be considered, for purposes of applicability and compliance with this subpart, as if it were organic hazardous air pollutant (HAP). Compliance with the provisions of this subpart, in the manner described in this paragraph, shall be deemed to constitute compliance with the standard identified in paragraph (c)(1), (c)(2), or (c)(3) of this section.

(1) 40 CFR part 60, subpart VV, GGG, or KKK; (2) 40 CFR part 61, subpart F or J; or (3) 40 CFR part 264, subpart BB or 40 CFR part 265, subpart BB.

(2) [Reserved]

(d) The provisions in 40 CFR 63.1(a)(3) of subpart A of this part do not alter the provisions in paragraph (b) of this section.

(e) Except as provided in any subpart that references this subpart, lines and equipment not containing process fluids are not subject to the provisions of this subpart. Utilities, 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 considered to be part of a process unit.

(f) The provisions of this subpart do not apply to research and development facilities or to bench-scale batch processes, regardless of whether the facilities or processes are located at the same plant site as a process subject to the provisions of this subpart.

(g) *Alternative means of compliance.*

(1) Option to comply with part 65. Owners or operators of CMPU that are subject to 40 CFR 63.100 may choose to comply with the provisions of 40 CFR part 65 for all Group 1 and Group 2 process vents, Group 1 storage vessels, Group 1 transfer operations, and equipment that are subject to 40 CFR 63.100, that are part of the CMPU. Other provisions applying to an owner or operator who chooses to comply with 40 CFR part 65 are provided in 40 CFR 65.1.

(i) For equipment, 40 CFR part 65 satisfies the requirements of 40 CFR 63.102, 63.103, and 63.162 through 63.182. When choosing to comply with 40 CFR part 65, the requirements of 40 CFR 63.180(d) continue to apply.

(ii) For Group 1 and Group 2 process vents, Group 1 storage vessels, and Group 1 transfer operations, comply with 40 CFR 63.110(i)(1).

(2) Part 65, subpart C or F. For owners or operators choosing to comply with 40 CFR part 65, each surge control vessel and bottoms receiver subject to 40 CFR 63.100 that meets the conditions specified in table 2 or table 3 of this subpart shall meet the requirements for storage vessels in 40 CFR part 65, subpart C; all other equipment subject to 40 CFR 63.100 shall meet the requirements in 40 CFR part 65, subpart F.

(3) Part 63, subpart A. Owners or operators who choose to comply with 40 CFR part 65, subpart C or F, for equipment subject to 40 CFR 63.100 must also comply with the applicable general provisions of this part 63 listed in table 4 of this subpart. All sections and paragraphs of subpart A of this part that are not mentioned in table 4 of this subpart do not apply to owners or operators of equipment subject to 40 CFR 63.100 of subpart F complying with 40 CFR part 65, subpart C or F, except that provisions required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with 40 CFR part 65, subpart C or F, must comply with 40 CFR part 65, subpart A.

§§ 63.162 Standards: General.

(a) Compliance with this subpart will be determined by review of the records required by 40 CFR 63.181 of this subpart and the reports required by 40 CFR 63.182 of this subpart, review of performance test results, and by inspections.

(b)(1) An owner or operator may request a determination of alternative means of emission limitation to the requirements of 40 CFR 63.163 through 63.170, and 40 CFR 63.172 through 63.174 of this subpart as provided in 40 CFR 63.177.

(2) If the Administrator makes a determination that a means of emission limitation is a permissible alternative to the requirements of 40 CFR 63.163 through 63.170, and 40 CFR 63.172 through 63.174 of this subpart, the owner or operator shall comply with the alternative.

(c) Each piece of equipment in a process unit to which this subpart applies shall be identified such that it can be distinguished readily from equipment that is not subject to this subpart. Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, or by designation of process unit boundaries by some form of weatherproof identification.

(d) Equipment that is in vacuum service is excluded from the requirements of this subpart.

(e) Equipment that is in organic HAP service less than 300 hours per calendar year is excluded from the requirements of 40 CFR 63.163 through 63.174 of this subpart and 40 CFR 63.178 of this subpart if it is identified as required in 40 CFR 63.181(j) of this subpart.

(f) When each leak is detected as specified in 40 CFR 63.163 and 63.164; 40 CFR 63.168 and 63.169; and 40 CFR 63.172 through 63.174 of this subpart, the following requirements apply:

(1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

(2) The identification on a valve may be removed after it has been monitored as specified in 40 CFR 63.168(f)(3), and 63.175(e)(7)(i)(D) of this subpart, and no leak has been detected during the follow-up monitoring. If the owner or operator elects to comply using the provisions of 40 CFR 63.174(c)(1)(i) of this subpart, the identification on a connector may be removed after it is monitored as specified in 40 CFR 63.174(c)(1)(i) and no leak is detected during that monitoring.

(3) The identification which has been placed on equipment determined to have a leak, except for a valve or for a connector that is subject to the provisions of 40 CFR 63.174(c)(1)(i), may be removed after it is repaired.

(g) Except as provided in paragraph (g)(1) of this section, all terms in this subpart that define a period of time for completion of required tasks (e.g., weekly, monthly, quarterly, annual), refer to the standard calendar periods unless specified otherwise in the section or subsection that imposes the requirement.

(1) If the initial compliance date does not coincide with the beginning of the standard calendar period, an owner or operator may elect to utilize a period beginning on the compliance date, or may elect to comply in accordance with the provisions of paragraphs (g)(2) or (g)(3) of this section.

(2) Time periods specified in this subpart for completion of required tasks may be changed by mutual agreement between the owner or operator and the Administrator, as specified in subpart A of this part. 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.

(3) Except as provided in paragraph (g)(1) or (g)(2) of this section, where the period specified for compliance is a standard calendar period, if the initial compliance date does not coincide with the beginning of the calendar period, compliance shall be required according to the schedule specified in paragraphs (g)(3)(i) or (g)(3)(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.

(4) 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 each period, provided the task is conducted at a reasonable interval after completion of the task during the previous period.

(h) In all cases where the provisions of this subpart require an owner or operator to repair leaks by a specified time after the leak is detected, it is a violation of this subpart to fail to take action to repair the leaks within the specified time. If action is taken to repair the leaks within the specified time, failure of that action to successfully repair the leak is not a violation of this subpart. However, if the repairs are unsuccessful, a leak is detected and the owner or operator shall take further action as required by applicable provisions of this subpart.

§§ 63.163 Standards: Pumps in light liquid service.

(a) The provisions of this section apply to each pump that is in light liquid service.

(1) The provisions are to be implemented on the dates specified in the specific subpart in 40 CFR part 63 that references this subpart in the phases specified below:

(i) For each group of existing process units at existing sources subject to the provisions of subparts F or I of this part, the phases of the standard are:

(A) Phase I, beginning on the compliance date;

(B) Phase II, beginning no later than 1 year after the compliance date; and

(C) Phase III, beginning no later than 2 ½ years after the compliance date.

(ii) For new sources subject to the provisions of subparts F or I of this part, the applicable phases of the standard are:

(A) After initial start-up, comply with the Phase II requirements; and

(B) Beginning no later than 1 year after initial start-up, comply with the Phase III requirements.

(2) The owner or operator of a source subject to the provisions of subparts F or I of this part may elect to meet the requirements of a later phase during the time period specified for an earlier phase.

(3) Sources subject to other subparts in 40 CFR part 63 that reference this subpart shall comply on the dates specified in the applicable subpart.

(b)(1) The owner or operator of a process unit subject to this subpart shall monitor each pump monthly to detect leaks by the method specified in 40 CFR 63.180(b) of this subpart and shall comply with the requirements of paragraphs (a) through (d) of this section, except as provided in 40 CFR 63.162(b) of this subpart and paragraphs (e) through (j) of this section.

(2) The instrument reading, as determined by the method as specified in ? 63.180(b) of this subpart, that defines a leak in each phase of the standard is:

(i) For Phase I, an instrument reading of 10,000 parts per million or greater.

(ii) For Phase II, an instrument reading of 5,000 parts per million or greater.

(iii) For Phase III, an instrument reading of:

(A) 5,000 parts per million or greater for pumps handling polymerizing monomers;

(B) 2,000 parts per million or greater for pumps in food/medical service; and

(C) 1,000 parts per million or greater for all other pumps.

(3) Each pump shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in paragraph (c)(3) of this section or 40 CFR 63.171 of this subpart.

(2) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. First attempts at repair include, but are not limited to, the following practices where practicable:

(i) Tightening of packing gland nuts.

(ii) Ensuring that the seal flush is operating at design pressure and temperature.

(3) For pumps in Phase III to which a 1,000 parts per million leak definition applies, repair is not required unless an instrument reading of 2,000 parts per million or greater is detected.

(d)(1) The owner or operator shall decide no later than the first monitoring period whether to calculate percent leaking pumps on a process unit basis or on a source-wide basis. Once the owner or operator has decided, all subsequent percent calculations shall be made on the same basis.

(2) If, in Phase III, calculated on a 6-month rolling average, the greater of either 10 percent of the pumps in a process unit or three pumps in a process unit leak, the owner or operator shall implement a quality improvement program for pumps that complies with the requirements of 40 CFR 63.176 of this subpart.

(3) The number of pumps at a process unit shall be the sum of all the pumps in organic HAP service, except that pumps found leaking in a continuous process unit within 1 month after start-up of the pump shall not count in the percent leaking pumps calculation for that one monitoring period only.

(4) Percent leaking pumps shall be determined by the following equation: %PL=[(PL-PS)/(PT-PS)] x 100 where:

%PL=Percent leaking pumps

PL=Number of pumps found leaking as determined through monthly monitoring as required in paragraphs (b)(1) and (b)(2) of this section.

PT=Total pumps in organic HAP service, including those meeting the criteria in paragraphs (e) and (f) of this section.

PS=Number of pumps leaking within 1 month of start-up during the current monitoring period.

(e) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraphs (a) through (d) of this section, provided the following requirements are met:

(1) Each dual mechanical seal system is:

(i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or

(ii) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172 of this subpart; or

(iii) Equipped with a closed-loop system that purges the barrier fluid into a process stream.

(2) The barrier fluid is not in light liquid service.

(3) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4) Each pump is checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

(i) If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the pump shall be monitored as specified in 40 CFR 63.180(b) of this subpart to determine if there is a leak of organic HAP in the barrier fluid.

(ii) If an instrument reading of 1,000 parts per million or greater is measured, a leak is detected.

(5) Each sensor as described in paragraph (e)(3) of this section is observed daily or is equipped with an alarm unless the pump is located within the boundary of an unmanned plant site.

(6)(i) The owner or operator determines, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicates failure of the seal system, the barrier fluid system, or both.

(ii) If indications of liquids dripping from the pump seal exceed the criteria established in paragraph (e)(6)(i) of this section, or if, based on the criteria established in paragraph (e)(6)(i) of this section, the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected.

(iii) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in ? 63.171 of this subpart.

(iv) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(f) Any pump that is designed with no externally actuated shaft penetrating the pump housing is exempt from the requirements of paragraphs (a) through (c) of this section.

(g) Any pump equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or to a control device that complies with the requirements of ? 63.172 of this subpart is exempt from the requirements of paragraphs (b) through (e) of this section.

(h) Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (b)(3) and (e)(4) of this section, and the daily requirements of paragraph (e)(5) of this section, provided that each pump is visually inspected as often as practicable and at least monthly.

(i) If more than 90 percent of the pumps at a process unit meet the criteria in either paragraph (e) or (f) of this section, the process unit is exempt from the requirements of paragraph (d) of this section.

(j) Any pump that is designated, as described in 40 CFR 63.181(b)(7)(i) of this subpart, as an unsafe-to-monitor pump is exempt from the requirements of paragraphs (b) through (e) of this section if:

(1) The owner or operator of the pump determines that the pump is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraphs (b) through (d) of this section; and

(2) The owner or operator of the pump has a written plan that requires monitoring of the pump as frequently as practical during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable.

§§ 63.164 Standards: Compressors.

(a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of process fluid to the atmosphere, except as provided in 40 CFR 63.162(b) of this subpart and paragraphs (h) and (i) of this section.

(b) Each compressor seal system as required in paragraph (a) of this section shall be:

(1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or

(2) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172 of this subpart; or

(3) Equipped with a closed-loop system that purges the barrier fluid directly into a process stream.

(c) The barrier fluid shall not be in light liquid service.

(d) Each barrier fluid system as described in paragraphs (a) through (c) of this section shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(e)(1) Each sensor as required in paragraph (d) of this section shall be observed daily or shall be equipped with an alarm unless the compressor is located within the boundary of an unmanned plant site.

(2) The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(f) If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under paragraph (e)(2) of this section, a leak is detected.

(g)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171 of this subpart.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(h) A compressor is exempt from the requirements of paragraphs (a) through (g) of this section if it is equipped with a closed-vent system to capture and transport leakage from the compressor drive shaft seal back to a process or a fuel gas system or to a control device that complies with the requirements of 40 CFR 63.172 of this subpart.

(i) Any compressor that is designated, as described in 40 CFR 63.181(b)(2)(ii) of this subpart, to operate with an instrument reading of less than 500 parts per million above background, is exempt from the requirements of paragraphs (a) through (h) of this section if the compressor:

(1) Is demonstrated to be operating with an instrument reading of less than 500 parts per million above background, as measured by the method specified in 40 CFR 63.180(c) of this subpart; and

(2) Is tested for compliance with paragraph (i)(1) of this section initially upon designation, annually, and at other times requested by the Administrator.

§§ 63.165 Standards: Pressure relief devices in gas/vapor service.

(a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with an instrument reading of less than 500 parts per million above background except as provided in paragraph (b) of this section, as measured by the method specified in 40 CFR 63.180(c) of this subpart.

(b)(1) After each pressure release, the pressure relief device shall be returned to a condition indicated by an instrument reading of less than 500 parts per million above background,

as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.171 of this subpart.

(2) No later than 5 calendar days after the pressure release and being returned to organic HAP service, the pressure relief device shall be monitored to confirm the condition indicated by an instrument reading of less than 500 parts per million above background, as measured by the method specified in 40 CFR 63.180(c) of this subpart.

(c) Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in 40 CFR 63.172 of this subpart is exempt from the requirements of paragraphs (a) and (b) of this section.

(d)(1) Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of paragraphs (a) and (b) of this section, provided the owner or operator complies with the requirements in paragraph (d)(2) of this section.

(2) After each pressure release, a rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.171 of this subpart.

§§ 63.166 Standards: Sampling connection systems.

(a) Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in 40 CFR 63.162(b) of this subpart. Gases displaced during filling of the sample container are not required to be collected or captured.

(b) Each closed-purge, closed-loop, or closed-vent system as required in paragraph (a) of this section shall:

(1) Return the purged process fluid directly to the process line; or

(2) Collect and recycle the purged process fluid to a process; or

(3) Be designed and operated to capture and transport the purged process fluid to a control device that complies with the requirements of 40 CFR 63.172 of this subpart; or

(4) Collect, store, and transport the purged process fluid to a system or facility identified in paragraph (b)(4)(i), (ii), or (iii) of this section.

(i) A waste management unit as defined in 40 CFR 63.111 of subpart G of this part, if the waste management unit is subject to, and operated in compliance with the provisions of subpart G of this part applicable to group 1 wastewater streams. If the purged process fluid does not contain any organic HAP listed in Table 9 of subpart G of part 63, the

waste management unit need not be subject to, and operated in compliance with the requirements of 40 CFR part 63, subpart G applicable to group 1 wastewater streams provided the facility has an NPDES permit or sends the wastewater to an NPDES permitted facility.

(ii) A treatment, storage, or disposal facility subject to regulation under 40 CFR part 262, 264, 265, or 266; or

(iii) A facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR part 261.

(c) In-situ sampling systems and sampling systems without purges are exempt from the requirements of paragraphs (a) and (b) of this section.

§§ 63.167 Standards: Open-ended valves or lines.

(a)(1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in ? 63.162(b) of this subpart and paragraphs (d) and (e) of this section.

(2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance or repair.

(b) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

(c) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (a) of this section at all other times.

(d) Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs (a), (b) and (c) of this section.

(e) Open-ended valves or lines containing materials which would autocatalytically polymerize or, would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in paragraphs (a) through (c) of this section are exempt from the requirements of paragraph (a) through (c) of this section.

§§ 63.168 Standards: Valves in gas/vapor service and in light liquid service.

(a) The provisions of this section apply to valves that are either in gas service or in light liquid service.

(1) The provisions are to be implemented on the dates set forth in the specific subpart in 40 CFR part 63 that references this subpart as specified in paragraph (a)(1)(i), (a)(1)(ii), or (a)(1)(iii) of this section.

(i) For each group of existing process units at existing sources subject to the provisions of subpart F or I of this part, the phases of the standard are:

(A) Phase I, beginning on the compliance date;

(B) Phase II, beginning no later than 1 year after the compliance date; and

(C) Phase III, beginning no later than 2 ½ years after the compliance date.

(ii) For new sources subject to the provisions of subpart F or I of this part, the applicable phases of the standard are:

(A) After initial start-up, comply with the Phase II requirements; and

(B) Beginning no later than 1 year after initial start-up, comply with the Phase III requirements.

(iii) Sources subject to other subparts in 40 CFR part 63 that reference this subpart shall comply on the dates specified in the applicable subpart.

(2) The owner or operator of a source subject to this subpart may elect to meet the requirements of a later phase during the time period specified for an earlier phase.

(3) The use of monitoring data generated before April 22, 1994 to qualify for less frequent monitoring is governed by the provisions of 40 CFR 63.180(b)(6) of this subpart.

(b) The owner or operator of a source subject to this subpart shall monitor all valves, except as provided in 40 CFR 63.162(b) of this subpart and paragraphs (h) and (i) of this section, at the intervals specified in paragraphs (c) and (d) of this section and shall comply with all other provisions of this section, except as provided in 40 CFR 63.171, 40 CFR 63.177, 40 CFR 63.178, and 40 CFR 63.179 of this subpart.

(1) The valves shall be monitored to detect leaks by the method specified in 40 CFR 63.180(b) of this subpart.

(2) The instrument reading that defines a leak in each phase of the standard is:

(i) For Phase I, an instrument reading of 10,000 parts per million or greater.

(ii) For Phase II, an instrument reading of 500 parts per million or greater.

(iii) For Phase III, an instrument reading of 500 parts per million or greater.

(c) In Phases I and II, each valve shall be monitored quarterly.

(d) In Phase III, the owner or operator shall monitor valves for leaks at the intervals specified below:

(1) At process units with 2 percent or greater leaking valves, calculated according to paragraph (e) of this section, the owner or operator shall either:

(i) Monitor each valve once per month; or

(ii) Within the first year after the onset of Phase III, implement a quality improvement program for valves that complies with the requirements of 40 CFR 63.175 (d) or (e) of this subpart and monitor quarterly.

(2) At process units with less than 2 percent leaking valves, the owner or operator shall monitor each valve once each quarter, except as provided in paragraphs (d)(3) and (d)(4) of this section.

(3) At process units with less than 1 percent leaking valves, the owner or operator may elect to monitor each valve once every 2 quarters.

(4) At process units with less than 0.5 percent leaking valves, the owner or operator may elect to monitor each valve once every 4 quarters.

(e)(1) Percent leaking valves at a process unit shall be determined by the following equation:

%VL=[VL/(VT+VC)] x 100

where:

%VL=Percent leaking valves as determined through periodic monitoring required in paragraphs (b) through (d) of this section.

VL=Number of valves found leaking excluding nonrepairables as provided in paragraph (e)(3)(i) of this section.

VT=Total valves monitored, in a monitoring period excluding valves monitored as required by (f)(3) of this section.

VC=Optional credit for removed valves=0.67 x net number (i.e., total removed-total added) of valves in organic HAP service removed from process unit after the date set forth in 40 CFR 63.100(k) of subpart F for existing process units, and after the date of initial start-up for new sources. If credits are not taken, then VC=0.

(2) For use in determining monitoring frequency, as specified in paragraph (d) of this section, the percent leaking valves shall be calculated as a rolling average of two consecutive monitoring periods for monthly, quarterly, or semiannual monitoring programs; and as an average of any three out of four consecutive monitoring periods for annual monitoring programs.

(3)(i) Nonrepairable valves shall be included in the calculation of percent leaking valves the first time the valve is identified as leaking and nonrepairable and as required to comply with paragraph (e)(3)(ii) of this section. Otherwise, a number of nonrepairable valves (identified and included in the percent leaking calculation in a previous period) up to a maximum of 1 percent of the total number of valves in organic HAP service at a process unit may be excluded from calculation of percent leaking valves for subsequent monitoring periods.

(ii) If the number of nonrepairable valves exceeds 1 percent of the total number of valves in organic HAP service at a process unit, the number of nonrepairable valves exceeding 1 percent of the total number of valves in organic HAP service shall be included in the calculation of percent leaking valves.

(f)(1) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171 of this subpart.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(3) When a leak has been repaired, the valve shall be monitored at least once within the first 3 months after its repair.

(i) The monitoring shall be conducted as specified in 40 CFR 63.180 (b) and (c), as appropriate, to determine whether the valve has resumed leaking.

(ii) Periodic monitoring required by paragraphs (b) through (d) of this section may be used to satisfy the requirements of this paragraph (f)(3), if the timing of the monitoring period coincides with the time specified in this paragraph (f)(3). Alternatively, other monitoring may be performed to satisfy the requirements of this paragraph (f)(3), regardless of whether the timing of the monitoring period for periodic monitoring coincides with the time specified in this paragraph (f)(3).

(iii) If a leak is detected by monitoring that is conducted pursuant to paragraph (f)(3) of this section, the owner or operator shall follow the provisions of paragraphs (f)(3)(iii)(A) and (f)(3)(iii)(B) of this section, to determine whether that valve must be counted as a leaking valve for purposes of 40 CFR 63.168(e) of this subpart.

(A) If the owner or operator elected to use periodic monitoring required by paragraphs (b) through (d) of this section to satisfy the requirements of paragraph (f)(3) of this section, then the valve shall be counted as a leaking valve.

(B) If the owner or operator elected to use other monitoring, prior to the periodic monitoring required by paragraphs (b) through (d) of this section, to satisfy the requirements of paragraph (f)(3) of this section, then the valve shall be counted as a leaking valve unless it is repaired and shown by periodic monitoring not to be leaking.

(g) First attempts at repair include, but are not limited to, the following practices where practicable:

(1) Tightening of bonnet bolts,

(2) Replacement of bonnet bolts,

(3) Tightening of packing gland nuts, and

(4) Injection of lubricant into lubricated packing.

(h) Any valve that is designated, as described in 40 CFR 63.181(b)(7)(i) of this subpart, as an unsafe-to-monitor valve is exempt from the requirements of paragraphs (b) through (f) of this section if:

(1) The owner or operator of the valve determines that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraphs (b) through (d) of this section; and

(2) The owner or operator of the valve has a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable.

(i) Any valve that is designated, as described in 40 CFR 63.181(b)(7)(ii) of this subpart, as a difficult-to-monitor valve is exempt from the requirements of paragraphs (b) through (d) of this section if:

(1) The owner or operator of the valve determines that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface or it is not accessible at anytime in a safe manner;

(2) The process unit within which the valve is located is an existing source or the owner or operator designates less than 3 percent of the total number of valves in a new source as difficult-to-monitor; and

(3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

(j) Any equipment located at a plant site with fewer than 250 valves in organic HAP service is exempt from the requirements for monthly monitoring and a quality improvement program specified in paragraph (d)(1) of this section. Instead, the owner or operator shall monitor each valve in organic HAP service for leaks once each quarter, or comply with paragraph (d)(3) or (d)(4) of this section except as provided in paragraphs (h) and (i) of this section.

§§ 63.169 Standards: Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service.

(a) Pumps, valves, connectors, and agitators in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and instrumentation systems shall be monitored within 5 calendar days by the method specified in 40 CFR 63.180(b) of this subpart if evidence of a potential leak to the atmosphere is found by visual, audible, olfactory, or any other detection method. If such a potential leak is repaired as required in paragraphs (c) and (d) of this section, it is not necessary to monitor the system for leaks by the method specified in 40 CFR 63.180(b) of this subpart.

(b) If an instrument reading of 10,000 parts per million or greater for agitators, 5,000 parts per million or greater for pumps handling polymerizing monomers, 2,000 parts per million or greater for all other pumps (including pumps in food/medical service), or 500 parts per million or greater for valves, connectors, instrumentation systems, and pressure relief devices is measured, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171 of this subpart.

(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(3) For equipment identified in paragraph (a) of this section that is not monitored by the method specified in 40 CFR 63.180(b), repaired shall mean that the visual, audible, olfactory, or other indications of a leak to the atmosphere 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.

(d) First attempts at repair include, but are not limited to, the practices described under 40 CFR 63.163(c)(2) and 63.168(g) of this subpart, for pumps and valves, respectively.

§§ 63.170 Standards: Surge control vessels and bottoms receivers.

Each surge control vessel or bottoms receiver that is not routed back to the process and that meets the conditions specified in table 2 or table 3 of this subpart shall be equipped with a

closed-vent system that routes the organic vapors vented from the surge control vessel or bottoms receiver back to the process or to a control device that complies with the requirements in ? 63.172 of this subpart, except as provided in 40 CFR 63.162(b) of this subpart, or comply with the requirements of 40 CFR 63.119(b) or (c) of subpart G of this part.

§§ 63.171 Standards: Delay of repair.

(a) Delay of repair of equipment for which leaks have been detected is allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur by the end of the next process unit shutdown.

(b) Delay of repair of equipment for which leaks have been detected is allowed for equipment that is isolated from the process and that does not remain in organic HAP service.

(c) Delay of repair for valves, connectors, and agitators is also allowed if:

(1) The owner or operator determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair, and

(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 40 CFR 63.172 of this subpart.

(d) Delay of repair for pumps is also allowed if:

(1) Repair requires replacing the existing seal design with a new system that the owner or operator has determined under the provisions of 40 CFR 63.176(d) of this subpart will provide better performance or:

(i) A dual mechanical seal system that meets the requirements of ? 63.163(e) of this subpart,

(ii) A pump that meets the requirements of 40 CFR 63.163(f) of this subpart, or

(iii) A closed-vent system and control device that meets the requirements of 40 CFR 63.163(g) of this subpart; and

(2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

(e) Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit shutdown will not be allowed unless the third process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

§§ 63.172 Standards: Closed-vent systems and control devices.

(a) Owners or operators of closed-vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of this section, except as provided in 40 CFR 63.162(b) of this subpart.

(b) Recovery or recapture devices (e.g., condensers and absorbers) shall be designed and operated to recover the organic hazardous air pollutant emissions or volatile organic compounds emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts par million by volume, whichever is less stringent. The 20 parts per million by volume performance standard is not applicable to the provisions of ? 63.179.

(c) Enclosed combustion devices shall be designed and operated to reduce the organic hazardous air pollutant emissions or volatile organic compounds emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent, or to provide a minimum residence time of 0.50 seconds at a minimum temperature of 760 degrees C.

(d) Flares used to comply with this subpart shall comply with the requirements of 40 CFR 63.11(b) of subpart A of this part.

(e) Owners or operators of control devices that are used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their design.

Note: The intent of this provision is to ensure proper operation and maintenance of the control device.

(f) Except as provided in paragraphs (k) and (l) of this section, each closed-vent system shall be inspected according to the procedures and schedule specified in paragraphs (f)(1) and (f)(2) of this section.

(1) If the closed-vent system is constructed of hard-piping, the owner or operator shall:

(i) Conduct an initial inspection according to the procedures in paragraph (g) of this section, and

(ii) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

(2) If the vapor collection system or closed-vent system is constructed of duct work, the owner or operator shall:

(i) Conduct an initial inspection according to the procedures in paragraph (g) of this section, and

(ii) Conduct annual inspections according to the procedures in paragraph (g) of this section.

(g) Each closed-vent system shall be inspected according to the procedures in 40 CFR 63.180(b) of this subpart.

(h) 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 paragraph (i) of this section.

(1) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(2) Repair shall be completed no later than 15 calendar days after the leak is detected, except as provided in paragraph (i) of this section.

(i) Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the owner or operator 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 process unit shutdown.

(j) For each closed-vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the owner or operator shall comply with the provisions of either paragraph (j)(1) or (j)(2) of this section, except as provided in paragraph (j)(3) of this section.

(1) Install, set or adjust, maintain, and operate a flow indicator that takes a reading at least once every 15 minutes. Records shall be generated as specified in 40 CFR 63.118(a)(3) of subpart G of this part. The flow indicator shall be installed at the entrance to any bypass line; or

(2) Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass line.

(3) 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.

(k) Any parts of the closed-vent system that are designated, as described in paragraph 63.181(b)(7)(i), as unsafe to inspect are exempt from the inspection requirements of paragraphs (f)(1) and (f)(2) of this section if:

(1) The owner or operator 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 paragraph (f)(1) or (f)(2) of this section; and

(2) The owner or operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times, but not more frequently than annually.

(l) Any parts of the closed-vent system that are designated, as described in 40 CFR 63.181 (b)(7)(i) of this subpart, as difficult to inspect are exempt from the inspection requirements of paragraphs (f)(1) and (f)(2) of this section if:

(1) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

(2) The owner or operator has a written plan that requires inspection of the equipment at least once every 5 years.

(m) Whenever organic HAP emissions are vented to a closed-vent system or control device used to comply with the provisions of this subpart, such system or control device shall be operating.

(n) After the compliance dates specified in 40 CFR 63.100 of subpart F of this part, the owner or operator of any control device subject to this subpart that is also subject to monitoring, recordkeeping, and reporting requirements in 40 CFR part 264, subpart BB, or is subject to monitoring and recordkeeping requirements in 40 CFR part 265, subpart BB, 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 chosen, in the next periodic report required by 40 CFR 63.182(d).

§§ 63.173 Standards: Agitators in gas/vapor service and in light liquid service.

(a)(1) Each agitator shall be monitored monthly to detect leaks by the methods specified in ? 63.180(b) of this subpart, except as provided in 40 CFR 63.162(b) of this subpart.

(2) If an instrument reading of 10,000 parts per million or greater is measured, a leak is detected.

(b)(1) Each agitator shall be checked by visual inspection each calendar week for indications of liquids dripping from the agitator.

(2) If there are indications of liquids dripping from the agitator, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171 of this subpart.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) Each agitator equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (a) of this section, provided the requirements specified in paragraphs (d)(1) through (d)(6) of this section are met:

(1) Each dual mechanical seal system is:

(i) Operated with the barrier fluid at a pressure that is at all times greater than the agitator stuffing box pressure; or

(ii) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172 of this subpart; or

(iii) Equipped with a closed-loop system that purges the barrier fluid into a process stream.

(2) The barrier fluid is not in light liquid organic HAP service.

(3) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4) Each agitator is checked by visual inspection each calendar week for indications of liquids dripping from the agitator seal.

(i) If there are indications of liquids dripping from the agitator seal at the time of the weekly inspection, the agitator shall be monitored as specified in 40 CFR 63.180(b) of this subpart to determine the presence of organic HAP in the barrier fluid.

(ii) If an instrument reading of 10,000 parts per million or greater is measured, a leak is detected.

(5) Each sensor as described in paragraph (d)(3) of this section is observed daily or is equipped with an alarm unless the agitator is located within the boundary of an unmanned plant site.

(6) (i) The owner or operator determines, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicates failure of the seal system, the barrier fluid system, or both.

(ii) If indications of liquids dripping from the agitator seal exceed the criteria established in paragraph (d)(6)(i) of this section, or if, based on the criteria established in paragraph (d)(6)(i) of this section, the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected.

(iii) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171 of this subpart.

(iv) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) Any agitator that is designed with no externally actuated shaft penetrating the agitator housing is exempt from paragraphs (a) through (c) of this section.

(f) Any agitator equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a process or fuel gas system or to a control device that complies with the requirements of 40 CFR 63.172 of this subpart is exempt from the requirements of paragraphs (a) through (c) of the section.

(g) Any agitator that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (b)(1) and (d)(4) of this section, and the daily requirements of paragraph (d)(5) of this section, provided that each agitator is visually inspected as often as practical and at least monthly.

(h) Any agitator that is difficult-to-monitor is exempt from the requirements of paragraphs (a) through (d) of this section if:

(1) The owner or operator determines that the agitator cannot be monitored without elevating the monitoring personnel more than two meters above a support surface or it is not accessible at anytime in a safe manner;

(2) The process unit within which the agitator is located is an existing source or the owner or operator designates less than three percent of the total number of agitators in a new source as difficult-to-monitor; and

(3) The owner or operator follows a written plan that requires monitoring of the agitator at least once per calendar year.

(i) Any agitator that is obstructed by equipment or piping that prevents access to the agitator by a monitor probe is exempt from the monitoring requirements of paragraphs (a) through (d) of this section.

(j) Any agitator that is designated, as described in 40 CFR 63.181(b)(7)(i) of this subpart, as an unsafe-to-monitor agitator is exempt from the requirements of paragraphs (a) through (d) of this section if:

(1) The owner or operator of the agitator determines that the agitator is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraphs (a) through (d) of this section; and

(2) The owner or operator of the agitator has a written plan that requires monitoring of the agitator as frequently as practical during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable.

§§ 63.174 Standards: Connectors in gas/vapor service and in light liquid service.

(a) The owner or operator of a process unit subject to this subpart shall monitor all connectors in gas/vapor and light liquid service, except as provided in 40 CFR 63.162(b) of this subpart, and in paragraphs (f) through (h) of this section, at the intervals specified in paragraph (b) of this section.

(1) The connectors shall be monitored to detect leaks by the method specified in 40 CFR 63.180(b) of this subpart.

(2) If an instrument reading greater than or equal to 500 parts per million is measured, a leak is detected.

(b) The owner or operator shall monitor for leaks at the intervals specified in either paragraph (b)(1) or (b)(2) of this section and in paragraph (b)(3) of this section.

(1) For each group of existing process units within an existing source, by no later than 12 months after the compliance date, the owner or operator shall monitor all connectors, except as provided in paragraphs (f) through (h) of this section.

(2) For new sources, within the first 12 months after initial start-up or by no later than 12 months after the date of promulgation of a specific subpart that references this subpart, whichever is later, the owner or operator shall monitor all connectors, except as provided in paragraphs (f) through (h) of this section.

(3) After conducting the initial survey required in paragraph (b)(1) or (b)(2) of this section, the owner or operator shall perform all subsequent monitoring of connectors at the frequencies specified in paragraphs (b)(3)(i) through (b)(3)(v) of this section, except as provided in paragraph (c)(2) of this section:

(i) Once per year (i.e., 12-month period), if the percent leaking connectors in the process unit was 0.5 percent or greater during the last required annual or biennial monitoring period.

(ii) Once every 2 years, if the percent leaking connectors was less than 0.5 percent during the last required monitoring period. An owner or operator may comply with this paragraph by monitoring at least 40 percent of the connectors in the first year and the remainder of the connectors in the second year. The percent leaking connectors will be calculated for the total of all monitoring performed during the 2-year period.

If the owner or operator of a process unit in a biennial leak detection and repair program calculates less than 0.5 percent leaking connectors from the 2-year monitoring period, the owner or operator may monitor the connectors one time every 4 years. An owner or operator may comply with the requirements of this paragraph by monitoring at least 20 percent of the connectors each year until all connectors have been monitored within 4 years.

(iv) If a process unit complying with the requirements of paragraph (b) of this section using a 4-year monitoring interval program has greater than or equal to 0.5 percent but less than 1 percent leaking connectors, the owner or operator shall increase the monitoring frequency to one time every 2 years. An owner or operator may comply with the requirements of this paragraph by monitoring at least 40 percent of the connectors in the first year and the remainder of the connectors in the second year. The owner or operator may again elect to use the provisions of paragraph (b)(3)(iii) of this section when the percent leaking connectors decreases to less than 0.5 percent.

(v) If a process unit complying with requirements of paragraph (b)(3)(iii) of this section using a 4-year monitoring interval program has 1 percent or greater leaking connectors, the owner or operator shall increase the monitoring frequency to one time per year. The owner or operator may again elect to use the provisions of paragraph (b)(3)(iii) of this section when the percent leaking connectors decreases to less than 0.5 percent.

(4) The use of monitoring data generated before April 22, 1994 to qualify for less frequent monitoring is governed by the provisions of 40 CFR 63.180(b)(6).

(c)(1)(i) Except as provided in paragraph (c)(1)(ii) of this section, each connector that has been opened or has otherwise had the seal broken shall be monitored for leaks when it is reconnected or within the first 3 months after being returned to organic hazardous air pollutants service. If the monitoring detects a leak, it shall be repaired according to the provisions of paragraph (d) of this section, unless it is determined to be nonrepairable, in which case it is counted as a nonrepairable connector for the purposes of paragraph (i)(2) of this section.

(ii) As an alternative to the requirements in paragraph (c)(1)(i) of this section, an owner or operator may choose not to monitor connectors that have been opened or otherwise had the seal broken. In this case, the owner or operator may not count nonrepairable connectors for the purposes of paragraph (i)(2) of this section. The owner or operator shall calculate the percent leaking connectors for the monitoring periods described in paragraph (b) of this section, by setting the

nonrepairable component, CAN, in the equation in paragraph (i)(2) of this section to zero for all monitoring periods.

(iii) An owner or operator may switch alternatives described in paragraphs (c)(1) (i) and (ii) of this section at the end of the current monitoring period he is in, provided that it is reported as required in 40 CFR 63.182 of this subpart and begin the new alternative in annual monitoring. The initial monitoring in the new alternative shall be completed no later than 12 months after reporting the switch.

(2) As an alternative to the requirements of paragraph (b)(3) of this section, each screwed connector 2 inches or less in nominal inside diameter installed in a process unit before the dates specified in paragraph (c)(2)(iii) or (c)(2)(iv) of this section may:

(i) Comply with the requirements of 40 CFR 63.169 of this subpart, and

(ii) Be monitored for leaks within the first 3 months after being returned to organic hazardous air pollutants service after having been opened or otherwise had the seal broken. If that monitoring detects a leak, it shall be repaired according to the provisions of paragraph (d) of this section.

(iii) For sources subject to subparts F and I of this part, the provisions of paragraph (c)(2) of this section apply to screwed connectors installed before December 31, 1992.

(iv) For sources not identified in paragraph (c)(2)(iii) of this section, the provisions of paragraph (c)(2) of this section apply to screwed connectors installed before the date of proposal of the applicable subpart of this part that references this subpart.

(d) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in paragraph (g) of this section and in 40 CFR 63.171 of this subpart. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(e) [Reserved]

(f) Any connector that is designated, as described in 40 CFR 63.181(b)(7)(i) of this subpart, as an unsafe-to-monitor connector is exempt from the requirements of paragraph (a) of this section if:

(1) The owner or operator determines that the connector is unsafe to monitor because personnel would be exposed to an immediate danger as a result of complying with paragraphs (a) through (e) of this section; and

(2) The owner or operator has a written plan that requires monitoring of the connector as frequently as practicable during safe to monitor periods, but not more frequently than the periodic schedule otherwise applicable.

(g) Any connector that is designated, as described in 40 CFR 63.181(b)(7)(iii) of this subpart, as an unsafe-to-repair connector is exempt from the requirements of paragraphs (a), (d), and (e) of this section if:

(1) The owner or operator determines that repair personnel would be exposed to an immediate danger as a consequence of complying with paragraph (d) of this section; and

(2) The connector will be repaired before the end of the next scheduled process unit shutdown.

(h)(1) Any connector that is inaccessible or is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined), is exempt from the monitoring requirements of paragraphs (a) and (c) of this section and from the recordkeeping and reporting requirements of 40 CFR 63.181 and 40 CFR 63.182 of this subpart. An inaccessible connector is one that is:

(i) Buried;

(ii) Insulated in a manner that prevents access to the connector by a monitor probe;

(iii) Obstructed by equipment or piping that prevents access to the connector by a monitor probe;

(iv) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold which would allow access to connectors up to 7.6 meters (25 feet) above the ground;

(v) Inaccessible because it would require elevating the monitoring personnel more than 2 meters above a permanent support surface or would require the erection of scaffold; or

(vi) Not able to be accessed at any time in a safe manner to perform monitoring. Unsafe access includes, but is not limited to, the use of a wheeled scissor-lift on unstable or uneven terrain, the use of a motorized man-lift basket in areas where an ignition potential exists, or access would require near proximity to hazards such as electrical lines, or would risk damage to equipment.

(2) If any inaccessible or ceramic or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the leak shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in ? 63.171 of this subpart and paragraph (g) of this section.

(3) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(i) For use in determining the monitoring frequency, as specified in paragraph (b) of this section, the percent leaking connectors shall be calculated as specified in paragraphs (i)(1) and (i)(2) of this section.

(1) For the first monitoring period, use the following equation:

% CL = CL/(Ct + CC) x 100

where:

% CL= Percent leaking connectors as determined through periodic monitoring required in paragraphs (a) and (b) of this section.

CL= Number of connectors measured at 500 parts per million or greater, by the method specified in 40 CFR 63.180(b) of this subpart.

Ct= Total number of monitored connectors in the process unit.

CC= Optional credit for removed connectors = 0.67 x net (i.e., total removed -- total added) number of connectors in organic hazardous air pollutants service removed from the process unit after the compliance date set forth in the applicable subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then CC= 0.

(2) For subsequent monitoring periods, use the following equation:

% CL = [(CL- CAN)/(Ct + CC)] x 100

where:

% CL= Percent leaking connectors as determined through periodic monitoring required in paragraphs (a) and (b) of this section.

CL= Number of connectors, including nonrepairables, measured at 500 parts per million or greater, by the method specified in 40 CFR 63.180(b) of this subpart.

CAN= Number of allowable nonrepairable connectors, as determined by monitoring required in paragraphs (b)(3) and (c) of this section, not to exceed 2 percent of the total connector population, Ct.

Ct= Total number of monitored connectors, including nonrepairables, in the process unit.

CC= Optional credit for removed connectors = 0.67 x net number (i.e., total removed -- total added) of connectors in organic hazardous air pollutants service removed from the process unit after the compliance date set forth in the applicable subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then CC= 0.

(j) Optional credit for removed connectors. If an owner or operator eliminates a connector subject to monitoring under paragraph (b) of this section, the owner or operator may receive credit for elimination of the connector, as described in paragraph (i) of this section, provided the requirements in paragraphs (j)(1) through (j)(4) are met.

(1) The connector was welded after the date of proposal of the specific subpart that references this subpart.

(2) The integrity of the weld is demonstrated by monitoring it according to the procedures in 40 CFR 63.180(b) of this subpart or by testing using X-ray, acoustic monitoring, hydrotesting, or other applicable method.

(3) Welds created after the date of proposal but before the date of promulgation of a specific subpart that references this subpart are monitored or tested by 3 months after the compliance date specified in the applicable subpart.

(4) Welds created after promulgation of the subpart that references this subpart are monitored or tested within 3 months after being welded.

(5) If an inadequate weld is found or the connector is not welded completely around the circumference, the connector is not considered a welded connector and is therefore not exempt from the provisions of this subpart.

§§ 63.175 Quality improvement program for valves.

(a) In Phase III, an owner or operator may elect to comply with one of the alternative quality improvement programs specified in paragraphs (d) and (e) of this section. The decision to use one of these alternative provisions to comply with the requirements of 40 CFR 63.168(d)(1)(ii) of this subpart must be made during the first year of Phase III for existing process units and for new process units.

(b) An owner or operator of a process unit subject to the requirements of paragraph (d) or (e) of this section shall comply with those requirements until the process unit has fewer than 2 percent leaking valves, calculated as a rolling average of 2 consecutive quarters, as specified in 40 CFR 63.168(e) of this subpart.

(c) After the process unit has fewer than 2 percent leaking valves, the owner or operator may elect to comply with the requirements in 40 CFR 63.168 of this subpart, to continue to comply with the requirements in paragraph (e) (or (d), if appropriate) of this section, or comply with both the requirements in 40 CFR 63.168 and 40 CFR 63.175.

(1) If the owner or operator elects to continue the quality improvement program, the owner or operator is exempt from the requirements for performance trials as specified in paragraph (e)(6) of this section, or further progress as specified in paragraph (d)(4) of this section, as

long as the process unit has fewer than 2 percent leaking valves calculated according to 40 CFR 63.168(e).

(2) If the owner or operator elects to comply with both paragraph (e) of this section and 40 CFR 63.168 of this subpart, he may also take advantage of the lower monitoring frequencies associated with lower leak rates in 40 CFR 63.168 (d)(2), (d)(3), and (d)(4) of this subpart.

(3) If the owner or operator elects not to continue the quality improvement program, the program is no longer an option if the process unit again exceeds 2 percent leaking valves, and in such case, monthly monitoring will be required.

(d) The following requirements shall be met if an owner or operator elects to use a quality improvement program to demonstrate further progress:

(1) The owner or operator shall continue to comply with the requirements in 40 CFR 63.168 of this subpart except each valve shall be monitored quarterly.

(2) The owner or operator shall collect the following data, and maintain records as required in 40 CFR 63.181(h)(1) of this subpart, for each valve in each process unit subject to the quality improvement program:

(i) The maximum instrument reading observed in each monitoring observation before repair, the response factor for the stream if appropriate, the instrument model number, and date of the observation.

(ii) Whether the valve is in gas or light liquid service.

(iii) If a leak is detected, the repair methods used and the instrument readings after repair.

(3) The owner or operator shall continue to collect data on the valves as long as the process unit remains in the quality improvement program.

(4) The owner or operator must demonstrate progress in reducing the percent leaking valves each quarter the process unit is subject to the requirements of paragraph (d) of this section, except as provided in paragraphs (d)(4)(ii) and (d)(4)(iii) of this section.

(d)(i) Demonstration of progress shall mean that for each quarter there is at least a 10-percent reduction in the percent leaking valves from the percent leaking valves determined for the preceding monitoring period. The percent leaking valves shall be calculated as a rolling average of two consecutive quarters of monitoring data. The percent reduction shall be calculated using the rolling average percent leaking valves, according to the following:

%LVR = (%LVAVG1 - %LVAVG2 / %LVAVG1 x 100 where:

%LVR=Percent leaking valve reduction.

%LVAVG1=(%VLi + %VLi=1)/2.

%LVAVG2=(%VLi=1 + %VLi=2)/2. where:

%VLi, %VLi=1, %VLi=2 are percent leaking valves calculated for subsequent monitoring periods, i, i+1, i+2.

(ii) An owner or operator who fails for two consecutive rolling averages to demonstrate at least a 10-percent reduction per quarter in percent leaking valves, and whose overall average percent reduction based on two or more rolling averages is less than 10 percent per quarter, shall either comply with the requirements in 40 CFR 63.168(d)(1)(i) of this subpart using monthly monitoring or shall comply using a quality improvement program for technology review as specified in paragraph (e) of this section. If the owner or operator elects to comply with the requirements of paragraph (e) of this section, the schedule for performance trials and valve replacements remains as specified in paragraph (e) of this section.

(iii) As an alternative to the provisions in paragraph (d)(4)(i), an owner or operator may use the procedure specified in paragraphs (d)(4)(iii)(A) and (d)(4)(iii)(B) of this section to demonstrate progress in reducing the percent leaking valves.

(A) The percent reduction that must be achieved each quarter shall be calculated as follows:

%RR = %VL - 2% / 0.10

%RR = percent reduction required each quarter, as calculated according to 40 CFR 63.168(e)

%VL = percent leaking valves, calculated according to 40 CFR 63.168(e), at the time elected to use provisions of 40 CFR 63.168(d)(1)(ii)

(B) The owner or operator shall achieve less than 2 percent leaking valves no later than 2 years after electing to use the demonstration of progress provisions in 40 CFR 63.175(d) of this subpart.

(e) The following requirements shall be met if an owner or operator elects to use a quality improvement program of technology review and improvement:

(1) The owner or operator shall comply with the requirements in 40 CFR 63.168 of this subpart except the requirement for monthly monitoring in 40 CFR 63.168(d)(1)(i) of this subpart does not apply.

(2) The owner or operator shall collect the data specified below, and maintain records as required in 40 CFR 63.181(h)(2), for each valve in each process unit subject to the quality improvement program. The data may be collected and the records may be maintained on a process unit or group of process units basis. The data shall include the following:

(i) Valve type (e.g., ball, gate, check); valve manufacturer; valve design (e.g., external stem or actuating mechanism, flanged body); materials of construction; packing material; and year installed.

(ii) Service characteristics of the stream such as operating pressure, temperature, line diameter, and corrosivity.

(iii) Whether the valve is in gas or light liquid service.

(iv) The maximum instrument readings observed in each monitoring observation before repair, response factor for the stream if adjusted, instrument model number, and date of the observation.

(v) If a leak is detected, the repair methods used and the instrument readings after repair.

(vi) If the data will be analyzed as part of a larger analysis program involving data from other plants or other types of process units, a description of any maintenance or quality assurance programs used in the process unit that are intended to improve emission performance.

(3) The owner or operator shall continue to collect data on the valves as long as the process unit remains in the quality improvement program.

(C) Information on limitations on the service conditions for the valve design and operating conditions as well as information on maintenance procedures to ensure continued low emission performance.

(iv) The data analysis may be conducted through an inter- or intra-company program (or through some combination of the two approaches) and may be for a single process unit, a company, or a group of process units.

(v) The first analysis of the data shall be completed no later than 18 months after the start of Phase III. The first analysis shall be performed using a minimum of two quarters of data. An analysis of the data shall be done each year the process unit is in the quality improvement program.

(6) A trial evaluation program shall be conducted at each plant site for which the data analysis does not identify superior performing valve designs or technologies that can be applied to the operating conditions and services identified as having poorer than average performance, except as provided in paragraph (e)(6)(v) of this section. The trial program

shall be used to evaluate the feasibility of using in the process unit the valve designs or technologies that have been identified by others as having low emission performance.

(i) The trial program shall include on-line trials of valves or operating and maintenance practices that have been identified in the available literature or in analysis by others as having the ability to perform with leak rates below 2 percent in similar services, as having low probability of failure, or as having no external actuating mechanism in contact with the process fluid. If any of the candidate superior performing valve technologies is not included in the performance trials, the reasons for rejecting specific technologies from consideration shall be documented as required in 40 CFR 63.181(h)(5)(ii) of this subpart.

(ii) The number of valves in the trial evaluation program shall be the lesser of 1 percent

(C) Information on limitations on the service conditions for the valve design and operating conditions as well as information on maintenance procedures to ensure continued low emission performance.

(iv) The data analysis may be conducted through an inter- or intra-company program (or through some combination of the two approaches) and may be for a single process unit, a company, or a group of process units.

(v) The first analysis of the data shall be completed no later than 18 months after the start of Phase III.The first analysis shall be performed using a minimum of two quarters of data.An analysis of the data shall be done each year the process unit is in the quality improvement program.

(6) A trial evaluation program shall be conducted at each plant site for which the data analysis does not identify superior performing valve designs or technologies that can be applied to the operating conditions and services identified as having poorer than average performance, except as provided in paragraph (e)(6)(v) of this section.The trial program shall be used to evaluate the feasibility of using in the process unit the valve designs or technologies that have been identified by others as having low emission performance.

(i) The trial program shall include on-line trials of valves or operating and maintenance practices that have been identified in the available literature or in analysis by others as having the ability to perform with leak rates below 2 percent in similar services, as having low probability of failure, or as having no external actuating mechanism in contact with the process fluid.If any of the candidate superior performing valve technologies is not included in the performance trials, the reasons for rejecting specific technologies from consideration shall be documented as required in 40 CFR 63.181(h)(5)(ii) of this subpart.

(ii) The number of valves in the trial evaluation program shall be the lesser of 1 percent or 20 valves for programs involving single process units and the lesser of 1 percent or 50 valves for programs involving groups of process units.

(iii) The trial evaluation program shall specify and include documentation of:

(A) The candidate superior performing valve designs or technologies to be evaluated, the stages for evaluating the identified candidate valve designs or technologies, including the estimated time period necessary to test the applicability;

(B) The frequency of monitoring or inspection of the equipment;

(C) The range of operating conditions over which the component will be evaluated; and

(D) Conclusions regarding the emission performance and the appropriate operating conditions and services for the trial valves.

(iv) The performance trials shall initially be conducted for, at least, a 6-month period beginning not later than 18 months after the start of Phase III. Not later than 24 months after the start of Phase III, the owner or operator shall have identified valve designs or technologies that, combined with appropriate process, operating, and maintenance practices, operate with low emission performance for specific applications in the process unit. The owner or operator shall continue to conduct performance trials as long as no superior performing design or technology has been identified, except as provided in paragraph (e)(6)(vi) of this section. The compilation of candidate and demonstrated superior emission performance valve designs or technologies shall be amended in the future, as appropriate, as additional information and experience is obtained.

(v) Any plant site with fewer than 400 valves and owned by a corporation with fewer than 100 total employees shall be exempt from trial evaluations of valves. Plant sites exempt from the trial evaluations of valves shall begin the program at the start of the fourth year of Phase III.

(vi) An owner or operator who has conducted performance trials on all candidate superior emission performance technologies suitable for the required applications in the process unit may stop conducting performance trials provided that a superior performing design or technology has been demonstrated or there are no technically feasible candidate superior technologies remaining. The owner or operator shall prepare an engineering evaluation documenting the physical, chemical, or engineering basis for the judgment that the superior emission performance technology is technically infeasible or demonstrating that it would not reduce emissions.

(7) Each owner or operator who elects to use a quality improvement program for technology review and improvement shall prepare and implement a valve quality assurance program that details purchasing specifications and maintenance procedures for all valves in the process unit. The quality assurance program may establish any number of categories, or classes, of valves as needed to distinguish among operating conditions and services associated with poorer than average emission performance as well as those associated

with better than average emission performance. The quality assurance program shall be developed considering the findings of the data analysis required under paragraph (e)(5) of this section, if applicable, the findings of the trial evaluation required in paragraph (e)(6) of this section, and the operating conditions in the process unit. The quality assurance program shall be reviewed and, as appropriate, updated each year as long as the process unit has 2 percent or more leaking valves.

(i) The quality assurance program shall:

(A) Establish minimum design standards for each category of valves. The design standards shall specify known critical parameters such as tolerance, manufacturer, materials of construction, previous usage, or other applicable identified critical parameters;

(B) Require that all equipment orders specify the design standard (or minimum tolerances) for the valve;

(C) Include a written procedure for bench testing of valves that specifies performance criteria for acceptance of valves and specifies criteria for the precision and accuracy of the test apparatus. All valves repaired off-line after preparation of the quality assurance plan shall be bench-tested for leaks. This testing may be conducted by the owner or operator of the process unit, by the vendor, or by a designated representative. The owner or operator shall install only those valves that have been documented through bench-testing to be nonleaking.

(D) Require that all valves repaired on-line be monitored using the method specified in 40 CFR 63.180(b) of this subpart for leaks for 2 successive months, after repair.

(E) Provide for an audit procedure for quality control of purchased equipment to ensure conformance with purchase specifications. The audit program may be conducted by the owner or operator of the process unit or by a designated representative.

(F) Detail off-line valve maintenance and repair procedures. These procedures shall include provisions to ensure that rebuilt or refurbished valves will meet the design specifications for the valve type and will operate such that emissions are minimized.

(ii) The quality assurance program shall be established no later than the start of the third year of Phase III for plant sites with 400 or more valves or owned by a corporation with 100 or more employees; and no later than the start of the fourth year of Phase III for plant sites with less than 400 valves and owned by a corporation with less than 100 employees.

(8) Beginning at the start of the third year of Phase III for plant sites with 400 or more valves or owned by a corporation with 100 or more employees and at the start of the fourth year of Phase III for plant sites with less than 400 valves and owned by a corporation with less than 100 employees, each valve that is replaced for any reason shall be replaced with a new or modified valve that complies with the quality assurance standards for the valve

category and that is identified as superior emission performance technology. Superior emission performance technology means valves or valve technologies identified with emission performance that, combined with appropriate process, operating, and maintenance practices, will result in less than 2 percent leaking valves for specific applications in a large population, except as provided in paragraph (e)(8)(ii) of this section.

(i) The valves shall be maintained as specified in the quality assurance program.

(ii) If a superior emission performance technology cannot be identified, then valve replacement shall be with one of (if several) the lowest emission performance technologies that has been identified for the specific application.

§§ 63.176 Quality improvement program for pumps.

(a) In Phase III, if, on a 6-month rolling average, the greater of either 10 percent of the pumps in a process unit (or plant site) or three pumps in a process unit (or plant site) leak, the owner or operator shall comply with the requirements of this section as specified below:

(1) Pumps that are in food/medical service or in polymerizing monomer service shall comply with all requirements except for those specified in paragraph (d)(8) of this section.

(2) Pumps that are not in food/medical or polymerizing monomer service shall comply with all requirements of this section.

(b) The owner or operator shall comply with the requirements of this section until the number of leaking pumps is less than the greater of either 10 percent of the pumps or three pumps, calculated as a 6-month rolling average, in the process unit (or plant site). Once the performance level is achieved, the owner or operator shall comply with the requirements in ? 63.163 of this subpart.

(c) If in a subsequent monitoring period, the process unit (or plant site) has greater than 10 percent of the pumps leaking or three pumps leaking (calculated as a 6-month rolling average), the owner or operator shall resume the quality improvement program starting at performance trials.

(d) The quality improvement program shall include the following:

(1) The owner or operator shall comply with the requirements in 40 CFR 63.163 of this subpart.

(2) The owner or operator shall collect the following data, and maintain records as required in 40 CFR 63.181(h)(3), for each pump in each process unit (or plant site) subject to the quality improvement program. The data may be collected and the records may be maintained on a process unit or plant site basis.

(i) Pump type (e.g., piston, horizontal or vertical centrifugal, gear, bellows); pump manufacturer; seal type and manufacturer; pump design (e.g., external shaft, flanged body); materials of construction; if applicable, barrier fluid or packing material; and year installed.

(ii) Service characteristics of the stream such as discharge pressure, temperature, flow rate, corrosivity, and annual operating hours.

(iii) The maximum instrument readings observed in each monitoring observation before repair, response factor for the stream if appropriate, instrument model number, and date of the observation.

(iv) If a leak is detected, the repair methods used and the instrument readings after repair.

(v) If the data will be analyzed as part of a larger analysis program involving data from other plants or other types of process units, a description of any maintenance or quality assurance programs used in the process unit that are intended to improve emission performance.

(3) The owner or operator shall continue to collect data on the pumps as long as the process unit (or plant site) remains in the quality improvement program.

(4) The owner or operator shall inspect all pumps or pump seals which exhibited frequent seal failures and were removed from the process unit due to leaks. The inspection shall determine the probable cause of the pump seal failure or of the pump leak and shall include recommendations, as appropriate, for design changes or changes in specifications to reduce leak potential.

(5) (i) The owner or operator shall analyze the data collected to comply with the requirements of paragraph (d)(2) of this section to determine the services, operating or maintenance practices, and pump or pump seal designs or technologies that have poorer than average emission performance and those that have better than average emission performance. The analysis shall determine if specific trouble areas can be identified on the basis of service, operating conditions or maintenance practices, equipment design, or other process specific factors.

(ii) The analysis shall also be used to determine if there are superior performing pump or pump seal technologies that are applicable to the service(s), operating conditions, or pump or pump seal designs associated with poorer than average emission performance. A superior performing pump or pump seal technology is one with a leak frequency of less than 10 percent for specific applications in the process unit or plant site. A candidate superior performing pump or pump seal technology is one demonstrated or reported in the available literature or through a

group study as having low emission performance and as being capable of achieving less than 10 percent leaking pumps in the process unit (or plant site).

(iii) The analysis shall include consideration of:

(A) The data obtained from the inspections of pumps and pump seals removed from the process unit due to leaks;

(B) Information from the available literature and from the experience of other plant sites that will identify pump designs or technologies and operating conditions associated with low emission performance for specific services; and

(C) Information on limitations on the service conditions for the pump seal technology operating conditions as well as information on maintenance procedures to ensure continued low emission performance.

(iv) The data analysis may be conducted through an inter- or intra-company program (or through some combination of the two approaches) and may be for a single process unit, a plant site, a company, or a group of process units.

(v) The first analysis of the data shall be completed no later than 18 months after the start of the quality improvement program. The first analysis shall be performed using a minimum of 6 months of data. An analysis of the data shall be done each year the process unit is in the quality improvement program.

(6) A trial evaluation program shall be conducted at each plant site for which the data analysis does not identify use of superior performing pump seal technology or pumps that can be applied to the areas identified as having poorer than average performance, except as provided in paragraph (d)(6)(v) of this section. The trial program shall be used to evaluate the feasibility of using in the process unit (or plant site) the pump designs or seal technologies, and operating and maintenance practices that have been identified by others as having low emission performance.

(i) The trial program shall include on-line trials of pump seal technologies or pump designs and operating and maintenance practices that have been identified in the available literature or in analysis by others as having the ability to perform with leak rates below 10 percent in similar services, as having low probability of failure, or as having no external actuating mechanism in contact with the process fluid. If any of the candidate superior performing pump seal technologies or pumps is not included in the performance trials, the reasons for rejecting specific technologies from consideration shall be documented as required in 40 CFR 63.181(h)(5)(ii).

(ii) The number of pump seal technologies or pumps in the trial evaluation program shall be the lesser of 1 percent or two pumps for programs involving single process units and the lesser of 1 percent or five pumps for programs involving a plant site or groups of process

units. The minimum number of pumps or pump seal technologies in a trial program shall be one.

(iii) The trial evaluation program shall specify and include documentation of:

(A) The candidate superior performing pump seal designs or technologies to be evaluated, the stages for evaluating the identified candidate pump designs or pump seal technologies, including the time period necessary to test the applicability;

(B) The frequency of monitoring or inspection of the equipment;

(C) The range of operating conditions over which the component will be evaluated; and

(D) Conclusions regarding the emission performance and the appropriate operating conditions and services for the trial pump seal technologies or pumps.

(iv) The performance trials shall initially be conducted, at least, for a 6-month period beginning not later than 18 months after the start of the quality improvement program. No later than 24 months after the start of the quality improvement program, the owner or operator shall have identified pump seal technologies or pump designs that, combined with appropriate process, operating, and maintenance practices, operate with low emission performance for specific applications in the process unit. The owner or operator shall continue to conduct performance trials as long as no superior performing design or technology has been identified, except as provided in paragraph (d)(6)(vi) of this section. The initial list of superior emission performance pump designs or pump seal technologies shall be amended in the future, as appropriate, as additional information and experience is obtained.

(v) Any plant site with fewer than 400 valves and owned by a corporation with fewer than 100 employees shall be exempt from trial evaluations of pump seals or pump designs. Plant sites exempt from the trial evaluations of pumps shall begin the pump seal or pump replacement program at the start of the fourth year of the quality improvement program.

(vi) An owner or operator who has conducted performance trials on all alternative superior emission performance technologies suitable for the required applications in the process unit may stop conducting performance trials provided that a superior performing design or technology has been demonstrated or there are no technically feasible alternative superior technologies remaining. The owner or operator shall prepare an engineering evaluation documenting the physical, chemical, or engineering basis for the judgment that the superior emission performance technology is technically infeasible or demonstrating that it would not reduce emissions.

(7) Each owner or operator shall prepare and implement a pump quality assurance program that details purchasing specifications and maintenance procedures for all pumps and pump seals in the process unit. The quality assurance program may establish any number

of categories, or classes, of pumps as needed to distinguish among operating conditions and services associated with poorer than average emission performance as well as those associated with better than average emission performance. The quality assurance program shall be developed considering the findings of the data analysis required under paragraph (d)(5) of this section, if applicable, the findings of the trial evaluation required in paragraph (d)(6) of this section, and the operating conditions in the process unit. The quality assurance program shall be updated each year as long as the process unit has the greater of either 10 percent or more leaking pumps or has three leaking pumps.

(i) The quality assurance program shall:

(A) Establish minimum design standards for each category of pumps or pump seal technology. The design standards shall specify known critical parameters such as tolerance, manufacturer, materials of construction, previous usage, or other applicable identified critical parameters;

(B) Require that all equipment orders specify the design standard (or minimum tolerances) for the pump or the pump seal;

(C) Provide for an audit procedure for quality control of purchased equipment to ensure conformance with purchase specifications. The audit program may be conducted by the owner or operator of the plant site or process unit or by a designated representative; and

(D) Detail off-line pump maintenance and repair procedures. These procedures shall include provisions to ensure that rebuilt or refurbished pumps and pump seals will meet the design specifications for the pump category and will operate such that emissions are minimized.

(ii) The quality assurance program shall be established no later than the start of the third year of the quality improvement program for plant sites with 400 or more valves or 100 or more employees; and no later than the start of the fourth year of the quality improvement program for plant sites with less than 400 valves and less than 100 employees.

(8) Beginning at the start of the third year of the quality improvement program for plant sites with 400 or more valves or 100 or more employees and at the start of the fourth year of the quality improvement program for plant sites with less than 400 valves and less than 100 employees, the owner or operator shall replace, as described in paragraphs (d)(8)(i) and (d)(8)(ii) of this section, the pumps or pump seals that are not superior emission performance technology with pumps or pump seals that have been identified as superior emission performance technology and that comply with the quality assurance standards for the pump category. Superior emission performance technology is that category or design of pumps or pump seals with emission performance which, when combined with appropriate process, operating, and maintenance practices, will result in less than 10 percent leaking pumps for specific applications in the process unit or plant site. Superior emission performance technology includes material or design changes to the existing

pump, pump seal, seal support system, installation of multiple mechanical seals or equivalent, or pump replacement.

(i) Pumps or pump seals shall be replaced at the rate of 20 percent per year based on the total number of pumps in light liquid service. The calculated value shall be rounded to the nearest nonzero integer value. The minimum number of pumps or pump seals shall be one. Pump replacement shall continue until all pumps subject to the requirements of 40 CFR 63.163 of this subpart are pumps determined to be superior performance technology.

(ii) The owner or operator may delay replacement of pump seals or pumps with superior technology until the next planned process unit shutdown, provided the number of pump seals and pumps replaced is equivalent to the 20 percent or greater annual replacement rate.

(iii) The pumps shall be maintained as specified in the quality assurance program.

§§ 63.177 Alternative means of emission limitation: General.

(a) Permission to use an alternative means of emission limitation under section 112(h)(3) of the Act shall be governed by the following procedures in paragraphs (b) through (e) of this section.

(b) Where the standard is an equipment, design, or operational requirement:

(1) Each owner or operator applying for permission to use an alternative means of emission limitation under 40 CFR 63.6(g) of subpart A of this part shall be responsible for collecting and verifying emission performance test data for an alternative means of emission limitation.

(2) The Administrator will compare test data for the means of emission limitation to test data for the equipment, design, and operational requirements.

(3) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same emission reduction as the equipment, design, and operational requirements.

(c) Where the standard is a work practice:

(1) Each owner or operator applying for permission shall be responsible for collecting and verifying test data for an alternative means of emission limitation.

(2) For each kind of equipment for which permission is requested, the emission reduction achieved by the required work practices shall be demonstrated for a minimum period of 12 months.

(3) For each kind of equipment for which permission is requested, the emission reduction achieved by the alternative means of emission limitation shall be demonstrated.

(4) Each owner or operator applying for permission shall commit, in writing, for each kind of equipment to work practices that provide for emission reductions equal to or greater than the emission reductions achieved by the required work practices.

(5) The Administrator will compare the demonstrated emission reduction for the alternative means of emission limitation to the demonstrated emission reduction for the required work practices and will consider the commitment in paragraph (c)(4) of this section.

(6) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same or greater emission reduction as the required work practices of this subpart.

(d) An owner or operator may offer a unique approach to demonstrate the alternative means of emission limitation.

(e)(1) Manufacturers of equipment used to control equipment leaks of an organic HAP may apply to the Administrator for permission for an alternative means of emission limitation that achieves a reduction in emissions of the organic HAP achieved by the equipment, design, and operational requirements of this subpart.

(2) The Administrator will grant permission according to the provisions of paragraphs (b), (c), and (d) of this section.

§§ 63.178 Alternative means of emission limitation: Batch processes.

(a) As an alternative to complying with the requirements of 40 CFR 63.163 through 63.171 and 40 CFR 63.173 through 63.176, an owner or operator of a batch process that operates in organic HAP service during the calendar year may comply with one of the standards specified in paragraphs (b) and (c) of this section, or the owner or operator may petition for approval of an alternative standard under the provisions of 40 CFR 63.177 of this subpart. The alternative standards of this section provide the options of pressure testing or monitoring the equipment for leaks. The owner or operator may switch among the alternatives provided the change is documented as specified in 40 CFR 63.181.

(b) The following requirements shall be met if an owner or operator elects to use pressure testing of batch product-process equipment to demonstrate compliance with this subpart. An owner or operator who complies with the provisions of this paragraph is exempt from the monitoring provisions of 40 CFR 63.163, 40 CFR 63.168 and 63.169, and 40 CFR 63.173 through 63.176 of this subpart.

(1) Each time equipment is reconfigured for production of a different product or intermediate, the batch product-process equipment train shall be pressure-tested for leaks

before organic HAP is first fed to the equipment and the equipment is placed in organic HAP service.

(i) When the batch product-process train is reconfigured to produce a different product, pressure testing is required only for the new or disturbed equipment.

(ii) Each batch product process that operates in organic HAP service during a calendar year shall be pressure tested at least once during that calendar year.

(iii) Pressure testing is not required for routine seal breaks, such as changing hoses or filters, which are not part of the reconfiguration to produce a different product or intermediate.

(2) The batch product process equipment shall be tested either using the procedures specified in 40 CFR 63.180(f) of this subpart for pressure or vacuum loss or with a liquid using the procedures specified in 40 CFR 63.180(g) of this subpart.

(3) (i) For pressure or vacuum tests, a leak is detected if the rate of change in pressure is greater than 6.9 kilopascals (1 psig) in 1 hour or if there is visible, audible, or olfactory evidence of fluid loss.

(ii) For pressure tests using a liquid, a leak is detected if there are indications of liquids dripping or if there is other evidence of fluid loss.

(4) (i) If a leak is detected, it shall be repaired and the batch product-process equipment shall be retested before start-up of the process.

(ii) If a batch product-process fails the retest or the second of two consecutive pressure tests, it shall be repaired as soon as practicable, but not later than 30 calendar days after the second pressure test, provided the conditions specified in paragraph (d) of this section are met.

(c) The following requirements shall be met if an owner or operator elects to monitor the equipment to detect leaks by the method specified in 40 CFR 63.180(b) of this subpart to demonstrate compliance with this subpart.

(1) The owner or operator shall comply with the requirements of 40 CFR 63.163 through 63.170, and 40 CFR 63.172 through 63.176 of this subpart.

(2) The equipment shall be monitored for leaks by the method specified in 40 CFR 63.180(b) of this subpart when the equipment is in organic HAP service, in use with an acceptable surrogate volatile organic compound which is not an organic HAP, or is in use with any other detectable gas or vapor.

(3) The equipment shall be monitored for leaks as specified below:

(i) Each time the equipment is reconfigured for the production of a new product, the reconfigured equipment shall be monitored for leaks within 30 days of start-up of the process. This initial monitoring of reconfigured equipment shall not be included in determining percent leaking equipment in the process unit.

(ii) Connectors shall be monitored in accordance with the requirements in 40 CFR 63.174 of this subpart.

(iii) Equipment other than connectors shall be monitored at the frequencies specified in table 1 of this subpart. The operating time shall be determined as the proportion of the year the batch product-process that is subject to the provisions of this subpart is operating.

(iv) The monitoring frequencies specified in table 1 of this subpart are not requirements for monitoring at specific intervals and can be adjusted to accommodate process operations. An owner or operator may monitor anytime during the specified monitoring period (e.g., month, quarter, year), provided the monitoring is conducted at a reasonable interval after completion of the last monitoring campaign. For example, if the equipment is not operating during the scheduled monitoring period, the monitoring can be done during the next period when the process is operating.

(4) If a leak is detected, it shall be repaired as soon as practicable but not later than 15 calendar days after it is detected, except as provided in paragraph (d) of this section.

(d) Delay of repair of equipment for which leaks have been detected is allowed if the replacement equipment is not available providing the following conditions are met:

(1) Equipment supplies have been depleted and supplies had been sufficiently stocked before the supplies were depleted.

(2) The repair is made no later than 10 calendar days after delivery of the replacement equipment.

§§ 63.179 Alternative means of emission limitation: Enclosed-vented process units.

Process units enclosed in such a manner that all emissions from equipment leaks are vented through a closed-vent system to a control device meeting the requirements of 40 CFR 63.172 of this subpart are exempt from the requirements of 40 CFR 63.163, through 63.171, and 40 CFR 63.173 and 63.174 of this subpart. The enclosure shall be maintained under a negative pressure at all times while the process unit is in operation to ensure that all emissions are routed to a control device.

§§ 63.180 Test methods and procedures.

(a) Each owner or operator subject to the provisions of this subpart shall comply with the test methods and procedures requirements provided in this section.

(b) Monitoring, as required under this subpart, shall comply with the following requirements:

(1) Monitoring shall comply with Method 21 of 40 CFR part 60, appendix A.

(2)(i) Except as provided for in paragraph (b)(2)(ii) of this section, 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 VOC in the stream. For process streams that contain nitrogen, water, air, or other inerts which are not organic HAP's or VOC's, the average stream response factor may be calculated on an inert-free basis. The response factor may be determined at any concentration for which monitoring for leaks will be conducted.

(ii) If no instrument is available at the plant site that will meet the performance criteria specified in paragraph (b)(2)(i) of this section, 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 paragraph (b)(2)(i) of this section.

(3) The 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.

(4) Calibration gases shall be:

(i) Zero air (less than 10 parts per million of hydrocarbon in air); and

(ii) Mixtures of methane in air at the concentrations specified in paragraphs (b)(4)(ii)(A) through (b)(4)(ii)(C) of this section. 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 paragraph (b)(2)(i) of this section. In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air.

(A) For Phase I, a mixture of methane or other compounds, as applicable, in air at a concentration of approximately, but less than, 10,000 parts per million.

(B) For Phase II, a mixture of methane or other compounds, as applicable, and air at a concentration of approximately, but less than, 10,000 parts per million for agitators, 5,000 parts per million for pumps, and 500 parts per million for all other equipment, except as provided in paragraph (b)(4)(iii) of this section.

(C) For Phase III, a mixture of methane or other compounds, as applicable, and air at a concentration of approximately, but less than, 10,000 parts per million methane for agitators; 2,000 parts per million for pumps in food/medical service; 5,000 parts per million for pumps in polymerizing monomer service; 1,000 parts per million for all other

pumps; and 500 parts per million for all other equipment, except as provided in paragraph (b)(4)(iii) of this section.

(iii) The instrument may be calibrated at a higher methane concentration than the concentration specified for that piece of equipment. The concentration of the calibration gas may exceed the concentration specified as a leak by no more than 2,000 parts per million. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 parts per million above the concentration specified as a leak and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 parts per million. If only one scale on an instrument will be used during monitoring, the owner or operator need not calibrate the scales that will not be used during that day's monitoring.

(5) Monitoring shall be performed when the equipment is in organic HAP service, in use with an acceptable surrogate volatile organic compound which is not an organic HAP, or is in use with any other detectable gas or vapor.

(6) Monitoring data that do not meet the criteria specified in paragraphs (b)(1) through (b)(5) of this section may be used to qualify for less frequent monitoring under the provisions in 40 CFR 63.168(d)(2) and (d)(3) or 40 CFR 63.174(b)(3)(ii) or (b)(3)(iii) of this subpart provided the data meet the conditions specified in paragraphs (b)(6)(i) and (b)(6)(ii) of this section.

(i) The data were obtained before April 22, 1994.

(ii) The departures from the criteria specified in paragraphs (b)(1) through (b)(5) of this section or from the specified monitoring frequency of ? 63.168(c) are minor and do not significantly affect the quality of the data. Examples of minor departures are monitoring at a slightly different frequency (such as every six weeks instead of monthly or quarterly), following the performance criteria of section 3.1.2(a) of Method 21 of appendix A of 40 CFR part 60 instead of paragraph (b)(2) of this section, or monitoring at a different leak definition if the data would indicate the presence or absence of a leak at the concentration specified in this subpart. Failure to use a calibrated instrument is not considered a minor departure.

(c) When equipment is monitored for compliance as required in 40 CFR 63.164(i), 63.165(a), and 63.172(f) or when equipment subject to a leak definition of 500 ppm is monitored for leaks as required by this subpart, the owner or operator may elect to adjust or not to adjust the instrument readings for background. If an owner or operator elects to not adjust instrument readings for background, the owner or operator shall monitor the equipment according to the procedures specified in paragraphs (b)(1) through (b)(4) of this section. In such case, all instrument readings shall be compared directly to the applicable leak definition to determine whether there is a leak. If an owner or operator elects to adjust instrument readings for background, the owner or operator shall monitor the equipment according to the procedures specified in paragraphs (c)(1) through (c)(4) of this section.

(1) The requirements of paragraphs (b) (1) through (4) of this section shall apply.

(2) The background level shall be determined, using the same procedures that will be used to determine whether the equipment is leaking.

(3) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Method 21 of 40 CFR part 60, appendix A.

(4) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 parts per million for determining compliance.

(d)(1) Each piece of equipment within a process unit that can reasonably be expected to contain equipment in organic HAP service is presumed to be in organic HAP service unless an owner or operator demonstrates that the piece of equipment is not in organic HAP service. For a piece of equipment to be considered not in organic HAP service, it must be determined that the percent organic HAP content can be reasonably expected not to exceed 5 percent by weight on an annual average basis. For purposes of determining the percent organic HAP content of the process fluid that is contained in or contacts equipment, Method 18 of 40 CFR part 60, appendix A shall be used.

(2)(i) An owner or operator may use good engineering judgment rather than the procedures in paragraph (d)(1) of this section to determine that the percent organic HAP content does not exceed 5 percent by weight. When an owner or operator and the Administrator do not agree on whether a piece of equipment is not in organic HAP service, however, the procedures in paragraph (d)(1) of this section shall be used to resolve the disagreement.

(ii) Conversely, the owner or operator may determine that the organic HAP content of the process fluid does not exceed 5 percent by weight by, for example, accounting for 98 percent of the content and showing that organic HAP is less than 3 percent.

(3) If an owner or operator determines that a piece of equipment is in organic HAP service, the determination can be revised after following the procedures in paragraph (d)(1) of this section, or by documenting that a change in the process or raw materials no longer causes the equipment to be in organic HAP service.

(4) Samples used in determining the percent organic HAP content shall be representative of the process fluid that is contained in or contacts the equipment.

(e) When a flare is used to comply with 40 CFR 63.172(d), the owner or operator shall comply with paragraphs (e)(1) through (3) of this section. The owner or operator is not required to conduct a performance test to determine percent emission reduction or outlet organic HAP or TOC concentration.

(1) Conduct a visible emission test using the techniques specified in 40 CFR 63.11(b)(4).

(2) Determine the net heating value of the gas being combusted using the techniques specified in 40 CFR 63.11(b)(6).

(3) Determine the exit velocity using the techniques specified in either 40 CFR 63.11(b)(7)(i) (and ? 63.11(b)(7)(iii), where applicable) or 40 CFR 63.11(b)(8), as appropriate.

(f) The following procedures shall be used to pressure test batch product-process equipment for pressure or vacuum loss to demonstrate compliance with the requirements of 40 CFR 63.178(b)(3)(i) of this subpart.

(1) The batch product-process equipment train shall be pressurized with a gas to a pressure less than the set pressure of any safety relief devices or valves or to a pressure slightly above the operating pressure of the equipment, or alternatively, the equipment shall be placed under a vacuum.

(2) Once the test pressure is obtained, the gas source or vacuum source shall be shut off.

(3) The test shall continue for not less than 15 minutes unless it can be determined in a shorter period of time that the allowable rate of pressure drop or of pressure rise was exceeded. The pressure in the batch product-process equipment shall be measured after the gas or vacuum source is shut off and at the end of the test period. The rate of change in pressure in the batch product-process equipment shall be calculated using the following equation:

Delta P/t = (I Pf - Pi l) / (tf - ti)

where:

Delta P/t=Change in pressure, psig/hr.

Pf=Final pressure, psig.

Pi=Initial pressure, psig.

tf-ti=Elapsed time, hours.

(4) The pressure shall be measured using a pressure measurement device (gauge, manometer, or equivalent) which has a precision of +/-2.5 millimeter mercury in the range of test pressure and is capable of measuring pressures up to the relief set pressure of the pressure relief device. If such a pressure measurement device is not reasonably available, the owner or operator shall use a pressure measurement device with a precision of at least +10 percent of the test pressure of the equipment and shall extend the duration of the test for the time necessary to detect a pressure loss or rise that equals a rate of one psig per hour.

(5) An alternative procedure may be used for leak testing the equipment if the owner or operator demonstrates the alternative procedure is capable of detecting a pressure loss or rise.

(g) The following procedures shall be used to pressure-test batch product-process equipment using a liquid to demonstrate compliance with the requirements of 40 CFR 63.178(b)(3)(ii) of this subpart.

(1) The batch product-process equipment train, or section of the train, shall be filled with the test liquid (e.g., water, alcohol) until normal operating pressure is obtained. Once the equipment is filled, the liquid source shall be shut off.

(2) The test shall be conducted for a period of at least 60 minutes, unless it can be determined in a shorter period of time that the test is a failure.

(3) Each seal in the equipment being tested shall be inspected for indications of liquid dripping or other indications of fluid loss. If there are any indications of liquids dripping or of fluid loss, a leak is detected.

(4) An alternative procedure may be used for leak testing the equipment, if the owner or operator demonstrates the alternative procedure is capable of detecting losses of fluid.

§§ 63.181 Recordkeeping requirements.

(a) An owner or operator of more than one process unit subject to the provisions of this subpart may comply with the recordkeeping requirements for these process units in one recordkeeping system if the system identifies each record by process unit and the program being implemented (e.g., quarterly monitoring, quality improvement) for each type of equipment. All records and information required by this section shall be maintained in a manner that can be readily accessed at the plant site. This could include physically locating the records at the plant site or accessing the records from a central location by computer at the plant site.

(b) Except as provided in paragraph (e) of this section, the following information pertaining to all equipment in each process unit subject to the requirements in 40 CFR 63.162 through 63.174 of this subpart shall be recorded:

(1)(i) A list of identification numbers for equipment (except connectors exempt from monitoring and recordkeeping identified in 40 CFR 63.174 of this subpart and instrumentation systems) subject to the requirements of this subpart. Connectors need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of this subpart are identified as a group, and the number of connectors subject is indicated. With respect to connectors, the list shall be complete no later than the completion of the initial survey required by 40 CFR 63.174 (b)(1) or (b)(2) of this subpart.

(ii) A schedule by process unit for monitoring connectors subject to the provisions of 40 CFR 63.174(a) of this subpart and valves subject to the provisions of 40 CFR 63.168(d) of this subpart.

(iii) Physical tagging of the equipment to indicate that it is in organic HAP service is not required. Equipment subject to the provisions of this subpart may be identified on a plant site plan, in log entries, or by other appropriate methods.

(2) (i) A list of identification numbers for equipment that the owner or operator elects to equip with a closed-vent system and control device, under the provisions of 40 CFR 63.163(g), 40 CFR 63.164(h), 40 CFR 63.165(c), or 40 CFR 63.173(f) of this subpart.

(ii) A list of identification numbers for compressors that the owner or operator elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of 40 CFR 63.164(i) of this subpart.

(iii) Identification of surge control vessels or bottoms receivers subject to the provisions of this subpart that the owner or operator elects to equip with a closed-vent system and control device, under the provisions of 40 CFR 63.170 of this subpart.

(3) (i) A list of identification numbers for pressure relief devices subject to the provisions in 40 CFR 63.165(a) of this subpart.

(ii) A list of identification numbers for pressure relief devices equipped with rupture disks, under the provisions of 40 CFR 63.165(d) of this subpart.

(4) Identification of instrumentation systems subject to the provisions of this subpart. Individual components in an instrumentation system need not be identified.

(5) Identification of screwed connectors subject to the requirements of 40 63.174(c)(2) of this subpart. Identification can be by area or grouping as long as the total number within each group or area is recorded.

(6) The following information shall be recorded for each dual mechanical seal system:

(i) Design criteria required in 40 CFR 63.163(e)(6)(i), 63.164(e)(2), and 63.173(d)(6)(i) of this subpart and an explanation of the design criteria; and

(ii) Any changes to these criteria and the reasons for the changes.

(7) The following information pertaining to all pumps subject to the provisions of 40 CFR 63.163(j), valves subject to the provisions of 40 CFR 63.168(h) and (i) of this subpart,

agitators subject to the provisions of 40 CFR 63.173(h) through (j), and connectors subject to the provisions of 40 CFR 63.174(f) and (g) of this subpart shall be recorded:

(i) Identification of equipment designated as unsafe to monitor, difficult to monitor, or unsafe to inspect and the plan for monitoring or inspecting this equipment.

(ii) A list of identification numbers for the equipment that is designated as difficult to monitor, an explanation of why the equipment is difficult to monitor, and the planned schedule for monitoring this equipment.

(iii) A list of identification numbers for connectors that are designated as unsafe to repair and an explanation why the connector is unsafe to repair.

(8)(i) A list of valves removed from and added to the process unit, as described in 40 CFR 63.168(e)(1) of this subpart, if the net credits for removed valves is expected to be used.

(ii) A list of connectors removed from and added to the process unit, as described in 40 CFR 63.174(i)(1) of this subpart, and documentation of the integrity of the weld for any removed connectors, as required in 40 CFR 63.174(j) of this subpart. This is not required unless the net credits for removed connectors is expected to be used.

(9)(i) For batch process units that the owner or operator elects to monitor as provided under 40 CFR 63.178(c) of this subpart, a list of equipment added to batch product process units since the last monitoring period required in 40 CFR 63.178(c)(3)(ii) and (3)(iii) of this subpart.

(ii) Records demonstrating the proportion of the time during the calendar year the equipment is in use in a batch process that is subject to the provisions of this subpart. Examples of suitable documentation are records of time in use for individual pieces of equipment or average time in use for the process unit. These records are not required if the owner or operator does not adjust monitoring frequency by the time in use, as provided in 40 CFR 63.178(c)(3)(iii) of this subpart.

(c) For visual inspections of equipment subject to the provisions of this subpart (e.g., 40 CFR 63.163(b)(3), 40 CFR 63.163(e)(4)(i)), the owner or operator shall document that the inspection was conducted and the date of the inspection. The owner or operator shall maintain records as specified in paragraph (d) of this section for leaking equipment identified in this inspection, except as provided in paragraph (e) of this section. These records shall be retained for 2 years.

(d) When each leak is detected as specified in 40 CFR 63.163 and 63.164; 40 CFR 63.168 and 63.169; and 40 CFR 63.172 through 63.174 of this subpart, the following information shall be recorded and kept for 2 years:

(1) The instrument and the equipment identification number and the operator name, initials, or identification number.

(2) The date the leak was detected and the date of first attempt to repair the leak.

(3) The date of successful repair of the leak.

(4) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be nonrepairable.

(5) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(i) The owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. The written procedures may be included as part of the startup/shutdown/malfunction plan, required by 40 CFR 63.6(e)(3), for the source or may be part of a separate document that is maintained at the plant site. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(ii) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.

(6) Dates of process unit shutdowns that occur while the equipment is unrepaired.

(7) (i) Identification, either by list, location (area or grouping), or tagging of connectors that have been opened or otherwise had the seal broken since the last monitoring period required in 40 CFR 63.174(b) of this subpart, as described in 40 CFR 63.174(c)(1) of this subpart, unless the owner or operator elects to comply with the provisions of 40 CFR 63.174(c)(1)(ii) of this subpart.

(ii) The date and results of monitoring as required in 40 CFR 63.174(c) of this subpart. If identification of connectors that have been opened or otherwise had the seal broken is made by location under paragraph (d)(7)(i) of this section, then all connectors within the designated location shall be monitored.

(8) The date and results of the monitoring required in 40 CFR 63.178(c)(3)(i) of this subpart for equipment added to a batch process unit since the last monitoring period required in 40 CFR 63.178 (c)(3)(ii) and (c)(3)(iii) of this subpart. If no leaking equipment is found in this monitoring, the owner or operator shall record that the inspection was performed. Records of the actual monitoring results are not required.

(9) Copies of the periodic reports as specified in 40 CFR 63.182(d) of this subpart, if records are not maintained on a computerized database capable of generating summary reports from the records.

(e) The owner or operator of a batch product process who elects to pressure test the batch product process equipment train to demonstrate compliance with this subpart is exempt from the requirements of paragraphs (b), (c), (d), and (f) of this section. Instead, the owner or operator shall maintain records of the following information:

(1) The identification of each product, or product code, produced during the calendar year. It is not necessary to identify individual items of equipment in a batch product process equipment train.

(2) [Reserved]

(3) Physical tagging of the equipment to identify that it is in organic HAP service and subject to the provisions of this subpart is not required. Equipment in a batch product process subject to the provisions of this subpart may be identified on a plant site plan, in log entries, or by other appropriate methods.

(4) The dates of each pressure test required in 40 CFR 63.178(b) of this subpart, the test pressure, and the pressure drop observed during the test.

(5) Records of any visible, audible, or olfactory evidence of fluid loss.

(6) When a batch product process equipment train does not pass two consecutive pressure tests, the following information shall be recorded in a log and kept for 2 years:

(i) The date of each pressure test and the date of each leak repair attempt.

(ii) Repair methods applied in each attempt to repair the leak.

(iii) The reason for the delay of repair.

(iv) The expected date for delivery of the replacement equipment and the actual date of delivery of the replacement equipment.

(v) The date of successful repair.

(f) The dates and results of each compliance test required for compressors subject to the provisions in 40 CFR 63.164(i) and the dates and results of the monitoring following a pressure release for each pressure relief device subject to the provisions in 40 CFR 63.165 (a) and (b) of this subpart. The results shall include:

(1) The background level measured during each compliance test.

(2) The maximum instrument reading measured at each piece of equipment during each compliance test.

(g) The owner or operator shall maintain records of the information specified in paragraphs (g)(1) through (g)(3) of this section for closed-vent systems and control devices subject to the provisions of 40 CFR 63.172 of this subpart. The records specified in paragraph (g)(1) of this section shall be retained for the life of the equipment. The records specified in paragraphs (g)(2) and (g)(3) of this section shall be retained for 2 years.

(1) The design specifications and performance demonstrations specified in paragraphs (g)(1)(i) through (g)(1)(iv) of this section.

(i) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams.

(ii) The dates and descriptions of any changes in the design specifications.

(iii) The flare design (i.e., steam-assisted, air-assisted, or non-assisted) and the results of the compliance demonstration required by 40 CFR 63.11(b) of subpart A of this part.

(iv) A description of the parameter or parameters monitored, as required in 40 CFR 63.172(e) of this subpart, to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

(2) Records of operation of closed-vent systems and control devices, as specified in paragraphs (g)(2)(i) through (g)(2)(iii) of this section.

(i) Dates and durations when the closed-vent systems and control devices required in 40 CFR 63.163 through 63.166, and 40 CFR 63.170 of this subpart are not operated as designed as indicated by the monitored parameters, including periods when a flare pilot light system does not have a flame.

(ii) Dates and durations during which the monitoring system or monitoring device is inoperative.

(iii) Dates and durations of start-ups and shutdowns of control devices required in 40 CFR 63.163 through 63.166, and 40 CFR 63.170 of this subpart.

(3) Records of inspections of closed-vent systems subject to the provisions of 40 CFR 63.172 of this subpart, as specified in paragraphs (g)(3)(i) and (g)(3)(ii) of this section.

(i) For each inspection conducted in accordance with the provisions of 40 CFR 63.172(f)(1) or (f)(2) of this subpart during which no leaks were detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(ii) For each inspection conducted in accordance with the provisions of 40 CFR 63.172(f)(1) or (f)(2) of this subpart during which leaks were detected, the information specified in paragraph (d) of this section shall be recorded.

(h) Each owner or operator of a process unit subject to the requirements of 40 CFR 63.175 and 63.176 of this subpart shall maintain the records specified in paragraphs (h)(1) through (h)(9) of this section for the period of the quality improvement program for the process unit.

(1) For owners or operators who elect to use a reasonable further progress quality improvement program, as specified in 40 CFR 63.175(d) of this subpart:

(i) All data required in 40 CFR 63.175(d)(2) of this subpart.

(ii) The percent leaking valves observed each quarter and the rolling average percent reduction observed in each quarter.

(iii) The beginning and ending dates while meeting the requirements of 40 CFR 63.175(d) of this subpart.

(2) For owners or operators who elect to use a quality improvement program of technology review and improvement, as specified in 40 CFR 63.175(e) of this subpart:

(i) All data required in 40 CFR 63.175(e)(2) of this subpart.

(ii) The percent leaking valves observed each quarter.

(iii) Documentation of all inspections conducted under the requirements of ? 63.175(e)(4) of this subpart, and any recommendations for design or specification changes to reduce leak frequency.

(iv) The beginning and ending dates while meeting the requirements of 40 CFR 63.175(e) of this subpart.

(3) For owners or operators subject to the requirements of the pump quality improvement program as specified in 40 CFR 63.176 of this subpart:

(i) All data required in 40 CFR 63.176(d)(2) of this subpart.

(ii) The rolling average percent leaking pumps.

(iii) Documentation of all inspections conducted under the requirements of 40 CFR 63.176(d)(4) of this subpart, and any recommendations for design or specification changes to reduce leak frequency.

(iv) The beginning and ending dates while meeting the requirements of 40 CFR 63.176(d) of this subpart.

(4) If a leak is not repaired within 15 calendar days after discovery of the leak, the reason for the delay and the expected date of successful repair.

(5) Records of all analyses required in 40 CFR 63.175(e) and 63.176(d) of this subpart. The records will include the following:

(i) A list identifying areas associated with poorer than average performance and the associated service characteristics of the stream, the operating conditions and maintenance practices.

(ii) The reasons for rejecting specific candidate superior emission performing valve or pump technology from performance trials.

(iii) The list of candidate superior emission performing valve or pump technologies, and documentation of the performance trial program items required under 40 CFR 63.175(e)(6)(iii) and 63.176(d)(6)(iii) of this subpart.

(iv) The beginning date and duration of performance trials of each candidate superior emission performing technology.

(6) All records documenting the quality assurance program for valves or pumps as specified in 40 CFR 63.175(e)(7) and 63.176(d)(7) of this subpart.

(7) Records indicating that all valves or pumps replaced or modified during the period of the quality improvement program are in compliance with the quality assurance requirements in 40 CFR 63.175(e)(7) and 40 CFR 63.176(d)(7) of this subpart.

(8) Records documenting compliance with the 20 percent or greater annual replacement rate for pumps as specified in 40 CFR 63.176(d)(8) of this subpart.

(9) Information and data to show the corporation has fewer than 100 employees, including employees providing professional and technical contracted services.

(i)(i) The owner or operator of equipment in heavy liquid service shall comply with the requirements of either paragraph (i)(1) or (i)(2) of this section, as provided in paragraph (i)(3) of this section.

(1) Retain information, data, and analyses used to determine that a piece of equipment is in heavy liquid service.

(2) When requested by the Administrator, demonstrate that the piece of equipment or process is in heavy liquid service.

(3) A determination or demonstration that a piece of equipment or process is in heavy liquid service shall include an analysis or demonstration that the process fluids do not meet the definition of "in light liquid service." Examples of information that could document this include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations, or process knowledge.

(j) Identification, either by list, location (area or group) of equipment in organic HAP service less than 300 hours per year within a process unit subject to the provisions of this subpart under 40 CFR 63.160 of this subpart.

(k) Owners and operators choosing to comply with the requirements of 40 CFR 63.179 of this subpart shall maintain the following records:

(1) Identification of the process unit(s) and the organic HAP's they handle.

(2) A schematic of the process unit, enclosure, and closed-vent system.

(3) A description of the system used to create a negative pressure in the enclosure to ensure that all emissions are routed to the control device.

§§ 63.182 Reporting requirements.

(a) Each owner or operator of a source subject to this subpart shall submit the reports listed in paragraphs (a)(1) through (a)(5) of this section. Owners or operators requesting an extension of compliance shall also submit the report listed in paragraph (a)(6) of this section.

(1) An Initial Notification described in paragraph (b) of this section, and

(2) A Notification of Compliance Status described in paragraph (c) of this section,

(3) Periodic Reports described in paragraph (d) of this section, and

(4)-(5) [Reserved]

(6) Pursuant to section 112(i)(3)(B) of the Act, an owner or operator may request an extension allowing an existing source up to 1 additional year beyond the compliance date specified in the subpart that references this subpart.

(i) For purposes of this subpart, a request for an extension shall be submitted to the operating permit authority as part of the operating permit application. If the State in which the source is located does not have an approved operating permit program, a request for an extension shall be submitted to the Administrator as a separate submittal. The dates specified in 40 CFR 63.6(i) of subpart A of this part for submittal of requests for extensions shall not apply to sources subject to this subpart.

(ii) A request for an extension of compliance must include the data described in 40 CFR 63.6(i)(6)(i) (A), (B), and (D) of subpart A of this part.

(iii) The requirements in 40 CFR 63.6(i)(8) through (i)(14) of subpart A of this part will govern the review and approval of requests for extensions of compliance with this subpart.

(b) Each owner or operator of an existing or new source subject to the provisions of this subpart shall submit a written Initial Notification to the Administrator, containing the information described in paragraph (b)(1), according to the schedule in paragraph (b)(2) of this section. The Initial Notification provisions in 40 CFR 63.9(b)(1) through (b)(3) of subpart A of this part shall not apply to owners or operators of sources subject to this subpart.

(1) The Initial Notification shall include the following information:

(i) The name and address of the owner or operator;

(ii) The address (physical location) of the affected source;

(iii) An identification of the chemical manufacturing processes subject to this subpart; and

(iv) A statement of whether the source can achieve compliance by the applicable compliance date specified in the subpart in 40 CFR part 63 that references this subpart.

(2) The Initial Notification shall be submitted according to the schedule in paragraph (b)(2)(i), (b)(2)(ii), or (b)(2)(iii) of this section, as applicable.

(i) For an existing source, the Initial Notification shall be submitted within 120 days after the date of promulgation of the subpart that references this subpart.

(ii) For a new source that has an initial start-up 90 days after the date of promulgation of this subpart or later, the application for approval of construction or reconstruction required by 40 CFR 63.5(d) of subpart A of this part shall be submitted in lieu of the Initial Notification. The application shall be submitted as soon as practicable before the construction or reconstruction is planned to commence (but it need not be sooner than 90 days after the date of promulgation of the subpart that references this subpart).

(iii) For a new source that has an initial start-up prior to 90 days after the date of promulgation of the applicable subpart, the Initial Notification shall be submitted within 90 days after the date of promulgation of the subpart that references this subpart.

(c) Each owner or operator of a source subject to this subpart shall submit a Notification of Compliance Status within 90 days after the compliance dates specified in the subpart in 40 CFR part 63 that references this subpart, except as provided in paragraph (c)(4) of this section.

(1) The notification shall provide the information listed in paragraphs (c)(1)(i) through (c)(1)(iv) of this section for each process unit subject to the requirements of ? 63.163 through 40 CFR 63.174 of this subpart.

(i) Process unit identification.

(ii) Number of each equipment type (e.g., valves, pumps) excluding equipment in vacuum service.

(iii) Method of compliance with the standard (for example, "monthly leak detection and repair" or "equipped with dual mechanical seals").

(iv) Planned schedule for each phase of the requirements in 40 CFR 63.163 and 40 CFR 63.168 of this subpart.

(2) The notification shall provide the information listed in paragraphs (c)(2)(i) and (c)(2)(ii) of this section for each process unit subject to the requirements of 40 CFR 63.178(b) of this subpart.

(i) Batch products or product codes subject to the provisions of this subpart, and

(ii) Planned schedule for pressure testing when equipment is configured for production of products subject to the provisions of this subpart.

(3) The notification shall provide the information listed in paragraphs (c)(3)(i) and (c)(3)(ii) of this section for each process unit subject to the requirements in 40 CFR 63.179 of this subpart.

(i) Process unit identification.

(ii) A description of the system used to create a negative pressure in the enclosure and the control device used to comply with the requirements of 40 CFR 63.172 of this subpart.

(4) For existing sources subject to subpart F of this part, the Notification of Compliance Status shall be submitted for the group of process units with the earliest compliance date specified in 40 CFR 63.100(k) of subpart F of this part, by no later than 90 days after the compliance date for that group. The Notification of Compliance Status for each subsequent group shall be submitted as part of the first periodic report that is due not less than 90 days after the compliance date for that group.

(d) The owner or operator of a source subject to this subpart shall submit Periodic Reports.

(1) A report containing the information in paragraphs (d)(2), (d)(3), and (d)(4) of this section shall be submitted semiannually starting 6 months after the Notification of Compliance Status, as required in paragraph (c) of this section. The first periodic report shall cover the

first 6 months after the compliance date specified in 40 CFR 63.100(k)(3) of subpart F. Each subsequent periodic report shall cover the 6 month period following the preceding period.

(2) For each process unit complying with the provisions of 40 CFR 63.163 through ? 63.174 of this subpart, the summary information listed in paragraphs (i) through (xvi) of this paragraph for each monitoring period during the 6-month period.

(i) The number of valves for which leaks were detected as described in 40 CFR 63.168(b) of this subpart, the percent leakers, and the total number of valves monitored;

(ii) The number of valves for which leaks were not repaired as required in 40 CFR 63.168(f) of this subpart, identifying the number of those that are determined nonrepairable;

(iii) The number of pumps for which leaks were detected as described in 40 CFR 63.163(b) of this subpart, the percent leakers, and the total number of pumps monitored;

(iv) The number of pumps for which leaks were not repaired as required in 40 CFR 63.163(c) of this subpart;

(v) The number of compressors for which leaks were detected as described in 40 CFR 63.164(f) of this subpart;

(vi) The number of compressors for which leaks were not repaired as required in 40 CFR 63.164(g) of this subpart;

(vii) The number of agitators for which leaks were detected as described in 40 CFR 63.173(a) and (b) of this subpart;

(viii) The number of agitators for which leaks were not repaired as required in 40 CFR 63.173(c) of this subpart;

(ix) The number of connectors for which leaks were detected as described in 40 CFR 63.174(a) of this subpart, the percent of connectors leaking, and the total number of connectors monitored;

(x) [Reserved]

(xi) The number of connectors for which leaks were not repaired as required in 40 CFR 63.174(d) of this subpart, identifying the number of those that are determined nonrepairable;

(xii) [Reserved]

(xiii) The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible.

(xiv) The results of all monitoring to show compliance with 40 CFR 63.164(i), 63.165(a), and 63.172(f) of this subpart conducted within the semiannual reporting period.

(xv) If applicable, the initiation of a monthly monitoring program under 40 CFR 63.168(d)(1)(i) of this subpart, or a quality improvement program under either 40 CFR 63.175 or 63.176 of this subpart.

(xvi) If applicable, notification of a change in connector monitoring alternatives as described in 40 CFR 63.174(c)(1) of this subpart.

(xvii) If applicable, the compliance option that has been selected under 40 CFR 63.172(n).

(3) For owners or operators electing to meet the requirements of 40 CFR 63.178(b) of this subpart, the report shall include the information listed in paragraphs (i) through (v) of this paragraph for each process unit.

(i) Batch product process equipment train identification;

(ii) The number of pressure tests conducted;

(iii) The number of pressure tests where the equipment train failed the pressure test;

(iv) The facts that explain any delay of repairs; and

(v) The results of all monitoring to determine compliance with 40 CFR 63.172(f) of this subpart.

(4) The information listed in paragraph (c) of this section for the Notification of Compliance Status for process units with later compliance dates. Any revisions to items reported in earlier Notification of Compliance Status, if the method of compliance has changed since the last report.

8. [40 CFR 63, Subpart JJJ] National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins

The following emissions units are subject to this rule: P006, P009, P010, P011, P043, P065, P067, P068, P069, and T001, .

§§ 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 63.6(b), except that new affected sources whose primary product is poly(ethylene terephthalate) (PET) shall be in compliance with 40 CFR 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 40 CFR 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 40 CFR 63.1331, continuous process vents subject to 40 CFR 63.1316 through 63.1320, and heat exchange systems subject to 40 CFR 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 40 CFR 63.1311 (i.e., February 27, 1998 for most equipment leak components subject to 40 CFR 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 40 CFR 63.1331, continuous process vents subject to 40 CFR 63.1316 through 63.1320, and heat exchange systems subject to 40 CFR 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 40 CFR 63.1311 (i.e., February 27, 1998 for most equipment leak components subject to 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 63.1321 through 63.1327.

(2) The emission limitations set forth in subpart H of this part, as referred to in 40 CFR 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 40 CFR 63.1331 applies, or during periods of start-up, shutdown, malfunction, or process unit shutdown (as defined in 40 CFR 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 40 CFR 63.1335(e)(3). Once approved by the Administrator in accordance with 40 CFR 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.

§§ 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 40 CFR 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 40 CFR 63.1331 for which compliance is covered by paragraph (d) of this section) no later than June 19, 2001, as provided in 40 CFR 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 40 CFR 63.1329 is extended to February 27, 2001, for existing affected sources whose primary product, as determined using the procedures specified in 40 CFR 63.1310(f), is PET using a continuous terephthalic acid high viscosity multiple end finisher process.

[Note to paragraph (c): The compliance date of February 27, 2001 for the provisions of 40 CFR 63.1329 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 is stayed indefinitely. The EPA will publish a document in the Federal Register establishing a new compliance date for these sources.]

(d) Except as provided for in paragraphs (d)(1) through (d)(6) of this section, existing affected sources shall be in compliance with 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 63.13 no later than June 16, 1997. The request for a compliance extension shall contain the information specified in 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 63.170 shall occur no later than June 19, 2001.

(6) Nothhstanding paragraphs (d)(1) through (5) of this section, existing affected sources whose primary product, as determined using the procedures specified in 40 CFR 63.1310(f), is PET shall be in compliance with 40 CFR 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 40 CFR 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 40 CFR 63.6(i)(6)(i) (A),(B), and (D).

(2) The requirements in 40 CFR 63.6(i)(8) through 40 CFR 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 40 CFR 63.175 or 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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.

§§ 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 40 CFR 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 40 CFR 63.1315 or 40 CFR 63.1316 through 63.1320, batch process vents, aggregate batch vent streams, storage vessels, process wastewater, and/or in-process equipment subject to 40 CFR 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 40 CFR 63.1315, 40 CFR 63.1316(b)(1)(i)(A), 40 CFR 63.1316(b)(1)(ii), 40 CFR 63.1316(b)(2)(i), 40 CFR 63.1316(b)(2)(ii), or 40 CFR 63.1316(c)(1), excluding 40 CFR 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 40 CFR 63.1315, 40 CFR 63.1316(b)(1)(i)(A), 40 CFR 63.1316(b)(1)(ii), 40 CFR 63.1316(b)(2)(i), 40 CFR 63.1316(b)(2)(ii), or 40 CFR 63.1316(c)(1), excluding 40 CFR 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 40 CFR 63.1316(b)(1)(i)(A), 40 CFR 63.1316(b)(1)(ii), 40 CFR 63.1316(b)(2)(i), 40 CFR 63.1316(b)(2)(ii), or 40 CFR 63.1316(c)(1), excluding 40 CFR 63.1316(c)(1)(ii), as appropriate, for control of emissions from continuous process vents

subject to the control requirements of 40 CFR 63.1316, including applicable monitoring, recordkeeping, and reporting requirements;

(iii) The requirements of 40 CFR 63.119(e), as specified in 40 CFR 63.1314, for control of emissions from Group 1 storage vessels, including applicable monitoring, recordkeeping, and reporting;

(iv) The requirements of 40 CFR 63.139, as specified in 40 CFR 63.1330, for control devices used to control emissions from waste management units, including applicable monitoring, recordkeeping, and reporting;

(v) The requirements of 40 CFR 63.139, as specified in 40 CFR 63.1330, for closed vent systems for control of emissions from in-process equipment subject to 40 CFR 63.149, as specified in 40 CFR 63.1330, including applicable monitoring, recordkeeping, and reporting; or

(vi) The requirements of this subpart for aggregate batch vent streams subject to 40 CFR 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 40 CFR 63.1315, 40 CFR 63.1316(b)(1)(i)(A), 40 CFR 63.1316(b)(1)(ii), 40 CFR 63.1316(b)(2)(i), 40 CFR 63.1316(b)(2)(ii), or 40 CFR 63.1316(c)(1), excluding 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 63.1332(a)(1). An owner or operator electing to use emissions averaging shall still comply with the provisions of 40 CFR 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.

§§ 63.1314 Storage vessel provisions.

(a) This section applies to each storage vessel that is assigned to an affected source, as determined by 40 CFR 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 40 CFR 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 40 CFR 63.119 through 63.123, the definition of this term in 40 CFR 63.1312 shall apply for the purposes of this subpart.

(2) When the term "Group 1 storage vessel" is used in 40 CFR 63.119 through 63.123, the definition of this term in 40 CFR 63.1312 shall apply for the purposes of this subpart.

(3) When the term "Group 2 storage vessel" is used in 40 CFR 63.119 through 63.123, the definition of this term in 40 CFR 63.1312 shall apply for the purposes of this subpart.

(4) When the emissions averaging provisions of 40 CFR 63.150 are referred to in 40 CFR 63.119 and 63.123, the emissions averaging provisions contained in 40 CFR 63.1332 shall apply for the purposes of this subpart.

(5) When December 31, 1992, is referred to in 40 CFR 63.119, March 29, 1995 shall apply instead, for the purposes of this subpart.

(6) When April 22, 1994, is referred to in 40 CFR 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 40 CFR 63.120(d)(1)(ii) for the purposes of this subpart. If the control device used to comply with 40 CFR 63.119(e) is also used to comply with any of the requirements found in 40 CFR 63.1315, 40 CFR 63.1316, 40 CFR 63.1322, or 40 CFR 63.1330, the performance test required in or accepted by the applicable requirements of 40 CFR 63.1315, 63.1316, 63.1322, and 63.1330 is acceptable for demonstrating compliance with 40 CFR 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 40 CFR 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 40 CFR 63.119(e)(1) or 40 CFR 63.119(e)(2), as applicable; and

(ii) The performance test is submitted as part of the Notification of Compliance Status required by 40 CFR 63.1335(e)(5).

(8) When the term "range" is used in 40 CFR 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 40 CFR 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 40 CFR 63.1334. For those control devices for which the owner or operator has selected to not follow the procedures for continuous monitoring specified in 40 CFR 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 40 CFR 63.120(d)(2)(i).

(10) For purposes of this subpart, the monitoring plan required by 40 CFR 63.122(b) shall be included in the Notification of Compliance Status required by 40 CFR 63.1335(e)(5).

(11) When the Notification of Compliance Status requirements contained in 40 CFR 63.152(b) are referred to in 40 CFR 63.120, 63.122, and 63.123, the Notification of Compliance Status requirements contained in 40 CFR 63.1335(e)(5) shall apply for the purposes of this subpart.

(12) When the Periodic Report requirements contained in 40 CFR 63.152(c) are referred to in 40 CFR 63.120 and 63.122, the Periodic Report requirements contained in 40 CFR 63.1335(e)(6) shall apply for the purposes of this subpart.

(13) When other reports as required in 40 CFR 63.152(d) are referred to in 40 CFR 63.122, the reporting requirements contained in 40 CFR 63.1335(e)(7) shall apply for the purposes of this subpart.

(14) When the Initial Notification requirements contained in 40 CFR 63.151(b) are referred to in 40 CFR 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 40 CFR 63.102(b) is referred to in 40 CFR 63.121(a), the provisions in 40 CFR 63.6(g) shall apply for the purposes of this subpart.

(16) When 40 CFR 63.119(a) requires compliance according to the schedule provisions in 40 CFR 63.100, owners and operators of affected sources shall instead comply with the requirements in 40 CFR 63.119(a)(1) through 63.119(a)(4) by the compliance date for storage vessels, which is specified in 40 CFR 63.1311.

(17) In 40 CFR 63.120(e)(1), instead of the reference to 40 CFR 63.11(b), the requirements of 40 CFR 63.1333(e) shall apply.

§§ 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 40 CFR 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 40 CFR 63.113 through 63.118, the term "continuous process vent," and the definition of this term in 40 CFR 63.1312 shall apply for the purposes of this subpart.

(2) When the term "Group 1 process vent" is used in 40 CFR 63.113 through 63.118, the term "Group 1 continuous process vent," and the definition of this term in 40 CFR 63.1312 shall apply for the purposes of this subpart.

(3) When the term "Group 2 process vent" is used in 40 CFR 63.113 through 63.118, the term "Group 2 continuous process vent," and the definition of this term in 40 CFR 63.1312 shall apply for the purposes of this subpart.

(4) When December 31, 1992 is referred to in 40 CFR 63.113, apply the date March 29, 1995, for the purposes of this subpart.

(5) When 40 CFR 63.151(f), alternative monitoring parameters, and 40 CFR 63.152(e), submission of an operating permit, are referred to in 40 CFR 63.114(c) and 63.117(e), 40 CFR 63.1335(f), alternative monitoring parameters, and 40 CFR 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 40 CFR 63.152(b) are referred to in 40 CFR 63.114, 63.117, and 63.118, the Notification of Compliance Status requirements contained in 40 CFR 63.1335(e)(5) shall apply for the purposes of this subpart.

(7) When the Periodic Report requirements contained in 40 CFR 63.152(c) are referred to in 40 CFR 63.117 and 63.118, the Periodic Report requirements contained in 40 CFR 63.1335(e)(6) shall apply for the purposes of this subpart.

(8) When the definition of excursion in 40 CFR 63.152(c)(2)(ii)(A) is referred to in 40 CFR 63.118(f)(2), the definition of excursion in 40 CFR 63.1334(f) of this subpart shall apply for the purposes of this subpart.

(9) When 40 CFR 63.114(e) or 40 CFR 63.117(f) specifies that an owner or operator shall submit the information required in 40 CFR 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 40 CFR 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 40 CFR 63.114, 63.117, and 63.118.

(10) When reports of process changes are required under 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 63.113 through 63.118 in accordance with 40 CFR 63.1310(i)(2)(ii) or (i)(2)(iii), as applicable.

(ii) Whenever a process change, as defined in 40 CFR 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 40 CFR 63.113(d) by the dates specified in 40 CFR 63.1311.

(iii) Whenever a process change, as defined in 40 CFR 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 40 CFR 63.113(d) by the dates specified in 40 CFR 63.1311.

(iv) Whenever a process change, as defined in 40 CFR 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 40 CFR 63.113(d) by the dates specified in 40 CFR 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 40 CFR 63.115(e);

(B) The vent stream flow rate is recalculated according to 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 63.118, periodic reporting and recordkeeping requirements, refers to 40 CFR 63.152(f), the recordkeeping requirements in 40 CFR 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 40 CFR 63.113 through 63.118, except as otherwise provided in this section. As specified in 40 CFR 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 40 CFR 63.1333(a)(1)(i) or 40 CFR 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 40 CFR 63.1313(b)(1), as allowed under 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 63.113 through 63.118 for Group 1 process vents; or

(B) The owner or operator shall comply with 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 63.115(c)(3)(ii)(B) and (d)(2)(iv) and 40 CFR 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 40 CFR 63.1311.

(17) In 40 CFR 63.116(a), instead of the reference to 40 CFR 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 40 CFR 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 40 CFR 63.113(a)(2), an owner or operator shall record and report the outlet concentration required in 40 CFR 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 40 CFR 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.

§§ 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 40 CFR 63.1322 through 63.1327. The batch process vent group status shall be determined in accordance with 40 CFR 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 40 CFR 63.1324, the performance test methods and procedures to determine compliance in 40 CFR 63.1325, the recordkeeping requirements in 40 CFR 63.1326, and the reporting requirements in 40 CFR 63.1327. Owners or operators of all Group 2 batch process vents shall comply with the applicable reference control technology requirements in 40 CFR 63.1322, the applicable recordkeeping requirements in 40 CFR 63.1326, and the applicable reporting requirements in 40 CFR 63.1327.

§§ 63.1322 Batch process vents -- reference control technology.

(a) *Batch process vents*. The owner or operator of a Group 1 batch process vent, as determined using the procedures in 40 CFR 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 40 CFR 63.1333(e) for the flare.

(ii) Halogenated batch process vents, as defined in 40 CFR 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).

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

(a) *General requirements*. Except as provided in paragraph (a)(3) of this section and in 40 CFR 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 40 CFR 63.1312.

(3) The owner or operator of a batch process vent complying with the flare provisions in 40 CFR 63.1322(a)(1) or 40 CFR 63.1322(b)(1) or routing the batch process vent to a control device to comply with the requirements in 40 CFR 63.1322(a)(2) or 40 CFR 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.

§§ 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 40 CFR 63.1322(a) or 40 CFR 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.

(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.

(6) Where a condenser is used, a condenser exit temperature (product side) monitoring device equipped with a continuous recorder is 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 40 CFR 63.1327(f) and 40 CFR 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.

(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 40 CFR 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 40 CFR 63.1325, provided that the prior performance test meets the conditions of 40 CFR 63.1325(b)(3).

(i) For batch process vents using a control device to comply with 40 CFR 63.1322(a)(2), the established level shall reflect the control efficiency established as part of the initial compliance demonstration specified in 40 CFR 63.1325(c)(2).

(ii) For aggregate batch vent streams using a control device to comply with 40 CFR 63.1322(b)(2), the established level shall reflect the emission reduction requirement of either 90 percent or 20 ppmv specified in 40 CFR 63.1322(b)(2).

(iii) For batch process vents and aggregate batch vent streams using a control device to comply with 40 CFR 63.1322(a)(3), the established level shall reflect the control efficiency established as part of the initial compliance demonstration specified in 40 CFR 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 40 CFR 63.1335(e)(5) or 40 CFR 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 40 CFR 63.1322(a)(3), the established level shall reflect the control efficiency established as part of the initial compliance demonstration specified in 40 CFR 63.1325(f)(4).

§§ 63.1325 Batch process vents -- performance test methods and procedures to determine compliance.

(c) Batch process vent testing and procedures for compliance with 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 concentration of TOC or total organic HAP, emissions per batch emission episode shall be calculated using Equations 19 and 20 of this subpart.

Eepisode,inlet = K [(sum) n to j=1 (Cj,inlet)(Mj)] (AFRinlet) (Th) [Eq. 19]

Eepisode,outlet = K [(sum) n to j=1 (Cj,outlet)(Mj)] (AFRoutlet) (Th) [Eq. 20]

Where:

Eepisode=Inlet or outlet emissions, kg/episode.

K=Constant, 2.494 x 10- 6 (ppmv)- 1 (gm-mole/scm) (kg/gm) (min/hr), where standard temperature is 20 degreees 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.

Mj=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.

(A) For each measurement point, the emission rates shall be calculated using Equations 21 and 22 of this subpart.

Epoint,inlet = K [(sum) n to j=1 (Cj)(Mj)] (FRinlet) [Eq. 21]

Epoint,outlet = K [(sum) n to j=1 (Cj)(Mj)] (FRoutlet) [Eq. 22]

Where:

Epoint=Inlet or outlet emission rate for the measurement point, kg/hr.

K=Constant, 2.494 x 10- 6 (ppmv)- 1 (gm-mole/scm) (kg/gm) (min/hr), where standard temperature is 20 degrees C.

Cj=Inlet or outlet concentration of TOC or sample organic HAP component j of the gas stream, dry basis, ppmv.

Mj=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 emissions per batch emission episode shall be calculated using Equations 23 and 24 of this subpart.

Eepisode,inlet = (DUR) [(sum) n to i=1 {Epoint,inlet, j / n}] [Eq. 23]

Eepisode,outlet = (DUR) [(sum) n to i=1 {Epoint,outlet, j / n}] [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 of measurements.

(iv) The control efficiency for the control device shall be calculated using Equation 25 of this subpart.

R = [(sum) n to i=1 Einlet,j - Eoutlet,j / (sum) n to i=1 Einlet,j] (100) [Eq. 25]

where:

R = Control efficiency of control device, percent.

Einlet = 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.

Eoutlet = 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 subpart and the control device efficiencies specified in paragraphs (c)(2)(i) through (c)(2)(iii) of this section. All information used to calculate the batch cycle percent reduction, including a definition of the batch cycle identifying all batch emission episodes, shall be recorded as specified in ? 63.1326(b)(2). This information shall include identification of those batch emission episodes, or portions thereof, selected for control.

PR = [(sum) n to i=1 Eunc + (sum) n to i=1 Einlet,con - (sum) n to i=1 (1 - R) (Einlet, con) / (sum) n to i=1 Eunc + (sum) n to i=1 Einlet, con] (100) [Eq. 26]

Where:

PR = Percent reduction

Eunc = Mass rate of TOC or total organic HAP for uncontrolled batch emission episode i, kg/hr.

Einlet,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.

§§ 63.1326 Batch process vents -- recordkeeping provisions.

(a) [Emissions units are subject to 40 CFR 63.1322(a).]

(7) If a batch process vent is subject to 40 CFR 63.1322(a) or (b), none of the records in paragraphs (a)(1) through (a)(6) of this section are required.

(b) Compliance demonstration records. Each owner or operator of a batch process vent or aggregate batch vent stream complying with 40 CFR 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 40 CFR 63.1323(h);

(2) If the owner or operator of a batch process vent has chosen to comply with 40 CFR 63.1322(a)(2), records documenting the batch cycle percent reduction as specified in 40 CFR 63.1325(c)(2).

(4) The following information when using a control device to meet the percent reduction requirement specified in 40 CFR 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 40 CFR 63.1325(c) for batch process vents and 40 CFR 63.1325(e) for aggregate batch vent streams.

(c) Establishment of parameter monitoring level records. For each parameter monitored according to 40 CFR 63.1324(c) and Table 7 of this subpart, or for alternate parameters and/or parameters for alternate control devices monitored according to 40 CFR 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 40 CFR 63.1324(f) for parameters specified in 40 CFR 63.1324(c) and as required by 40 CFR 63.1335(e) for alternate parameters. Said documentation shall include the parameter monitoring data used to establish the level.

(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 40 CFR 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 40 CFR 63.1324(c) as applicable, and listed in Table 7 of this subpart, or specified by the Administrator in accordance with 40 CFR 63.1327(f) as allowed under 40 CFR 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.

(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 40 CFR 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.

(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.

§§ 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 40 CFR 63.1322(a) and each aggregate batch vent stream complying 40 CFR 63.1322(b), the information specified in 40 CFR 63.1326 (b) and (c), as applicable.

(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 40 CFR 63.1335(e)(5).

(f) If an owner or operator uses a control device other than those specified in 40 CFR 63.1324(c) and listed in Table 7 of this subpart or requests approval to monitor a parameter other than those specified 40 CFR 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 40 CFR 63.1335(f), as part of the Precompliance Report required under 40 CFR 63.1335(e)(3). The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the Precompliance Report.

§§ 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 40 CFR 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 40 CFR 63.102(b) is referred to in 40 CFR 63.132, 63.133, and 63.137, the provisions in 40 CFR 63.6(g) shall apply for the purposes of this subpart.

(2) When the storage vessel requirements contained in 40 CFR 63.119 through 63.123 are referred to in 40 CFR 63.132 through 63.149, 40 CFR 63.119 through 63.123 are

applicable, with the exception of the differences referred to in 40 CFR 63.1314, for the purposes of this subpart.

(3) When 40 CFR 63.146(a) requires the submission of a request for approval to monitor alternative parameters according to the procedures specified in 40 CFR 63.151(f) or (g), owners or operators requesting to monitor alternative parameters shall follow the procedures specified in 40 CFR 63.1335(f) for the purposes of this subpart.

(4) When 40 CFR 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 40 CFR 63.152(f), owners and operators shall instead keep records of the daily average value of each continuously monitored parameter as specified in 40 CFR 63.1335(d) for the purposes of this subpart.

(5) When 40 CFR 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 40 CFR 63.132 through 63.149 refer to a "new source," the term "new affected source," as defined in 40 CFR 63.1310(a), shall apply for the purposes of this subpart.

(7) When 40 CFR 63.132(a) and (b) refer to the "applicable dates specified in 40 CFR 63.100 of subpart F of this part," the compliance dates specified in 40 CFR 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 40 CFR 63.132 through 63.149.

(i) When 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 63.1312 and that are listed in table 36 of 40 CFR part 63, subpart G, for the purposes of this subpart.

(9) Whenever 40 CFR 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 40 CFR 63.100(b) of subpart F of this part," the term "a TPPU as defined in 40 CFR 63.1312(b)" shall apply for the purposes of this subpart.

(10) Whenever 40 CFR 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 40 CFR 63.1312 shall apply for the purposes of this subpart.

(11) When 40 CFR 63.149(d) refers to "40 CFR 63.100(f) of subpart F", the phrase "40 CFR 63.1310(c)" shall apply for the purposes of this subpart. In addition, where 40 CFR 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 40 CFR 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 40 CFR 63.152(b) are referred to in 40 CFR 63.138 and 63.146, the Notification of Compliance Status requirements contained in 40 CFR 63.1335(e)(5) shall apply for the purposes of this subpart. In addition, when 40 CFR 63.132 through 63.149 require that information be reported according to 40 CFR 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 40 CFR 63.1335(e)(5) for the purposes of this subpart.

(14) When the Periodic Report requirements contained in 40 CFR 63.152(c) are referred to in 40 CFR 63.146, the Periodic Report requirements contained in 40 CFR 63.1335(e)(6) shall apply for the purposes of this subpart. In addition, when 40 CFR 63.132 through 63.149 require that information be reported in the Periodic Reports required in 40 CFR 63.152(c), the owner or operator of an affected source shall report the specified information in the Periodic Reports required in 40 CFR 63.1335(e)(6) for the purposes of this subpart.

(15) When 40 CFR 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 40 CFR 63.1334(c) or (d) for establishing parameter level maximums/minimums for the purposes of this subpart.

(16) When 40 CFR 63.146(b)(7) and 40 CFR 63.146(b)(8) require that "the information on parameter ranges specified in 40 CFR 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 40 CFR 63.1335(e)(5)(ii) for the purposes of this subpart.

(17) When the term "range" is used in 40 CFR 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 40 CFR 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 40 CFR 63.145(f) or 40 CFR 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 40 CFR 63.139(c)(1)(ii), 40 CFR 63.145(d)(4), or 40 CFR 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 40 CFR 63.145(j), instead of the reference to 40 CFR 63.11(b), and instead of 40 CFR 63.145(j)(1) and 40 CFR 63.145(j)(2), the requirements in 40 CFR 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 40 CFR

63.132(g) is subject to the requirements of 40 CFR 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 40 CFR 63.132(g) refers to "40 CFR 63.133 through 63.137" or "40 CFR 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 40 CFR 63.105, except that when 40 CFR 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 40 CFR 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.

§§ 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 40 CFR 63.1311. Whenever subpart H of this part refers to the compliance dates specified in any paragraph contained in 40 CFR 63.100, the compliance dates listed in 40 CFR 63.1311(d) shall instead apply, for the purposes of this subpart. When 40 CFR 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 40 CFR 63.1311(e) instead of 40 CFR 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 40 CFR 63.182(a)(1) and 40 CFR 63.182(b).

(4) As specified in 40 CFR 63.1335(e)(5), the Notification of Compliance Status required by paragraphs 40 CFR 63.182(a)(2) and 40 CFR 63.182(c) shall be submitted within 150 days (rather than 90 days) of the applicable compliance date specified in 40 CFR 63.1311 for the equipment leak provisions.

(5) The information specified by 40 CFR 63.182(a)(3) and 40 CFR 63.182(d) (i.e., Periodic Reports) shall be submitted as part of the Periodic Reports required by 40 CFR 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 40 CFR 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 40 CFR 63.181(b)(1)(i) or 40 CFR 63.181(b)(4).

(iv) When recording the detection of a leak under 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 63.1333(e).

§§ 63.1333 Additional requirements for performance testing.

(a) Performance testing shall be conducted in accordance with 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 63.1335(e)(5) shall apply instead of the references in 40 CFR 63.7(g) to the Notification of Compliance Status requirements in 40 CFR 63.9(h).

(3) Because the site-specific test plans in 40 CFR 63.7(c)(3) are not required, 40 CFR 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 40 CFR 63.7(a)(2) of subpart A of this part.

(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 40 CFR 63.11(b)(4);

(2) Determine the net heating value of the gas being combusted, using the techniques specified in 40 CFR 63.11(b)(6); and

(3) Determine the exit velocity using the techniques specified in either 40 CFR 63.11(b)(7)(i) (and 40 CFR 63.11(b)(7)(iii), where applicable) or 40 CFR 63.11(b)(8), as appropriate.

§§ 63.1334 Parameter monitoring levels and excursions.

(a) Establishment of parameter monitoring levels. The owner or operator of a control or recovery device that has one or more parameter monitoring level requirements specified under this subpart shall establish a maximum or minimum level for each measured parameter. 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 63.1315(b)(2), an excursion has occurred when the mass emission rate calculated as specified in 40 CFR 63.1333(b) exceeds the mass emissions per mass product requirement specified in 40 CFR 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.

§§ 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 63.10(d)(5)(i). The reports shall include the information specified in 40 CFR 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 40 CFR 63.5 regarding construction and reconstruction, excluding the provisions specified in 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 63.1323(b)(6)(i)(C); wishing to establish parameter monitoring levels according to the procedures contained in 40 CFR 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 40 CFR 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 40 CFR 63.1311(e), may be submitted in the Precompliance Report. The request for a compliance extension shall include the data outlined in 40 CFR 63.6(i)(6)(i)(A), (B), and (D), as required in 40 CFR 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 40 CFR 63.6(g).

(vi) If a request for approval to use engineering assessment to estimate emissions from a batch emissions episode, as described in 40 CFR 63.1323(b)(6)(i)(C) is being made, the information required by 40 CFR 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 40 CFR 63.1334(c) or (d), the following information shall be submitted in the Precompliance Report:

(A) Identification of which procedures (i.e., 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 63.1312 or as designated under 40 CFR 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 40 CFR 63.1332. The projected credits shall be greater than or equal to the projected debits, as required under 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 63.122(b), to include the information specified in 40 CFR 63.120(d)(2)(i) and in either 40 CFR 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 40 CFR 63.1315 controlled by a pollution prevention measure or control technique for which monitoring parameters or inspection procedures are not specified in 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 63.1331, the owner or operator shall submit the information required in 40 CFR 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 40 CFR 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.

(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 40 CFR 63.114(e) for continuous process vents, 40 CFR 63.1324 for batch process vents and aggregate batch vent streams, 40 CFR 63.143(f) for process wastewater, 40 CFR 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 40 CFR 63.1314(a)(9), for those

storage vessels for which the monitoring plan required by 40 CFR 63.1314(a)(9) specifies compliance with the provisions of 40 CFR 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 40 CFR 63.1334, the owner or operator shall provide the information specified in 40 CFR 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 40 CFR 63.1325(c)(2) and 40 CFR 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 40 CFR 63.1332 (g) and (h), calculated or measured according to the procedures in 40 CFR 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 40 CFR 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 40 CFR 63.1310(f)(7).

(vi) The results for each predominant use determination made under 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 63.1311, and if the provisions of 40 CFR 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 40 CFR 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 40 CFR 63.1331, the owner or operator shall submit the information specified in 40 CFR 63.182(d) under the conditions listed in 40 CFR 63.182(d), and for heat exchange systems subject to 40 CFR 63.1328, the owner or operator shall submit the information specified in 40 CFR 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 40 CFR 63.1314(a)(9), for storage vessels to which the provisions of 40 CFR 63.1334 do not apply, as specified in the monitoring plan required by 40 CFR 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 40 CFR 63.1314 through 63.1330 for any emission point or process section, Periodic Reports shall include:

(A) All information specified in 40 CFR 63.122 for storage vessels; 40 CFR 63.117 and 63.118 and 40 CFR 63.1320 for continuous process vents, as applicable; 40 CFR 63.1327 for batch process vents and aggregate batch vent streams; 40 CFR 63.104 for heat exchange systems; and 40 CFR 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 40 CFR 63.1334(g), and unexcused excursions, as defined in 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 63.1332(e)(4);

(3) The values of any inputs to the debit and credit equations in 40 CFR 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 40 CFR 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 40 CFR 63.1332(e)(3); and

(2) A certification of compliance with all the emissions averaging provisions in 40 CFR 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 40 CFR 63.1334(f), than the number of excused excursions allowed under 40 CFR 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 40 CFR 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 40 CFR 63.1314 shall be submitted as specified in 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 63.1331) that are subject to 40 CFR 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 40 CFR 63.1310(i)(1) or (2); and

(3) Identification of the group status of emission points (except equipment leak components subject to 40 CFR 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 40 CFR 63.1310(i)(2)(i).

(iii) All the added or created emission points as described in 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 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 40 CFR 63.1331) subject to 40 CFR 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 40 CFR 63.1314 for storage vessels, 40 CFR 63.1315 or 40 CFR 63.1317, as appropriate, for continuous process vents, 40 CFR 63.1321 for batch process vents and aggregate batch vent streams, or 40 CFR 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 40 CFR 63.1315 or 40 CFR 63.1317, as appropriate, for continuous process vents, 40 CFR 63.1321 for batch process vents and aggregate batch vent streams, or 40 CFR 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 40 CFR 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 degrees 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 40 CFR 63.6(e)(3).

(B) An excused excursion, as described in 40 CFR 63.1334(g), shall not be considered an excursion for purposes of paragraph (h)(2) of this section.

9. **§§ 63.6 Compliance with standards and maintenance requirements.** (Required by 40 CFR 63, Subparts F, G, H and JJJ)

The following emissions units are subject to this rule: P006, P009, P010, P011, P035, P043, P048, P050, P062, P065, P067, P068, P069, P074, P075, P076, P079, P080, P081, P801, P803, P804, P805, P806, T001, T015, T019, T023, T024, T025, T026, T027, T028, T032, T033, T065, T066, T067, T068, T069, T070, T071, T073, T079, T080, T081, T082, T092, T093, T113, T114, T115 and T116.

(e)(3)i. The permittee of an affected source shall develop and implement a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction; a program of corrective action for malfunctioning process; and air pollution control and monitoring equipment

used to comply with the relevant standard. This plan shall be developed by the permittee by the source's compliance date for that relevant standard. The purpose of the startup, shutdown, and malfunction plan is to:

(1) Ensure that, at all times, the permittee operate and maintain affected sources, including associated air pollution control and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions to the levels required by the relevant standards;

(2) Ensure that the permittee is prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants; and

(3) Reduce the reporting burden associated with periods of startup, shutdown, and malfunction (including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation).

10. The following insignificant emissions units are located at the facility:

G001-Gasoline dispensing facility;
J004-Maleic acid loading facility (PTI #03-13464);
P016-Catalyst reactor;
P018-Catalyst calciner heaters;
T001-22,000-gallon Barex acrylonitrile internal floating roof tank;
T003-22,000-gallon fixed roof methyl acrylate tank;
T004-630-gallon Barex PVP solution weigh tank;
T005-1160-gallon Barex PVP solution tank;
T006-6132-gallon fixed roof Barex plant recovered monomer storage tank (T-18);
T007-2100-gallon Barex stabilizer solution makeup tank;
T008-880 gallon vertical fixed roof Barex stabilizer solution weight tank;
T009-880-gallon vertical fixed roof Barex Q-42 surge tank;
T010-16,600-gallon vertical fixed roof Barex waste hydrocarbon tank;
T011-550-gallon vertical fixed roof Barex doss emulsifier tank;
T015-30,000-gallon acetonitrile internal floating roof tank (T-35);*
T019-6132-gallon fixed roof Barex plant recovered monomer storage tank (T-8);
T020-6132-gallon fixed roof Barex plant recovered monomer storage tank (T-19);
T023-720,000-gallon internal floating roof acrylonitrile storage tank (T-1);*
T024-720,000-gallon internal floating roof acrylonitrile storage tank (T-2);*
T025-650,000-gallon internal floating roof acrylonitrile storage tank (T-2A);*
T026-95,100-gallon internal floating roof acrylonitrile storage tank (T-3);*
T027-120,000-gallon internal floating roof acrylonitrile storage tank (T-3A);*
T028-95,100-gallon internal floating roof acrylonitrile storage tank (T-4);*
T032-329,000-gallon internal floating roof acrylonitrile storage tank (T-51);*
T033-329,000-gallon internal floating roof acrylonitrile storage tank (T-52);*
T034-50,000-gallon hydrogen cyanide pressurized storage tank;

T065 - 22,000-gallon fixed roof wastewater equalization storage tank, with absorber off-gas incinerator (AOGI) (T-101) [PTI No. 3549];*
T066 - 6000-gallon fixed roof wastewater sludge storage tank, with absorber off-gas incinerator (AOGI) (T-111) [PTI No. 3549];*
T067 - 11,800-gallon filtered wastewater storage tank, with absorber off-gas incinerator (AOGI) (T-103) [PTI No. 3549];*
T068 - 8500-gallon fixed roof filtered wastewater reject storage tank, with absorber off-gas incinerator (AOGI) (T-102) [PTI No. 3549];*

T069-960,000-gallon internal floating roof west deepwell surge tank (T-105) [PTI No. 3549];*
T070-960,000-gallon internal floating roof west deepwell surge tank (T-106) [PTI No. 3549];*
T072-16,100-gallon Barex wastewater handling tank;
T073-300,000-gallon fixed roof wastewater storage tank [PTI no. 03-3554];*
T079-678,000-gallon internal roof acrylonitrile storage tank (T-5) [PTI no. 03-5554];*
T080-678,000-gallon internal roof acrylonitrile storage tank (T-6) [PTI no. 03-5554];*
T081-90,000-gallon internal roof acrylonitrile storage tank (T-41) [PTI no. 03-5680];*
T082-90,000-gallon internal roof acrylonitrile storage tank (T-42) [PTI no. 03-5680];*
T084-39,000-gallon hydrogen cyanide (HCN) pressurized south storage tank, with flare, condensers and scrubber [PTI no. 03-6435];*
T088-7,180-gallon fixed roof formaldehyde [PTI no. 03-6956];
T090-Used oil storage tank [PTI no. 03-7280];
T091-Soda ash storage tank [PTI no. 03-7457];
T092-92,000-gallon internal roof acrylonitrile slopwater storage tank (T-8);*
T093-90,000-gallon internal roof acetonitrile storage tank (T-50) [PTI no. 03-10545];*
T094-32,000-gallon fixed roof butanediol product rundown storage tank (T-60) [PTI no. 03-11250];
T095-32,000-gallon fixed roof butanediol product rundown storage tank (T-61) [PTI no. 03-11250];
T096-32,000-gallon fixed roof butanediol product rundown storage tank (T-62) [PTI no. 03-11250];
T097-12,000-gallon fixed roof organic waste storage tank with internal floating roof (T-63) [PTI no. 03-13628];
T099-35,000-gallon fixed roof tetrahydrofuran/water solution storage tank (T-65) [PTI no. 03-13628];
T100-35,000-gallon fixed roof maintenance flush storage tank (T-66) [PTI no. 03-13628];
T101-376,000-gallon fixed roof butanediol product storage tank (T-67) [PTI no. 03-13628];
T102-376,000-gallon fixed roof butanediol product storage tank (T-68) [PTI no. 03-13628];
T113-36,200-gallon fixed roof crude/product grade acetonitrile storage tank (T-26) [PTI no. 03-13314];*
T114-14,890-gallon fixed roof nitriles storage tank (T-9) [PTI no. 03-13347];*
T115-30,000-gallon fixed roof acetonitrile storage tank (T-36) [PTI no. 03-13593];*
T116-15,200-gallon fixed roof acetonitrile storage tank (T-37);*
T118-16,000-gallon Barex caustic tank;
Z005-Catalyst transport;
Z006-HQ solids handling;

Z022-Barex product handling;
Z025-Laboratory hoods;
Z026-Ammonia refrigeration system;
Z027-Offsites caustic tank;
Z028-Soda ash tank (30%);
Z029-(2) Sodium hypochlorite tanks;
Z030-Acrylonitrile catalyst handling system;
Z031-Acetic acid tank;
Z032-Ammonia feed system;
Z035-Oxazole resin treatment system;
Z036-Oxazole regeneration tank;
Z037-Propylene feed system;
Z038-Brine refrigeration system;
Z039-Ammonia feed system;
Z040-Propylene refrigeration system;
Z041-Freon refrigeration system;
Z042-Antifoam addition tank; and
Z043-Sulfuric acid tank.

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, and 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 federally-approved versions of OAC Chapters 3745-21 and 40 CFR, Part 63, Subpart JJJ.

* subject to 40 CFR Part 63, Subpart H (HON)

B. State Only Enforceable Section

1. The following insignificant emissions unit located at this facility are exempt from permit requirements because they are not subject to any applicable requirements (as defined in OAC rule 3745-77-01(H)) or because they meet the "de minimis" criteria established in OAC rule 3745-15-05:

P003-Barex elastomer charging;
P082-Barex cooling tower;
P083-Catalyst cooling tower;
T002-12,400-gallon pressurized Barex butadiene tank;
T031-8700-gallon fixed roof oxazole filter feed tank #7;
T117-12,700-gallon fixed roof wastewater tank #117;
Z003-2000 gallon HQ surge tank;
Z004-480-gallon MEHQ tank;
Z012-8700 gallon fixed roof acetonitrile tank #32;
Z013-8700-gallon fixed roof acetonitrile tank #33;

Z016-8700-gallon fixed roof acetonitrile tank #23;
Z017-8700-gallon fixed roof acetonitrile tank #24;
Z023-Barex unloading rack;
Z024-Brine refrigeration system tank; and
Z046-1840 gallon pressurized drum waste butadiene tank;
Z047-Barex #1 wastewater stripper;
Z048-Barex #2 wastewater stripper; and
Z049-Miscellaneous Barex wastewater handling (#1 & #2 clarifiers, primary settler, reactor cleaning tank**,** dewatering tank, sanitary sewer, bio sump and filtered water sump).

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Butanediol Loading Facilities (J001)
Activity Description: Butanediol loading facilities (1 truck and 2 railcar loading racks).

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
butanediol loading facilities (1 truck and 2 railcar loading racks)	OAC rule 3745-21-07(E)	See A.I.2.a.
	OAC rule 3745-21-09(DD)	See A.I.2. b.
	40 CFR, Part 60, Subpart VV	See A.I.2.c.
	40 CFR, Part 63, Subpart A	See A.I.2.b.
	40 CFR, Part 63, Subpart H	See A.I.2.b and A.I.2.d.
	OAC rule 3745-31-05 (PTI #03-11250)	0.1 ton of volatile organic compounds (VOC)/yr The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-09(DD) and 3745-21-07(E) and 40 CFR, Part 63, Subpart H. [The fugitive emissions associated with this emissions unit are accounted for in the fugitive emission allowable for emissions unit P801.]

2. Additional Terms and Conditions

2.a The permittee does not currently employ and has never before employed any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5) in this emissions unit. Therefore, this emissions unit is exempt from OAC rule 3745-21-07(E). A process change that would result in using photochemically reactive materials would constitute a modification as defined in OAC rule 3745-31-01, and would require the permittee to obtain a PTI modification.

2.b The permittee shall comply with all the applicable standards in OAC rule 3745-21-09(DD), 40 CFR, Part 63, Subpart A and 40 CFR, Part 63, Subpart H for this emissions unit. These requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

2.c 40 CFR, Part 60, Subpart VV regulations overlap with those of 40 CFR, Part 63, Subpart H. 40 CFR 63.160(b) and (c) address this overlap and state that equipment subject to 40 CFR, Part 60, Subpart VV is required to comply only with the provisions of 40 CFR, Part 63, Subpart H.

The requirements of the applicable standards in OAC rule 3745-21-09(DD), are equivalent to or less stringent than the alternative leak detection and repair (LDAR) monitoring plan submitted by the permittee, pursuant to 40 CFR Part 63, Subpart H.

The permittee shall include the appropriate process equipment and regulated components for emissions unit J001 in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall comply with the appropriate provisions (including operational restrictions, monitoring and recordkeeping, reporting, and testing)) 40 CFR 63 Subpart H (National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks.)

2.d This emissions unit is a group 1 transfer rack as defined in 40 CFR 63.111.

II Operational Restrictions

1. The permittee shall not exceed an annual material throughput rate of 22,500,000 gallons.

III Monitoring and/or Recordkeeping

1. The permittee shall submit annual summary reports that include the actual annual material throughput and all exceedances of the throughput restrictions established in this section for this emissions unit during the previous calendar year. These reports shall be submitted by January 31 of each year and shall include the corrective actions that were taken to achieve compliance.

IV Reporting Requirements

1. The permittee shall submit annual summary reports that include the actual annual material throughput and all exceedances of the throughput restrictions established in this section for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year and shall include the corrective actions that were taken to achieve compliance.

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:

a. Emission Limitation: 0.1 ton VOC/yr

Applicable Compliance Method: The permittee may demonstrate compliance with the annual limitation by using an emission factor and equation (1), from AP-42, Section 5.2.2.1.1, and the actual annual throughput as recorded in A.III.1, as follows:

LL = 12.46 [S x P x M/T]

where:

LL = loading loss, pounds per 1000 gallons (lbs/1000 gal) of liquid loaded

S = saturation factor = 0.50 (AP-42, Table 5.2-1)

P = true vapor pressure of liquid loaded, pounds per square inch absolute (psia) = 0.000789

M = molecular weight of vapors, pounds per pound-mole (lb/lb-mole) = 90

T = temperature of liquid loaded, degrees R = 573.

TPY = LL x (actual annual throughput/1000) x (1 ton/2000 lbs)

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: THF/Water Solution Loading (J002)
Activity Description:

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
tetrahydrofuran/water solution loading facilities (1 truck and 1 railcar loading rack), with steam-assisted flare	OAC rule 3745-21-07(E)	See A.I.2.a.
	OAC rule 3745-21-09(DD)	See A.I.2.b.
	40 CFR, Part 60, Subpart VV	See A.I.2.c.
	40 CFR, Part 63, Subpart A	See A.I.2.b.
	40 CFR, Part 63, Subpart H	See A.I.2.b. and A.I.2.d.
	OAC rule 3745-31-05 (PTI #03-11250)	For emissions from the flare: 0.16 ton of volatile organic compounds (VOC)/yr no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-09(DD) and 3745-21-07(E) and 40 CFR, Part 63, Subpart H.

[The fugitive emissions associated with this emissions unit are accounted for in fugitive emission allowable for emissions unit P801.]

2. Additional Terms and Conditions

2.a The permittee does not currently employ and has never before employed any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5) in this emissions unit. Therefore, this emissions unit is exempt from OAC rule 3745-21-07(E). A process change that would result in using photochemically reactive materials would constitute a modification as defined in OAC rule 3745-31-01, and would require the permittee to obtain a PTI modification

2.b The permittee shall comply with all applicable standards in OAC rule 3745-21-09(DD), 40 CFR, Part 63, Subpart A and 40 CFR, Part 63, Subpart H for this emissions unit. Requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

2.c 40 CFR, Part 60, Subpart VV regulations overlap with those of 40 CFR, Part 63, Subpart H. 40 CFR 63.160(b) and (c) address this overlap and state that equipment subject to 40 CFR, Part 60, Subpart VV is required to comply only with the provisions of 40 CFR, Part 63, Subpart H.

The requirements of the applicable standards in OAC rule 3745-21-09(DD), are equivalent to or less stringent than the alternative leak detection and repair (LDAR) monitoring plan submitted by the permittee, pursuant to 40 CFR Part 63, Subpart H.

The permittee shall include the appropriate process equipment and regulated components for emissions unit J002 in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall comply with the appropriate provisions (including operational restrictions, monitoring and recordkeeping, reporting, and testing)) 40 CFR 63 Subpart H (National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks.)

2.d This emissions unit is a group 1 transfer rack as defined in 40 CFR 63.111.

2.e This emissions unit is vented to a flare that also controls the emissions from emissions unit P801, which is subject to 40 CFR Part 63 Subpart G. All operational restrictions, monitoring, record keeping and reporting requirements for the flare are established in the terms and conditions for emissions unit P801. Therefore, no additional monitoring, record keeping and reporting requirements are necessary for this emissions unit.

II Operational Restrictions

1. The flare shall be operated at all times when this emissions unit is in operation.

2. The permittee shall not exceed an annual material throughput rate of 4,500,000 gallons.

III Monitoring and/or Recordkeeping

1. The permittee shall maintain annual records of the types of materials stored/loaded/unloaded and the throughput, in gallons, for this emissions unit.

2. The permittee shall maintain records that document any time periods when the flare serving this emissions unit was not in service while this emissions unit was operating.

IV Reporting Requirements

1. The permittee shall submit annual summary reports that include the actual annual material throughput and all exceedances of the throughput restrictions established in this section for this emissions unit during the previous calendar year. These reports shall be submitted by January 31 of each year and shall include the corrective actions that were taken to achieve compliance.

2. The permittee shall submit quarterly summaries that include a log of the downtime for the flare, when the associated emissions unit was in operation. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter.

V Testing Requirements

1. Compliance with the emission limitations in Section A.1.1 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation: 0.16 ton VOC/yr

      Applicable Compliance Method: The permittee may demonstrate compliance with the annual limitation by using an emission factor and equation (1), from AP-42, Section 5.2.2.1.1, the actual annual throughput, as recorded in A.III.1, and a control factor of (1-0.98)*, as follows:

      LL = 12.46 x [S x P x M/T]

      where:

      LL = loading loss, pounds per 1000 gallons (lbs/1000 gallon) of liquid loaded

      S = saturation factor = 0.50 (AP-42, Table 5.2-1)

      P = true vapor pressure of liquid loaded, pounds per square inch absolute (psia) = 0.7734

      M = molecular weight of vapors, pounds per pound-mole (lb/lb-mole) = 67

T = temperature of liquid loaded, degrees R = 555

TPY = LL x (actual annual throughput/1000) x (1 ton/2000 lbs) x (1 - 0.98*)

* The control efficiency of the flare is assumed to be 98% .

b. Emission Limitation: no visible emissions from the flare, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours, from the flare

Applicable Compliance Method: If required, the permittee shall demonstrate compliance in accordance with 40 CFR, Part 60, Appendix A, Method 22.

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: BDO Plant #1 SOGB (N006)
Activity Description: Butanediol manufacturing plant no. 1 scrubber offgas boiler (SOGB)

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
butanediol plant #1 scrubber off gas incinerator (SOGI)	OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05.
	OAC rule 3745-17-09	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05.
	OAC rule 3745-18-06	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05.
	OAC rule 3745-21-07(G)	See A.I.2.a.
	OAC rule 3745-21-09(DD)	See A.I.2.h.
	40 CFR, Part 60, Subpart Db	See A.I.2.b.
	40 CFR, Part 60, Subpart VV	See A.I.2.h.
	40 CFR, Part 63, Subpart F	See A.I.2.b.
	40 CFR, Part 63, Subpart G	See A.I.2.b, A.I.2.c. and A.I.2.d.

40 CFR, Part 63, Subpart H	See A.I.2.b.
40 CFR, Part 63, Subpart A	See A.I.2.b.
40 CFR, Part 60, Subpart A	See A.I.2.b.
OAC rule 3745-23-06(B) OAC rule 3745-21-08(B)	See A.I.2.g.
OAC rule 3745-31-05 (PTI #03-11250)	57.0 lbs of volatile organic compounds (VOC)/hr, 250.0 TPY VOC 186.0 lbs of carbon monoxide (CO)/hr, 814.7 TPY CO 23.0 lbs of nitrogen oxides (NOx)/hr, based upon a rolling, 24-hour average, 102.0 TPY NOx 5.0 lbs of sulfur dioxide (SO2)/hr, based upon a 30-day rolling average 21.90 TPY SO2 5.8 lbs of particulate emissions (PE)/hr, 25.40 TPY PE Visible PE shall not exceed 10% opacity as a 6-minute average. See A.I.2. e. and A.I.2. f. The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-07(G), 3745-23-06(B), 3745-21-08(B) and 3745-21-09(DD) and 40 CFR, Part 60, Subpart A, 40 CFR, Part 63, Subpart A 40 CFR, Part 63, Subpart F, 40 CFR, Part 63, Subpart G, 40 CFR, Part 63, Subpart H, 40 CFR, Part 60, Subpart Db, and 40 CFR, Part 60, Subpart VV.

2. Additional Terms and Conditions

2.a The permittee does not currently employ and has never before employed any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01(C)(5). Therefore, this emissions unit is exempt from OAC rule 3745-21-07(G)(2). A process change that would result in using photochemically reactive materials would constitute a modification as defined in OAC rule 3745-31-01, and would require the permittee to obtain a PTI modification.

2.b The permittee shall comply with all applicable standards in 40 CFR, Part 60, Subpart A, 40 CFR, Part 63, Subpart A, 40 CFR, Part 60, Subpart Db, 40 CFR, Part 60, Part 63, Subpart F, 40 CFR, Part 63, Subpart G and 40 CFR, Part 63, Subpart H for this emissions unit. The requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

2.c This emissions unit is a group 1 process vent as defined in 40 CFR 63.111.

2.d Pursuant to 40 CFR 63.113(h), the permittee is not required to make a group determination as described in 40 CFR 63.115 because it complies with 40 CFR 63.113(a)(1) or (a)(2).

2. e The permittee shall comply with the following control requirements for this emissions unit:

i. The incinerator shall achieve a destruction efficiency greater than or equal to 99% for gaseous VOC.

ii. The incinerator shall achieve a reduction efficiency of greater than or equal to 99% for liquid organics.

iii. NOx emissions from the combustion of fuel and waste streams in the incinerator shall not exceed 0.10 lb/mmBtu total heat input.

2.f The permittee shall not burn in this emissions unit any fuel gas that contains hydrogen sulfide (H2S) in excess of 162 ppm, as a rolling, 3-hour average. This concentration is equivalent to 230 mg H2S/dscm.

2.g The permittee has satisfied the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in permit to install No. 03-11250.

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.h 40 CFR, Part 60, Subpart VV regulations overlap with those of 40 CFR, Part 63, Subpart H. 40 CFR 63.160(b) and (c) address this overlap and state that equipment subject to 40 CFR, Part 60, Subpart VV is required to comply only with the provisions of 40 CFR, Part 63, Subpart H.

The requirements of the applicable standards in OAC rule 3745-21-09(DD), are equivalent to or less stringent than the alternative leak detection and repair (LDAR) monitoring plan submitted by the permittee, pursuant to 40 CFR Part 63, Subpart H.

The permittee shall include the appropriate process equipment and regulated components for emissions unit N006 in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall comply with the appropriate provisions (including operational restrictions, monitoring and record keeping, reporting, and testing) 40 CFR 63 Subpart H (National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks).

II Operational Restrictions

1. The permittee shall only burn liquid organic waste streams that meet the requirements of 40 CFR 261.38, whether or not they are hazardous, in this emissions unit which meet the following requirements for hazardous wastes:

   a. the liquid organic waste streams have been classified as a hazardous waste solely because it possesses the characteristic of ignitability as described by the test for characteristics of hazardous wastes under Chapter 3745-51 of the Administrative Code, or have been exempted by the Director from hazardous waste incineration requirements in accordance with OAC rule 3745-57-40(C); and

   b. the liquid organic waste streams are not applicable to 40 CFR, Part 63, Subpart EEE - National Emission Standards for Hazardous Waste Combustors in accordance with the comparable fuels exclusion.

2. The permittee shall establish a range of operating parameters for the SOGB that meet the requirements of 40 CFR Part 63 Subpart G. [40 CFR 63.116(c), and 40 CFR 63.114(e)].
3. At all times, including periods of startup, shutdown and malfunction as defined by a plan developed in accordance with 63.103(c)(2), the thermal oxidizer shall be operated in accordance with good air pollution practices.

III Monitoring and/or Recordkeeping

1. In order to demonstrate compliance with the requirement not to burn any fuel gas that contains an H2S concentration in excess of 230 mg/dscm (0.1 gr/dscf) (equivalent to 162 ppm) based on a 3-hour, rolling average in this emissions unit, the permittee shall calculate and record the H2S concentration, in ppm, for each rolling, 3-hour average, based on the data generated from the continuous monitoring system currently required for on the Premcor Refining Group (premise #0302020012) fuel gas system which also serves this emissions unit. The monitoring to show ongoing compliance with the H2S limitation will also be adequate to ensure ongoing compliance with the SO2 emission limitation.

2. 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 SOGB 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 emission incident; and

   e. any corrective actions taken to eliminate the visible emissions.

3. In order to demonstrate compliance with the NOx emission limitation of 23.0 lbs/hr, based upon a 24-hour rolling average, as established pursuant to OAC rule 3745-31-05 and the NOx emission limitation of 0.10 lb/mmBtu heat input based on a 30-day, rolling average as required by 40 CFR 60.44b, the permittee shall operate and maintain a continuous emission monitor (CEM) on the outlet stream of the SOGB to continuously monitor and record NOx from emissions unit N006 in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 and shall be installed and operated in accordance with the applicable portions of 40 CFR 60.48b.

4. The permittee shall operate the SOGB in order to meet the requirements of 40 CFR 63 Subpart G. The permittee shall operate continuous temperature monitoring and recording devices in the firebox of the thermal oxidizer. This parameter monitoring for temperature compliance with the requirements of 63.114(a)(1) provides parametric monitoring as an indicator of ongoing compliance with the applicable VOC and CO emission limitations.

5. The following information shall be recorded for this emissions unit and kept in a readily accessible location:

a. detailed schematics, design specifications, and piping and instrumentation diagrams;

b. the dates and descriptions of any changes in the design specification;

c. description of the parameter and or parameters monitored to ensure that the thermal oxidizer is operated and maintained in conformance with design, and an explanation of the reason for selecting such a parameter or parameters;

d. periods when the thermal oxidizer is not operated as designed; and

e. dates of start-ups and shutdowns of the thermal oxidizer. [OAC Rule 3745-21-09(DD)(14)(d)].

6. The permittee shall collect and record a daily record of operating time for the thermal oxidizer and monitoring equipment. The information shall be retained for a period of five years.

7. The permittee shall collect and record a daily record of operating time for the thermal oxidizer and monitoring equipment. The information shall be retained for a period of five years.

8. The permittee shall keep the following up-to-date and readily accessible records for a period of 5 years:

a. continuous records of thermal oxidizer firebox temperature [40 CFR 63.118(a) and 40 CFR 63.152(f)];

b. records of all periods when the closed vent stream is diverted from the incinerator [40 CFR 63.118(c)(3))]; and

c. records of the daily average thermal oxidizer firebox temperature for each operating day [40 CFR 63.118(a) and 40 CFR 63.152(f)].

9. The permittee shall comply with the applicable monitoring and record keeping requirements for emissions unit N006 contained in 40 CFR Part 60 Subpart Db.

11. 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 unless otherwise specified in this permit and/or required by either State or federal applicable regulations in accordance with the general terms and conditions of this permit. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings, if a strip-chart recorder is employed, for continuous monitoring instrumentation, and copies of all reports required by the permit. Such records may be maintained in computerized form.

IV Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the fuel content restriction of 230 mg H2S/dscm (equivalent to 162 ppm of H2S). These reports shall be submitted in accordance with the General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the SOGB 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 Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

3. The permittee shall submit the following semiannual reports:

   a. exceedances of all monitored parameters;

   b. a log of the operating time for the thermal oxidizer;

   c. periods of time when the closed vent system is diverted from the thermal oxidizer;

   d. all periods of time when the thermal oxidizer was not operational;

   e. all periods of time when required monitoring data was not collected; and

   f. daily average values of thermal oxidizer firebox temperature for both excused and un-excused excursions when the daily average temperature values were outside the ranges established in the Notification of Compliance or the operating permit. For excursions caused by lack of monitoring data, the duration of periods when monitoring data were not collected shall be specified [40 CFR 63.152(c) and 40 CFR 63.118(f)].

4. The permittee shall comply with the record keeping and reporting requirements outlined in 40 CFR 60.49b. The reporting requirements include the submission of quarterly excess emission reports to the Ohio EPA NWDO in accordance with the General Terms and Conditions of this permit.

5. The permittee shall maintain records of all data obtained by the continuous NOx monitoring system including but not limited to parts per million of NOx on a six-minute basis, emissions of NOx in units of the applicable standards in the appropriate averaging period (e.g., 3-hour, rolling average and lb/mmBtu as a 30-day, rolling average), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. Pursuant to OAC rules 3745-15-04, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(H), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northwest District Office or local air agency documenting the date, commencement and completion times, duration, magnitude, reason (if

known), and corrective actions taken (if any) of all instances of NOx values in excess of any applicable limitations specified in the terms and conditions of this permit, in units of the standards. These reports shall also contain the total NOx emissions for the calendar quarter (in tons.)

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any continuous NOx monitoring system downtime while the emissions unit was on line (date, time, duration, and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment functions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous quarter in accordance with the general terms and conditions of this permit.

8. The quality assurance/quality control plans and logbooks dedicated to the continuous NOx monitoring systems, developed in accordance with 40 CFR Part 60 Appendix F, shall be kept on site and available for inspection during regular hours.

9. The permittee will submit start-up, shutdown, and malfunction reports in accordance with 40 CFR 63.10(d)(5).

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:

a. Emission Limitations: 57.0 lbs VOC/hr, 186.0 lbs CO/hr, 23.0 lbs NOx/hr, 5.0 lbs SO2/hr, 5.8 lbs PE/hr

Applicable Compliance Method:

If required, compliance with the hourly allowable PE limitation shall be based on the results of stack testing conducted in accordance with 40 CFR, Part 60, Appendix A - Test Methods 1 - 5.

If required, compliance with the hourly allowable SO2 emission limitation shall be based on the results of stack testing conducted in accordance with 40 CFR, Part 60, Appendix A - Test Methods 1 - 4 and 6.

[Compliance with the hourly, based upon a 30-day rolling average, SO2 emission limitation shall be based upon H2S monitoring for refinery fuel gas and sulfur monitoring for input butane using ASTM test methods. For butane, supplied by Premcor Refining Group, sulfur monitoring shall be performed weekly at a minimum. For butane purchased form other commercial sources, sulfur monitoring shall be performed on a per shipment basis.]

Compliance with the hourly allowable VOC emission limitation shall be based on the results of stack testing conducted in accordance with 40 CFR, Part 60, Appendix A - Test Methods 1 - 4 and 18, 25, or 25A, as appropriate.

Compliance with the hourly allowable NOx emission limitation shall be based on the continuous NOx emissions monitor and the results of stack testing conducted in accordance with 40 CFR, Part 60, Appendix A - Test Methods 1 - 4 and 7.

Compliance with the hourly allowable CO emission limitation shall be based on the results of stack testing conducted in accordance with 40 CFR, Part 60, Appendix A - Test Methods 1 - 4 and 10.

b. Emission Limitations: 250.0 TPY VOC, 814.7 TPY CO, 102.0 TPY NOx, 21.90 TPY SO2, 25.4 TPY PE

Applicable Compliance Method: The annual emission limitation for each pollutant above was developed by multiplying the hourly emission limitation for each pollutant by 8760, and then dividing by 2000. Therefore, as long as compliance with the hourly allowable emission limitation for each pollutant is maintained, compliance with the annual emission limitation for the pollutant shall be ensured.

c. Emission Limitation: 0.10 lb NOx/mmBtu total heat input

Applicable Compliance Method:

Compliance with the NOx standard of 0.10 lb/mmBtu heat input shall be demonstrated through a 30-day rolling average of all the calculated hourly NOx emission rates for the previous 30 operating days based on the results of the continuous emission monitor (CEM).
The permittee shall also monitor and record fuel gas and off-gas flow rates to the SOGB. The above information will be applied to the following equation for calculating lbs NO_x per mmBtu heat input:

$$\frac{\text{lbs NOx}}{\text{mmBtu heat input}} = \frac{\text{lbs NOx emitted}}{\text{mmBtu heat input}}$$

lbs NOx = ppmv * MW_{corr} x Stack (lb/hr) x Moisture

10^6

Where:

ppmv	=	concentration of NOx measured by CEM on SOGI outlet
MW_{corr}	=	molecular weight correction factor, NOx (46.01 lb/lb-mole) to stack gas (~29.7 lb/lb-mole)
Stack	=	stack flow, lb/hr
Moisture	=	moisture correction factor, dry NOx CEM, wet stack flowmeter

mmBtu/hr = [Fuel * DH_{cf} / 10^6] + [Offgas <u>lb</u> * DH_{co} / 10 ^6]

Where:

Fuel	=	Fuel flow rate (natural gas or refinery fuel gas), average lb/hr
Offgas	=	Scrubber offgas flow rate, average lbs/hr
DH_{cf}	=	Heat of combustion for fuel, Btu/lb (for natural gas, 23,000 Btu/lb and refinery fuel gas, 20,482 Btu/lb)
DH_{co}	=	Heat of combustion for off gas
	=	$\sum_{i=1}^{n} C_i Btu_i$

where:

C_i	=	offgas concentration of component i, in lb/hr
Btu_i	=	Btu/lb of component i from published values or measured values of the heats of combustion determined using ASTM D2382-76 or 88 or D4809-95
10^6	=	conversion to MM

The permittee shall demonstrate compliance with the 0.10 lb NOx per mmBtu limit through a 30-day, rolling average of all the calculated hourly NOx emission rates for the preceding 30 operating days. The monitoring equipment shall be installed and operated in accordance with the applicable portions of 40 CFR 60.48b.

d. Emission Limitation: Visible PE shall not exceed 10% opacity as a 6-minute average

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation pursuant to Method 9 of 40 CFR, Part 60, Appendix A.

2. The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:

a. The emission testing shall be conducted within 2 ½ years after effective date of this permit and within 6 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the mass emission rates for VOC and CO. Performance testing shall also be conducted to demonstrate compliance with a liquid organic reduction efficiency of 99 percent, by weight.

c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates:

VOC - Methods 1 - 4 and 18, 25, or 25A, as appropriate, of 40 CFR Part 60, Appendix A

CO - Methods 1 - 4 and 10 of 40 CFR Part 60, Appendix A

Liquid OC - The permittee shall submit a reduction performance test plan to be approved by the Ohio EPA which will demonstrate compliance with the requirement to reduce liquid organic materials by 99 percent or greater.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

d. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or local air agency.

3. Performance testing requirements for emissions from emissions unit P801 to the SOGB are detailed in the terms and conditions for emissions unit N006 due to the fact that this incinerator also serves as a control device for emissions unit P801. All operational restrictions, monitoring, record keeping, reporting, and testing requirements for other emissions sources from P801, including but not limited to emissions from the butanediol plant no. 1 flare, are established in emissions unit P801.

VI Miscellaneous Requirements

None

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
butandiol plant #1 scrubber off gas incinerator (SOGI) with scrubber	none	none

2. Additional Terms and Conditions

None

II Operational Restrictions

None

III Monitoring and/or Recordkeeping

1. The permit to install for this emissions unit (N006)) was evaluated based on the actual 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" pollutants:

   Pollutant: Methanol
   TLV (μg/m3): 262,000
   Maximum Hourly Emission Rate (lbs/hr): 0.15
   Predicted 1-Hour Maximum Ground-Level Concentration (μg/m3): 174
   MAGLC (μg/m3): 6238

   Pollutant: Tetrahydrofuran
   TLV (μg/m3): 590,000
   Maximum Hourly Emission Rate (lbs/hr): 5.20

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m3): 358
MAGLC (µg/m3): 14,048

Pollutant: Ethanol
TLV (µg/m3): 1,880,000
Maximum Hourly Emission Rate (lbs/hr): 2.2
Predicted 1-Hour Maximum Ground-Level Concentration (µg/m3): 151
MAGLC (µg/m3): 44,762

Pollutant: Propanol
TLV (µg/m3): 492,000
Maximum Hourly Emission Rate (lbs/hr): 1.90
Predicted 1-Hour Maximum Ground-Level Concentration (µg/m3): 131
MAGLC (µg/m3): 11,714

Pollutant: Butanol
TLV (µg/m3): 152,000
Maximum Hourly Emission Rate (lbs/hr): 4.35
Predicted 1-Hour Maximum Ground-Level Concentration (µg/m3): 299
MAGLC (µg/m3): 2670

Pollutant: Formic Acid
TLV (µg/m3): 9400
Maximum Hourly Emission Rate (lbs/hr): 0.02
Predicted 1-Hour Maximum Ground-Level Concentration (µg/m3): 1.38
MAGLC (µg/m3): 224

Pollutant: Acrylic Acid
TLV (µg/m3): 5900
Maximum Hourly Emission Rate (lbs/hr): 0.02
Predicted 1-Hour Maximum Ground-Level Concentration (µg/m3): 1.38
MAGLC (µg/m3): 141

Pollutant: Acetic Acid
TLV (µg/m3): 25,000
Maximum Hourly Emission Rate (lbs/hr): 0.05
Predicted 1-Hour Maximum Ground-Level Concentration (µg/m3): 3.44
MAGLC (µg/m3): 595

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 , 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.).

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 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

3. 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.

IV Reporting Requirements

None

V Testing Requirements

None

VI Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Barex #1 Pasteline (P006)
Activity Description: Barex Plant #1 Pasteline and associated equipment. Combines Barex reactor batches, coagulates latex to make strands, washes strands. Refer to overall Barex process description and flow diagram.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Barex #1 pasteline	OAC rule 3745-21-07(G)	See A.I.2.a.
	40 CFR, Part 63, Subpart JJJ	See A.I.2.b and A.I.2.c.
	OAC rule 3745-31-05 (no PTI number established)	The requirements of this rule are equivalent to the requirements of OAC rule 3745-21-07(G).

2. Additional Terms and Conditions

2.a The permittee does not currently employ and has never before employed any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5) in this emissions unit. Therefore, this emissions unit is exempt from OAC rule 3745-21-07(G)(2). A process change that would result in using photochemically reactive materials would constitute a modification as defined in OAC rule 3745-31-01, and would require the permittee to obtain a PTI modification.

2.b The permittee shall comply with all applicable standards in 40 CFR, Part 63, Subpart JJJ for this emissions unit. These requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

2.c This emissions unit is a group 2 continuous process vent as defined in 40 CFR 63.1312.

II Operational Restrictions

See Part II of the terms and conditions of this permit.

III Monitoring and/or Recordkeeping

See Part II of the terms and conditions of this permit.

IV Reporting Requirements

See Part II of the terms and conditions of this permit.

V Testing Requirements

See Part II of the terms and conditions of this permit**.**

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Barex Reactor #1 (P009)
Activity Description: Barex Reactor #1 and associated equipment. Reaction of raw materials to produce nitrile copolymer resins. Refer to overall Barex process description and flow diagram.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Barex reactor #1, with condenser and thermal incinerator	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to 40 CFR, Part 63, Subpart JJJ.
	40 CFR, Part 63, Subpart JJJ	See A.I.2.a and A.I.2.b and A.I.2.c.
	OAC rule 3745-31-05 (no PTI number established)	The requirements of this rule are equivalent to the requirements of OAC rule 3745-21-07(G).

2. Additional Terms and Conditions

2.a The permittee shall comply with all the applicable standards in 40 CFR, Part 63, Subpart JJJ for this emissions unit. These requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

2.b This emissions unit is a group 1 batch process vent as defined in 40 CFR 63.1312 and 63.1323**.**

2.c This emissions unit is vented to a thermal oxidizer (formerly known as N004) that controls the emissions from the three Barex reactors, emissions units P009, P010 and P067 and acts as the control device for Group 1 batch process vents to achieve 90 weight percent reduction of HAP emissions for the batch cycle as required by 40 CFR 63.1322(a)(2). All operational restrictions**,** monitoring, record keeping, reporting and

testing requirements for the thermal oxidizer are established in the terms and conditions for emissions unit P067. Therefore, no additional monitoring, record keeping, reporting and testing requirements are necessary for this emissions unit.

II Operational Restrictions

See Part II of the terms and conditions of this permit.

III Monitoring and/or Recordkeeping

See Part II of the terms and conditions of this permit.

IV Reporting Requirements

See Part II of the terms and conditions of this permit.

V Testing Requirements

See Part II of the terms and conditions of this permit.

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Barex Reactor #2 (P010)
Activity Description: Barex Reactor #2 and associated equipment. Reaction of raw materials to produce nitrile copolymer resins. Refer to overall Barex process description and flow diagram.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Barex reactor #2, with condenser and thermal incinerator	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to 40 CFR, Part 63, Subpart JJJ.
	40 CFR, Part 63, Subpart JJJ	See A.I.2.a. A.I.2.b and A.I.2.c.
	OAC rule 3745-31-05 (no PTI number established)	The requirements of this rule are equivalent to the requirements of OAC rule 3745-21-07(G).

2. Additional Terms and Conditions

2.a The permittee shall comply with all the applicable standards in 40 CFR, Part 63, Subpart JJJ for this emissions unit. These requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

2.b This emissions unit is a group 1 batch process vent as defined in 40 CFR 63.1312.

2.c This emissions unit is vented to a thermal oxidizer (formerly known as N004) that controls the emissions from the three Barex reactors, emissions units P009, P010 and P067 and acts as the control device for Group 1 batch process vents to achieve 90 weight percent reduction of HAP emissions for the batch cycle as required by 40 CFR 63.1322(a)(2). All operational restrictions**,** monitoring, record keeping, reporting and testing requirements for the thermal oxidizer are established in the terms and conditions

for emissions unit P067. Therefore, no additional monitoring, record keeping, reporting and testing requirements are necessary for this emissions unit.

II Operational Restrictions

None

III Monitoring and/or Recordkeeping

None

IV Reporting Requirements

None

V Testing Requirements

None

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Barex #1 Strand Dryer (P011)
Activity Description: Barex Plant #1 Strand Dryer and associated equipment. Dries strands from #1 pasteline before transport to storage. Refer to overall Barex process description and flow diagram.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Barex #1 strand dryer, with cyclone	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20%, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)	5.96 lbs PE/hr
	OAC rule 3745-21-07(G)	See A.I.2.a.
	40 CFR, Part 63, Subpart JJJ	See A.I.2.b and A.I.2.c.
	OAC rule 3745-31-05 (no PTI number established)	The requirements of this rule are equivalent o the requirements of OAC rules 3745-21-07(G), 3745-17-07(A) and 3745-17-11(B).

2. Additional Terms and Conditions

2.a The permittee does not currently employ and has never before employed any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5) in this emissions unit. Therefore, this emissions unit is exempt from OAC rule 3745-21-07(G)(2). A process change that would result in using photochemically reactive materials would constitute a modification as defined in OAC rule 3745-31-01, and would require the permittee to obtain a PTI modification.

2.b The permittee shall comply with all applicable standards in 40 CFR, Part 63, Subpart JJJ for this emissions unit. These requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

2.c This emissions unit is a group 2 continuous process vent as defined in 40 CFR 63.1312.

II Operational Restrictions

None

III Monitoring and/or Recordkeeping

1. 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 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 emission incident; and

   e. any corrective actions taken to eliminate the visible emissions.

IV Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate 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 Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

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:

   a. Emission Limitation: Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by OAC rule 3745-17-07(A).

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with OAC rule 3745-17-03(B)(1).

b. Emission Limitation: 5.96 lbs PE/hr

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the PE limitation above in accordance with Methods 1 through 5 of 40 CFR, Part 60, Appendix A.

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Acrylonitrile Reaction and Absorption Section (P035)
Activity Description: The affected plant is the acrylonitrile unit. Acrylonitrile is produced by the vapor-phase catalytic reaction of ammonia, propylene, and air. This process produces the product acrylonitrile and co-products acetonitrile and hydrogen cyanide. This source refers to the reaction and product recovery (absorption) steps of this process. The subsequent recovery and purification steps for the product acrylonitrile and co-product HCN are addressed as emission unit P075. The subsequent recovery and purification steps for co-product acetonitrile are addressed as emission unit P074. Refer to the overall acrylonitrile plant process description and flow diagram.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
acrylonitrile plant #2 reactor and absorption section, with absorber off-gas incinerator (AOGI)	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05.
	OAC rule 3745-21-09(DD)	See A.I.2.a and h.
	OAC rule 3745-21-09(EE)	See A.I.2.e.
	40 CFR, Part 60,Subpart A	See A.I.2.a.
	40 CFR, Part 60, Subpart Db	See A.I.2.a and A.I.2.b.
	40 CFR, Part 60, Subpart VV	See A.I.2.c.

40 CFR, Part 60, Subpart III	See A.I.2.d.
40 CFR, Part 63, Subpart A	See A.I.2.a.
40 CFR, Part 63, Subpart F	See A.I.2.a.
40 CFR, Part 63, Subpart G	See A.I.2.a, A.I.2.e and AI.2.g.
40 CFR, Part 63, Subpart H	See A.I.2.a and A.2.I.h.
OAC rule 3745-31-05 (PTI #03-9227)	6.0 lbs PE/hr, 26.3 TPY PE 5736 lbs carbon monoxide (CO)/rolling, 24-hour-period, 978.0 tons CO per year, based upon a rolling, 365-day summation of daily emissions 6614 lbs nitrogen oxides (NOx) per rolling, 24-hour period, 1207.1 TPY NOx 2.5 lbs sulfur dioxide (SO2)/hr, 11.0 TPY SO2 130.8 lbs non-methane hydrocarbons (as carbon) (NMHC) per hour, 573.0 tons NMHC per year See A.I.2.e. through A.I.2.h. The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-09(DD), 3745-21-08(B), 3745-23-06(B) and 3745-17-07(A), and 40 CFR, Part 63, Subpart A, 40 CFR, Part 63, Subpart F, 40 CFR, Part 63, Subpart G, 40 CFR, Part 63, Subpart H, 40 CFR, Part 60, Subpart A, 40 CFR, Part 60, Subpart Db, 40 CFR, Part 60, Subpart VV, and 40 CFR, Part 60, Subpart III.

OAC rule 3745-18-06(E)	The emission limitation based on this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A). See A.I.2.j.
OAC rule 3745-23-06(B) OAC rule 3745-21-08(B)	

2. Additional Terms and Conditions

2.a The permittee shall comply with all applicable standards in OAC rule 3745-21-09(DD); 40 CFR Part 60 Subpart A; 40 CFR, Part 60, Subpart Db; 40 CFR Part 63 Subpart A; 40 CFR, Part 63, Subpart F; 40 CFR, Part 63, Subpart G; and 40 CFR, Part 63, Subpart H for this emissions unit. These requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

2.b NOx emissions from the combustion of fuel in the AOGI shall be limited to 0.10 lb/mmBtu of actual heat input (based on a 30-day, rolling average) as determined in accordance with sections A.III.5.c, A.III.5.d, and A.V.1.g of this permit.

2.c 40 CFR 60 Subpart VV regulations overlap with those of 40 CFR, Part 63, Subpart H. 40 CFR 63.160(b) addresses this overlap and states that equipment subject to 40 CFR, Part 60, Subpart VV is required to comply only with the provisions of 40 CFR, Part 63, Subpart H.

2.d 40 CFR 60 Subpart III regulations overlap with those of 40 CFR, Part 63, Subpart G. 40 CFR 63.110(d) addresses this overlap and states that equipment subject to 40 CFR, Part 60, Subpart III is required to comply only with the provisions of 40 CFR, Part 63, Subpart G.

2.e Emissions from this emissions unit shall be controlled by the use of a closed process vent system that is vented to the AOGI that is designed and operated to comply with the less stringent of the following provisions:

i. reduce the VOC emissions vented to it with an efficiency of at least 98%, by weight; or

ii. emit VOC at a concentration less than 20 parts per million volume (ppmv), dry basis, corrected to 3% oxygen.

The vent stream from the absorber shall be introduced into the flame zone of the AOGI.

2.f The AOGI is an incinerator used to control the closed vent system stream from the Acrylonitrile Plant #2 Reactor & Absorption Section (emissions unit P035) as required by air pollution rules and regulations. The AOGI also acts as a steam generating unit (waste heat boiler) and is, therefore, required to comply with the applicable portions of 40 CFR 60 Subpart Db.

2.g. This emissions unit is not required to perform the group determination per 40 CFR 63.113(h) since it complies with 63.113(a)(1) and (a)(2).

2.h. The permittee shall include the appropriate process equipment and regulated components for emissions unit P035 in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall comply with the appropriate provisions (including operational restrictions, monitoring and record keeping, reporting and testing) of 40 CFR 63, Subpart H (National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks).

40 CFR, Part 60, Subpart VV regulations overlap with those of 40 CFR, Part 63, Subpart H. 40 CFR 63.160(b) and (c) address this overlap and state that equipment subject to 40 CFR, Part 60, Subpart VV is required to comply only with the provisions of 40 CFR, Part 63, Subpart H.

The requirements of the applicable standards in OAC rule 3745-21-09(DD), are equivalent to or less stringent than the alternative leak detection and repair (LDAR) monitoring plan submitted by the permittee, pursuant to 40 CFR Part 63, Subpart H.

2.i. This emissions unit does not generate process wastewater as defined in 40 CFR 63.101. The aqueous streams within this emissions unit are routed for recovery/recycle of organic constituents. As such, the point of determination as defined in 40 CFR 63.111 is the collection tank. Wastewater is generated upon discharge from this tank, and is covered in emissions unit P062.

2.j. The permittee has satisfied the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in permit to install No. 03-9227.

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.

II Operational Restrictions

1. The closed vent system shall be operated at all times when this emissions unit is in operation.

2. The permittee shall monitor all heat exchanger systems used to cool process equipment by one of the methods specified in 63.104(b) or (c) unless one or more of the exemptions contained in 63.104(a)(1) through (6) are met.

3. The permittee shall repair any heat exchanger leak as soon as practicable but not later than 45 calendar days after the permittee receives indication that a leak is present.

   Once a leak has been repaired, the permittee shall confirm the heat exchange system has been repaired within 7 Callander days of the repair or start-up, whichever is later [40 CFR 63.104(d)(2)]

   Delay of repair of the heat exchange systems for which leaks have been detected is allowed provided the conditions of 40 CFR 63.104(e) are met.

4. The permittee shall identify each piece of equipment subject to 40 CFR 63, Subpart H and monitor it in accordance with the requirements of the Subpart.

5. The permittee shall comply with the LDAR operational restrictions in accordance with 40 CFR Part 63, Subpart H.

6. Delay of repair of equipment for which leaks have been detected is allowed provided the conditions of 40 CFR 63.171 are met.

7. The permittee shall comply with the LDAR program conditions for closed-vent systems and control devices in accordance with 40 CFR 63.172.

8. The permittee shall comply with the LDAR programs for surge control vessels in accordance with 40 CFR 63.170.

9. The permittee shall establish a range of operating parameters for the AOGI that meet the requirements of 40 CFR Part 63 Subpart G [40 CFR 63.116(c) and 40 CFR 63.114(e)].

10. At all times including periods of startup, shutdown, and malfunction as defined by a plan developed in accordance with 63.6(e)(3), emissions unit P035 shall be operated in accordance with good air pollution control practices.

III Monitoring and/or Recordkeeping

1. The permittee shall operate and maintain equipment to continuously monitor and record CO and NOx emissions from this emissions unit in units of the applicable standard (i.e., lbs CO/rolling, 24-hour period, lbs NOx/rolling, 24-hour period, and lbs NOx/mmBtu, as a rolling, 30-day

average). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR, Part 60.13. The monitoring data collected by the CO and NOx continuous emission monitors shall be used to demonstrate compliance with the CO and NOx tons per year limitations.

2. The permittee shall also operate and maintain equipment to monitor and record NOx in the inlet to the AOGI. This monitor shall be used to obtain at least one 15-minute sample per day.

3. The permittee shall maintain a written quality assurance/quality control plans for the continuous CO and inlet and outlet NO_X monitoring systems designed to ensure continuous valid and representative readings of CO and NO_X. The plans shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plans and logbooks dedicated to the continuous CO and inlet and outlet NO_X monitoring systems must be kept on site and available for inspection during regular office hours.

4. For any bypass line between the origin of the gas stream and the point where the gas stream reaches the process vent that could divert the gas stream directly to the atmosphere, the permittee shall either:

   a. properly install, maintain , and operate a flow indicator at the entrance to any bypass line that could divert the gas stream to the atmosphere that takes a reading at least once every 15 minutes [40 CFR 63.114(d)(1)]; or

   b. secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the non-diverting position and the gas stream is not diverted through the bypass line [40 CFR 63.114(d)(2)].

5. The permittee shall calculate and record each day the following for this emissions unit:

   a. the rolling, 24-hour CO emissions, in pounds, and the rolling, 365-day CO emissions, in tons, calculated from the emissions data recorded by the CO emissions monitoring system in section A.III.1 above;

   b. the rolling, 24-hour NOx emissions, in pounds, calculated from the emissions data recorded by the NOx emissions monitoring system in section A.III.1 above;

   c. the rolling 30-day average NOx emission rate, in lbs/mmBtu, calculated in accordance with the formula in section A.V.1.g below. The rolling 30-day average inlet NOx shall be calculated from the emissions data collected by the monitoring system in section A.II.2. above, with such data being reduced as follows:

      i. All measurements during a particular day shall be averaged to determine the average inlet NOx for that day.

ii. The 30-day average inlet NOx shall be the arithmetic average of all of the resulting daily averages during the rolling 30-day period.

Within 60 days of the effective date of this permit, the permittee shall submit to U.S. EPA (with a copies to Ohio EPA) a request for a determination of whether it is consistent with the requirements of 40 CFR Part 60 Subpart Db to equip the inlet NOx monitor required by section A.III.2 above with a high temperature converter in order to assure that the NOx contributed by the combustion of nitrogen-bearing organic compounds in the inlet gas stream are adequately accounted for. In addition, or in the alternative, the permittee may petition U.S. EPA to establish an alternative NOx emission limitation pursuant to 40 CFR 60.44b(f) and/or an alternative compliance demonstration method pursuant to 40 CFR 60.8(b).

In the interim period pending U.S. EPA action on these submissions, the permittee shall do one or both of the following:

a. Operate two inlet NOx monitors meeting the requirements of section A.III.2. above. One such monitor shall be equipped with a high temperature converter and the other with a low temperature converter. In the quarterly reports required by section A.IV.5. of this permit, the permittee shall separately report the net NOx emissions, calculated in accordance section A.V.1.g. below, using the data from each of these inlet monitors; or

b. Use data from inlet hydrocarbon monitoring systems to estimate the NOx contributed by the combustion of organic nitrogen compounds. In the quarterly reports required by section A.IV.5. of this permit, the permittee shall separately report:

i. the net NOx emissions calculated in accordance section A.V.1.g below, using the data from the inlet NOx monitor that does not have a high temperature converter; and

ii. the net NOx emissions calculated by subtracting the estimated NOx contributed by the combustion of organic nitrogen compounds from the results of the formula in section A.V.1.g.

Within sixty (60) days of final action by U.S. EPA on the request(s) required by this section of this permit, the permittee shall submit to Ohio EPA an application for modification of this permit to incorporate such terms and conditions (including, as necessary, compliance schedules) as are necessary to implement U.S. EPA's determinations.

6. The AOGI shall be equipped and operated with a temperature monitor equipped with continuous recording devices for the firebox of the AOGI [40 CFR 63.114(a)(1)].

7. The permittee shall maintain records for the AOGI which comply with the requirements contained in OAC rule 3745-21-09(DD), 40 CFR Part 60, Subparts A and Db, and 40 CFR Part 60, Subparts A, F, G, and H.

8. The following information shall be recorded and kept in a readily accessible location [OAC rule 3745-21-09(DD)]:

   a. detailed schematics, design specifications, and piping and instrumentation diagrams;

   b. the dates and description of any changes in the design specifications;

   c. description of the parameter and/ or parameters monitored to ensure that the thermal oxidizer is operated and maintained in conformance with design, and an explanation of the reason for selecting such parameter or parameters;

   d. periods when the closed vent system and thermal oxidizer is not operated as designed; and

   e. dates of start-ups and shutdowns of the closed vent system and AOGI.

9. The permittee shall maintain the following:

   a. continuous records of the AOGI firebox temperature [40 CFR 63.118(a) and 40 CFR 63.152(f)]; and

   b. records of the daily AOGI firebox temperature for each operating day [40 CFR 118(a) and 409 CFR 63.152(f)].

10. The permittee shall keep the following up-to-date and readily accessible records for a period of five years:

    a. For bypass lines complying with 40 CFR 63.114(d)(1), the permittee shall maintain hourly records of whether a diversion was detected at any time during the hour, as well as records of the times and durations of all periods when the gas stream is diverted to the atmosphere or the monitor is not operating [40 CFR 63.118(a) (3)].

    b. For bypass lines complying with 40 CFR 63.114(d)(2), the permittee shall record that the monthly visual inspection of the seal or closure mechanism has been done, and shall record the duration of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for the lock-and-key type lock has been checked out and records of any car-seal that has broken [40 CFR 63.118(a)(4)].

11. In addition to the requirements of OAC rule 3745-21-09(DD)(14)(d) and 40 CFR Part 63 Subpart G, the permittee shall collect and record the following information each day and maintain the information at the facility for a period of five years: a log or record of operating times for the closed vent system, thermal oxidizer, and monitoring equipment.

12. The permittee shall maintain records of all data obtained by the CO and NOx monitoring

systems including , but not limited to, parts per million CO and NOx on an instantaneous (fifteen minutes) basis, emissions of CO and NOx in units of the applicable standard in the appropriate averaging period (e.g. hourly, 3-hour, rolling average, daily, 30-day, rolling average, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

13. The permittee shall comply with all LDAR program monitoring requirements in accordance with 40 CFR 63.180. Emission monitoring shall be performed in accordance with Method 21 of 40 CFR Part 60, Appendix A.

14. The permittee shall comply with all LDAR program record keeping requirements in accordance with 40 CFR 63.181. All records and information required shall be maintained in a manner that can be readily accessed at the plant site.

15. The permittee shall perform a weekly check, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the 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 emission incident; and
    e. any corrective actions taken to eliminate the visible emissions.

IV Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:

    a. all exceedances of the rolling, 365-day emission limitation for CO of 978 tons;

    b. all exceedances of the rolling, 24-hour emission limitation for NOx of 6614 pounds; and

    c. all exceedances of the rolling, 24-hour emission limitation for CO of 5736 pounds.

    These reports shall be submitted in accordance with the General Terms and Conditions of this permit

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate 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 Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

3. The permittee shall submit the following reports on a quarterly basis:

   a. all exceedances of all monitored parameters;

   b. a log or record of operating time for the closed vent system, thermal oxidizer, and monitoring equipment;

   c. periods of time when the closed vent system stream is diverted from the control device;

   d. all periods of time when the AOGI was not operational; and

   e. all periods of time when required monitoring data was not collected.

   The permittee shall submit quarterly summaries of these records by January 31 , April 30, July 31, and October 31.

4. The permittee shall comply with the LDAR program reporting requirements in accordance with 40 CFR 63.182

5. Pursuant to OAC rules 3745-15-04 and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA Northwest District Office (NWDO) documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of all instances of CO and NOx values in excess of any applicable limitation(s) specified in the terms and conditions of this permit, in units of the applicable standard. These reports shall also contain the total CO and NOx for the calendar quarter (in tons).

   The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA Northwest District Office documenting any continuous CO and NOx monitoring system downtime while the emissions unit was on line (date, time, duration, and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit's operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions.

   If there were no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter.

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:

a. Emission Limitation: Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with OAC rule 3745-17-03(B)(1).

b. Emission Limitation: 6.0 lbs PE/hr

Applicable Compliance Method: The permittee shall demonstrate compliance with the hourly limitation above based upon the results of emissions testing conducted in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

c. Emission Limitation: 26.3 TPY PE

Applicable Compliance Method: The annual emission limitation was developed by multiplying the hourly emission limitation by 8760, and then dividing by 2000. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual emission limitation shall be ensured.

d. Emission Limitation: 5736 lbs CO/rolling, 24-hour period

Applicable Compliance Method: The permittee shall demonstrate compliance with the hourly limitation above based upon the results of emission testing conducted in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A, and the continuous CO emission monitoring and record keeping required in section A.III.1 of this permit.

e. Emission Limitation: 978.0 tons CO per year, based upon a rolling, 365-day summation of daily emissions

Applicable Compliance Method: The permittee shall demonstrate compliance with the tons per rolling, 365-day limitation by the continuous CO emission monitoring and record keeping required in section A.III.1 of this permit.

f. Emission Limitation: 6614 lbs NOx per rolling, 24-hour period

Applicable Compliance Method: The permittee shall demonstrate compliance with the rolling, 24-hour limitation above based upon the results of emission testing conducted in accordance with Methods 1-4 and 7 of 40 CFR, Part 60, Appendix A, and the monitoring and record keeping required in section A.III.1 of this permit.

g. Emission Limitation: 0.10 lb NOx/mmBtu, from the combustion of fuel

Applicable Compliance Method:

The permittee shall demonstrate compliance with the NO_X standard of 0.10 lb/mmBtu heat input by installing continuous emission monitors (CEMs) on the inlet and outlet streams of the AOGI. The permittee shall also monitor and record natural gas (NG) usage and reactor propylene feeds. The HC content of the AOGI inlet stream will be determined from reactor propylene feeds and reactor conversion. The above information will be applied to the following equation for calculating lbs of NO_X per mmBtu heat input.

Lbs NOx / mmBtu heat input	=	NOx (outlet) - NOx (inlet) / mmBtu heat input
NOx (outlet)	=	NOx emissions rate, average lb/hr, as measured by CEM on AOGI outlet stream
NO_X (inlet)	=	NO_X emission rate, average lb/hr, as measured on AOGI inlet stream
mmBtu heat	=	(NG usage, lb/hr) x (23,000 Btu/lb input NG)/10^6 + (Reactor propylene feed, lb/hr) x (propylene purity, %) x (1 - Reactor conversion, %) x (19,683 Btu/lb propylene) / 10^6 + (Reactor propylene feed, lb/hr) x (1 – propylene purity, %) x (19,929 Btu/lb propane) / 10^6

The permittee shall demonstrate compliance with the 0.10 lb NO_X per mmBtu limit through a 30-day, rolling average of all the calculated hourly NO_X emission rates for the preceding 30 operating days.

h. Emission Limitation: 1207.1 TPY NOx

Applicable Compliance Method: The annual emission limitation was developed by multiplying the hourly emission limitation by 8760, and then dividing by 2000. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual emission limitation shall be ensured.

i. Emission Limitation: 2.5 lbs SO2/hr

Applicable Compliance Method: The permittee shall demonstrate compliance with the hourly limitation above based upon the results of emission testing conducted in accordance with Methods 1-4 and 6 of 40 CFR, Part 60, Appendix A.

j. Emission Limitation: 11.0 TPY SO2

Applicable Compliance Method: The annual emission limitation was developed by multiplying the hourly emission limitation by 8760, and then dividing by 2000. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual emission limitation shall be ensured.

k. Emission Limitation: 130.8 lbs NMHC (as carbon) per hr

Applicable Compliance Method: The permittee shall demonstrate compliance with the hourly limitation above based upon the results of emission testing conducted in accordance with Methods 1-4 and 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

l. Emission Limitation: 573.0 tons NMHC (as carbon) per year

Applicable Compliance Method: The annual emission limitation was developed by multiplying the hourly emission limitation by 8760, and then dividing by 2000. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual emission limitation shall be ensured.

m. Emission Limitation: 98% reduction efficiency for VOC, or 20 ppmvd VOC corrected to 3% oxygen

Applicable Compliance Method: The permittee shall demonstrate compliance with the limitations above based upon the results of emission testing conducted in accordance the methods and procedures as outlined in section A.V.2. of this permit.

2. The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:

a. The emission testing shall be conducted within 12 months after issuance of this permit and within 6 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the mass emission rates for PE, SO2, NOx, CO and NMHC.

c. The following stack test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for PE - Methods 1 - 5 of 40 CFR, Part 60, Appendix A; for SO2 - Methods 1 - 4 and 6 of 40 CFR, Part 60, Appendix A; for NOx - Methods 1 - 4 and 7 of 40 CFR, Part 60, Appendix A; for CO - Methods 1 - 4 and 10 of 40 CFR, Part 60, Appendix A; and for NMHC - Methods 18, 25 or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

d. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

e. The permittee shall perform emission testing on the AOGI to demonstrate compliance with the 98%, by weight, reduction of VOC (minus methane and ethane) or with the 20 ppmvd VOC, corrected to 3% oxygen. The permittee shall also establish the operating ranges for the AOGI firebox temperature and stack excess oxygen during the compliance test.

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 or an approved alternative test protocol. 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 appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or local air agency.

3. The permittee shall comply with LDAR program testing requirements in accordance with 40 CFR 63.180.

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Catalyst Spray Dryer and #2 Calciner (P038)
Activity Description: Spray Dryer system, with venturi scrubber to control particulate emissions. #2 Calciner, dries/calcines metal powders, particulate emissions routed to venturi scrubber. Refer to overall Catalyst Plant process description and flow diagram.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
catalyst spray dryer and #2 calciner, with cyclones and venturi scrubber	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)	6.32 lbs PE/hr
	OAC rule 3745-21-08(B)	See A.I.2.a.
	OAC rule 3745-23-06(B)	See A.I.2.a.
	OAC rule 3745-18-06(E)	Exempt, see A.I.2.b.
	OAC rule 3745-31-05 (PTI #03-785)	The requirements of this rule are equivalent to the requirements of OAC rules 3745-17-11(B), 3745-17-07(A), 3745-21-08(B), 3745-23-06(B) and 3745-18-06(E).

2. Additional Terms and Conditions

2.a The permittee has satisfied the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively by committing to comply with the

best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install No. 03-785.

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.b The process weight rate input for this emissions unit is less than 1000 pounds/hr. Therefore, pursuant to OAC rule 3745-18-06(C), this emissions unit is exempt from any SO2 emission limitation.

II Operational Restrictions

1. Within 9 months after the effective date of the permit, the permittee shall establish, and submit to OEPA for approval, a range of values for pressure drop across the scrubber (in inches of water) and for scrubber water flow rate (in gallons per minute). The proposed range of values (which may be expressed as a maximum, minimum or both) shall be based on testing and/or other appropriate data. The permittee may from time to time propose a revised range for either parameter based on further testing or other appropriate data or information.

   The scrubber water flow rate shall be continuously maintained within the range of values, in gallons per minute, established as indicated in the paragraph above, at all times while the emissions unit is in operation.

   The pressure drop across the scrubber shall be continuously maintained within the range of values, in inches of water, established as indicated in the paragraph above, at all times while the emissions unit is in operation.

   The Ohio EPA shall approve the operational restrictions proposed by the permittee. The permittee may petition to the OEPA for reestablishment, based on emissions testing or the collection of data, of the scrubber flow rate and pressure drop minimum values provided the permittee can demonstrate to the OEPA’s satisfaction that the new minimum values will reasonably ensure compliance and the basis upon which the minimum values were previously established is no longer applicable.

   The parametric operational restrictions are included in this permit to ensure ongoing compliance with the applicable mass emission and visible emission limitations. The operation of the control equipment outside the values established above may or may not indicate a mass emission and/or visible emission violation. If required by the Ohio EPA, Northwest District Office, compliance with the mass emission limitations and visible emission limitations shall be determined by performing concurrent mass emission tests, and visible emissions readings, using

USEPA-approved methods and procedures, as well as operational parameter readings. The results of any required emission tests, visible emission readings, and operational parameter readings shall be used in determining whether or not the operation of the control equipment below the minimum values that will be established above is indicative of a possible violation of the mass emission limitation and/or visible emission limitations. In addition, the permittee may provide other relevant credible evidence to the Ohio EPA to demonstrate that a deviation of an operational restriction is not a violation of the applicable mass emission and/or visible emission limitations.

III Monitoring and/or Recordkeeping

1. The permittee shall properly install not later than 3 months from the effective date of this permit, and thereafter operate and maintain equipment to monitor the static pressure drop across the scrubber and the scrubber water flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

   The permittee shall collect and record the following information each shift:

   a. The pressure drop across the scrubber, in inches of water.

   b. The scrubber water flow rate, in gallons per minute.

   c. A log of the downtime for the duct scrubber and monitoring equipment when the associated emissions unit was in operation.

IV Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels established pursuant to Section A.II of this permit:

   a. The static pressure drop across the scrubber.

   b. The scrubber water flow rate.

   These reports shall be submitted in accordance with the General Terms and Conditions of this permit.

2. The permittee shall submit quarterly summary reports that include a log of the downtime for the scrubber and monitoring equipment when the associated emissions unit was in operation**.**

V Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:

   a. The emission testing shall be conducted within 6 months after the effective date of this permit.

   b. The emission testing shall be conducted to demonstrate compliance with the mass emission rate for PE.

   c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for PE - Methods 1 - 5 of 40 CFR, Part 60, Appendix A.

      Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

      Measurement of the pressure drop and water flow rate for the venturi scrubber shall be recorded every 5 minutes during each test run.

   d. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

   Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

   Personnel from the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District Office or local air agency.

2. Compliance with the emission limitations in section A.I.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:

   a. Emission Limitation: Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

      Applicable Compliance Method: If required, the permittee shall demonstrate compliance with this emission limitation pursuant to OAC rule 3745-17-03(B)(1).

   b. Emission Limitation: 6.32 lbs PE/hr

      Applicable Compliance Method: The permittee shall demonstrate compliance with the limitation above based upon the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Catalyst #1 Calciner (P039)
Activity Description: #1 Calciner, dries/calcines metal powders, particulate emissions routed to cyclones and thermal oxidizer. Refer to overall Catalyst Plant process description and flow diagram.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
catalyst #1 calciner, with cyclone	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)	2.58 lbs PE/hr
	OAC rule 3745-18-06(E)	Exempt, see A.I.2.a.

2. Additional Terms and Conditions

2.a The process weight rate input for this emissions unit is less than 1000 pounds/hr. Therefore, pursuant to OAC rule 3745-18-06(C), this emissions unit is exempt from any SO2 emission limitation.

II Operational Restrictions

None

III Monitoring and/or Recordkeeping

1. 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 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 emission incident; and

e. any corrective actions taken to eliminate the visible emissions.

IV Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate 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 Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V Testing Requirements

1. Compliance with the emission limitations in section A.I.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation: Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method: If required, compliance with the visible PE limitation shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

b. Emission Limitation: 2.58 lbs PE/hr

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the limitation above in accordance with Methods 1 through 5 of 40 CFR, Part 60, Appendix A.

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Barex #1 Fines Dryer (P043)
Activity Description: Barex Plant #1 Fines Dryer and associated equipment. Collects and dries fines from #1 Strand Dryer system and transports to strand storage. Refer to overall Barex process description and flow diagram.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Barex #1 fines dryer, with cyclone	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20%, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)	1.73 lbs PE/hr
	OAC rule 3745-21-07(G)	See A.I.2.a.
	40 CFR, Part 63, Subpart JJJ	See A.I.2.b and A.I.2.c.
	OAC rule 3745-18-06(E)	See A.I.2.d.
	OAC rule 3745-21-08(B)	See A.I.2.e.
	OAC rule 3745-23-06(B)	See A.I.2.e.
	OAC rule 3745-31-05 (PTI #03-1079)	The requirements of this rule are equivalent to the requirements of OAC rules 3745-21-07(G), 3745-17-07(A), 3745-17-11(B), 3745-18-06(E), 3745-21-08(B), and 3745-23-06(B).

2. Additional Terms and Conditions

2.a The permittee does not currently employ and has never before employed any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5) in this emissions unit. Therefore, this emission unit is exempt from OAC rule 3745-21-07(G)(2). A process change that would result in using photochemically reactive materials would constitute a modification as defined in OAC rule 3745-31-01, and would require the permittee to obtain a PTI modification.

2.b The permittee shall comply with all applicable standards in 40 CFR, Part 63, Subpart JJJ for this emissions unit. These requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

2.c This emissions unit is a group 2 process vent as defined in 40 CFR 63.1312.

2.d The process weight rate input for this emissions unit is less than 1000 pounds/hr. Therefore, pursuant to OAC rule 3745-18-06(C), this emissions unit is exempt from any SO2 emission limitation.

2.e The permittee has satisfied the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install No. 03-1079.

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.

II Operational Restrictions

None

III Monitoring and/or Recordkeeping

1. 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 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 emission incident; and

e. any corrective actions taken to eliminate the visible emissions.

IV Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate 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 Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

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:

   a. Emission Limitation: Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by OAC rule 3745-17-07(A).

   Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with OAC rule 3745-17-03(B)(1).

   b. Emission Limitation: 1.73 lbs PE/hr

   Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the limitation above in accordance with Methods 1 through 5 of 40 CFR, Part 60, Appendix A.

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Acetonitrile Reactor and Absorption Section (P048)
Activity Description: The acetonitrile kill kettle (previously P048) and the acetonitrile batch still system (previously P015) are now incorporated into consolidated source P048, Acetonitrile Reaction and Absorption Section. Refer to the overall acetonitrile purification process description and flow diagram.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
acetonitrile reactor and absorption section, with steam-assisted flare	OAC rule 3745-17-07(A)	none (See A.I.2.a.)
	OAC rule 3745-17-11(B)	none (See A.I.2.b.)
	OAC rule 3745-21-07(G)	See A.I.2.c.
	OAC rule 3745-21-09(DD)	See A.I.2.d and A.I.2.k.
	40 CFR, Part 60, Subpart VV	See A.I.2.e.
	40 CFR, Part 60, Subpart NNN	See A.I.2.f.
	40 CFR, Part 63, Subpart F	See A.I.2.d.
	40 CFR, Part 63, Subpart G	See A.I.2.d. and A.I.2.g.
	40 CFR, Part 63, Subpart H	See A.I.2.d.
	40 CFR, Part 60, Subpart A	See A.I.2.d.
	40 CFR, Part 63, Subpart A	See A.I.2.d.
	OAC rule 3745-31-05(A)(3)	1.63 lbs of organic compounds (OC)/hr, 7.14 TPY OC

(PTI #03-13534) See A.I.2.h. and A.I.2.i.

2. Additional Terms and Conditions

2.a This emissions unit is exempt from the visible particulate emission limitations specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because the emissions unit is not subject to an emission limitation from OAC rule 3745-17-11.

2.b The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 lbs per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(i), Figure II of OAC rule 3745-17-11 does not apply. Table I of OAC rule 3745-17-11 does not apply because the process weight, as defined in OAC rule 3745-17-01(B)(14) does not include gaseous fuels used solely as fuel for the flare as a control device.

2.c The permittee does not currently employ and has never before employed any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01(C)(5). Therefore, this emissions unit is exempt from OAC rule 3745-21-07(G)(2). A process change that would result in using photochemically reactive materials would constitute a modification as defined in OAC rule 3745-31-01, and would require the permittee to obtain a PTI modification.

2.d The permittee shall comply with all the applicable standards in OAC rule 3745-21-09(DD), 40 CFR, Part 60 Subpart A, 40 CFR Part 63, Subparts A, F, G and H for this emissions unit. These requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

2.e 40 CFR, Part 60, Subpart VV regulations overlap with those of 40 CFR, Part 63, Subpart H. 40 CFR 63.160(b) addresses this overlap and states that equipment subject to 40 CFR, Part 60, Subpart VV is required to comply only with the provisions of 40 CFR, Part 63, Subpart H.

2.f 40 CFR, Part 60, Subpart NNN regulations overlap with those of 40 CFR, Part 63, Subpart G. 40 CFR 63.110(d) addresses this overlap and states that equipment subject to 40 CFR, Part 60, Subpart NNN is required to comply only with the provisions of 40 CFR, Part 63, Subpart G.

2.g This emissions unit includes group 1 and group 2 process vents as defined in 40 CFR 63.111. Therefore, the permittee shall control the combined streams as group 1, as described in 63.112(d)(3).

2.h All emissions from this emissions unit, which includes the acetonitrile light ends column, digester and associated process condensers, shall be vented to a closed process vent system. The closed process vent system shall meet the following control requirements:

i. All process vent emissions shall be combusted in a flare.

ii. The permittee shall operate the flare to meet the applicable conditions specified in OAC rule 3745-21-09(DD)(10), 40 CFR, Part 63, Subpart A and G.

2.i The requirements of this rule also include compliance with the requirements of 40 CFR, Part 63, Subparts A, G, F, and H.

2.j. Emissions from this emissions unit shall be routed to the acrylonitrile flare (emissions unit P075) through a closed vent system. The flare is the control option selected for control of a group 1 process vent as listed in 40 CFR 63.113.

2.k. The permittee shall include the appropriate process equipment and regulated components for emissions unit P048 in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall comply with the appropriate provisions (including operational restrictions, monitoring and record keeping, reporting and testing) of 40 CFR 63, Subpart H (National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks).

40 CFR 60 Subpart VV regulations overlap with those of 40 CFR, Part 63, Subpart H. 40 CFR 63.160(b) addresses this overlap and states that equipment subject to 40 CFR, Part 60, Subpart VV is required to comply only with the provisions of 40 CFR, Part 63, Subpart H.

The requirements of applicable standards in OAC rule 3745-21-09(DD), are equivalent to or less stringent that the alternative leak detection and repair (LDAR) monitoring plan submitted by the permittee, pursuant to 40 CFR Part 63, Subpart H.

2.l. This emissions unit does not generate process wastewater as defined in 40 CFR 63.101. Aqueous steams within this process are routed for recovery /recycling of organic constituents. As such, the point of determination as defined in 40 CFR 63.111 is the collection tank. Wastewater is generated upon discharge from this tank, and is covered in emissions unit P062.

2.m. This emissions unit is vented to a flare that also controls the emissions from emissions unit P075. All operational restrictions, monitoring, record keeping, reporting and testing requirements for the flare are established in the terms and conditions for emissions unit P075 and are also applicable to emissions unit P048. Therefore, no additional monitoring, record keeping, reporting and testing requirements are necessary for the flare in this emissions unit.

II Operational Restrictions

1. At all time including periods of startup, shutdown, and malfunction as defined by a plan developed in accordance with 63.6(e)(3), emissions unit P048 shall be operated in accordance with good air pollution control practices.

2. The permittee shall monitor all heat exchanger systems used to cool process equipment by one of the methods specified in 63.104(b) or (c) unless one or more of the exemptions contained in 63.104(a)(1) through (6) are met.

3. The permittee shall repair any heat exchanger leak as soon as practicable but not later than 45 calendar days after the permittee receives indication that a leak is present. [40 CFR 63.104(d)(1)]

   Once a leak has been repaired, the permittee shall confirm the heat exchange system has been repaired within 7 calendar days of the repair or start-up, whichever is later. [40 CFR 63.104(d)(2)]
   Delay of repair of the heat exchange systems for which leaks have been detected is allowed provided the conditions of 40 CFR 63.104(e) are met.

4. The permittee shall identify each piece of equipment subject to 40 CFR 63, Subpart H and monitor in accordance with the requirements of the subpart.

5. The permittee shall comply with the LDAR operational restrictions in accordance with 40 CFR Part 63, Subpart H.

6. Delay of repair of equipment for which leaks have been detected is allowed provided the conditions of 40 CFR 63.171 are met.

7. The permittee shall comply with the LDAR program conditions for closed-vent systems and control devices in accordance with 40 CFR 63.172.

8. The permittee shall comply with the LDAR programs for surge control vessels in accordance with 40 CFR 63.170.

III Monitoring and/or Recordkeeping

1. The permittee shall comply with the record keeping requirements contained in 40 CFR, Part 63, Subparts A, F, G, and H.

2. The permittee shall comply with all LDAR program monitoring requirements in accordance with 40 CFR 63.180. Emission monitoring shall comply with Method 21 of 40 CFR Part 60, Appendix A.

3. The permittee shall comply with all LDAR program record keeping requirements in accordance

with 40 CFR 63.181. All records and information required shall be maintained in a manner that can be readily accessed at the plant site.

IV Reporting Requirements

1. All reporting shall comply with the requirements contained in 40 CFR, Part 63, Subparts, A, F, G and H.

2. The permittee shall comply with the LDAR program reporting requirements in accordance with 40 CFR 63.182.

3. The permittee shall submit semi-annual periodic reports in accordance with the provisions of 40 CFR, Part 63, Subparts G and H for this emissions unit.

4. The permittee shall submit start-up, shutdown, and malfunction reports in accordance with 40 CFR 63.10(d)(5).

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:

a. Emission Limitation: 1.63 lbs OC/hr

Applicable Compliance Method:

The flare emission limitation was developed by applying a 98 percent reduction efficiency for control with a flare to a maximum uncontrolled emission rate of 81.50 lbs OC/hr. Compliance shall be demonstrated by ensuring the flare operates at the proper efficiency through the monitoring and record keeping established in the terms and conditions for emissions unit P075.

b. Emission Limitation: 7.14 tons OC/yr

Applicable Compliance Method: The annual emission limitation was developed by multiplying the hourly emission limitation by 8760, and then dividing by 2000. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual emission limitation shall be ensured.

2. The permittee shall comply with the LDAR program testing requirements in accordance with 40 CFR 63.180.

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Nitriles Loading Rack (P050)
Activity Description: Product loading rack system for loading acrylonitrile and acetonitrile into tank cars or trucks, controlled by scrubbers.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
nitriles loading rack, with packed bed scrubbers	OAC rule 3745-21-07(G)	See A.I.2.a.
	OAC rule 3745-21-09(DD)	See A.I.2. b.
	40 CFR, Part 63, Subpart F	See A.I.2. b. and A.I.2.c.
	40 CFR, Part 63, Subpart G	See A.I.2. b. and A.I.2.c.
	40 CFR, Part 63, Subpart H	See A.I.2. b. and A.I.2.c.

2. Additional Terms and Conditions

2.a This facility is located in Allen County, which is not considered a "Priority I" county as indicated by paragraph (A) of OAC rule 3745-21-06, and is not a "new source." Therefore, pursuant to OAC rule 3745-21-07(A), this emissions unit is not subject to the requirements of OAC rule 3745-21-07.

2.b The permittee shall comply with all applicable standards in OAC rule 3745-21-09(DD), 40 CFR, Part 63, Subpart F, 40 CFR, Part 63, Subpart G, 40 CFR and Part 63, Subpart H for this emissions unit. These requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

2.c This emissions unit is a group 1 transfer rack as defined in 40 CFR 63.111. The Subpart G provisions for transfer racks are included in 40 CFR 63.126, 63.127, 63.128, 63.129, and 63.130.

II Operational Restrictions

1. The scrubber water flow rate for the acrylonitrile scrubber and the acetonitrile scrubber shall be continuously maintained at a minimum value of not less than 3.5 gallons per minute and 2.5 gallons per minute, respectively, at all times while the emissions unit is in operation. These values may be changed in the future based on values that would be established during future emission testing. An interlock system shall be used to ensure that loading cannot occur unless the scrubber water flow is above the established minimum value. This is alternate monitoring to that required by 40 CFR 63.127(b), as allowed by 63.127(c), 63.151(f) and 63.152(e). This permit authorizes use of alternate monitoring as described herein, pending approval from U.S. EPA Region 5. This monitoring approach is expected to be approved by USEPA Region 5 because Region 6 approved the same approach for a sister facility (BP Green Lake, Texas Plant) of this permittee.

   The Ohio EPA shall approve the operational restrictions proposed by the permittee. The permittee may petition to the OEPA for reestablishment, based on emissions testing or the collection of data, of the scrubber flow rate and pressure drop minimum values provided the permittee can demonstrate to the OEPA's satisfaction that the new minimum values will reasonably ensure compliance and the basis upon which the minimum values were previously established is no longer applicable.

   The operation of the control equipment below the minimum values established above may or may not indicate control efficiency or a mass emission violation. If required by the Ohio EPA, Northwest District Office, compliance with the limitations shall be determined by performing concurrent mass emission tests and operational parameter readings, using USEPA-approved methods and procedures. The results of any required emission tests and readings shall be used in determining whether or not the operation of the control equipment outside the minimum values established above is indicative of a possible violation of the applicable limitations. In addition, the permittee may provide other relevant credible evidence to the Ohio EPA to demonstrate that a deviation of an operational restriction is not a violation of the applicable control efficiency and/or emission limitations.

III Monitoring and/or Recordkeeping

1. The permittee shall properly operate and maintain equipment to monitor the scrubber water flow rate on each scrubber while the emissions unit is in operation. An interlock system shall also be installed to assure that loading cannot occur unless the scrubber water flow is within the specified range. This is alternate monitoring to that required by 40 CFR 63.127(b), as allowed by 63.127(c), 63.151(f) and 63.152(e). This permit authorizes use of alternate monitoring as described herein, pending approval from U.S. EPA Region 5. The permittee shall calibrate the flow monitor and test the interlock system on a semiannual basis to determine system integrity. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

2. The permittee shall keep records of the semiannual interlock system and flow calibration tests.

3. The permittee shall keep records of the applicable information listed in 40 CFR 63.129, 40 CFR 63.130 and 40 CFR 63.152.

IV Reporting Requirements

1. By January 31 of each year, the permittee shall submit annual reports concerning the operation of the interlock system during the prior year, including the results of the semiannual interlock and flow calibration tests.

2. The permittee shall submit reports as required by 40 CFR 63.152 and include the applicable information listed in 40 CFR 63.130 for transfer racks.

V Testing Requirements

1. The permittee shall comply with the applicable performance test provisions of 40 CFR 63.7, 63.128 and 63.129. A performance test shall be conducted to demonstrate the scrubber HAP removal and establish minimum water flow rate. The permittee shall conduct a transfer rack performance test within 90 days of receipt of EPA approval of the alternative monitoring request. A vapor collection system inspection shall be conducted and recorded prior to the test. BP shall replace the monitors and conduct calibrations prior to the new transfer rack performance test. All information required by the approval for alternate monitoring will be recorded when the new transfer rack performance test is conducted.

   The permittee shall demonstrate scrubber water flow cessation and the interlock mechanism during the performance test.

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or 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 Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

   Personnel from the appropriate Ohio EPA District Office or 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 appropriate Ohio EPA District

Office or 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 appropriate Ohio EPA District Office or local air agency.

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units
Emissions Unit ID: Nitriles Drum Loading System (P051)
Activity Description: Equipment for loading acrylonitrile and acetonitrile into drums; controlled by carbon adsorption.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
nitriles drum loading system, with carbon adsorber	OAC rule 3745-21-07(G)	See A.I.2.a.
	OAC rule 3745-21-09(DD)	See A.I.2.b.

2. Additional Terms and Conditions

2.a This facility is located in Allen County, which is not considered a "Priority I" county as indicated by paragraph (A) of OAC rule 3745-21-06, and is not a "new source." Therefore, pursuant to OAC rule 3745-21-07(A), this emissions unit is not subject to the requirements of OAC rule 3745-21-07.

2.b The permittee shall comply with all applicable standards in OAC rule 3745-21-09(DD) for this emissions unit. These requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

II Operational Restrictions
None

III Monitoring and/or Recordkeeping
None

IV Reporting Requirements
None

V Testing Requirements
None

VI Miscellaneous Requirements
None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: HCN Loading Rack (P052)
Activity Description: Rack for loading HCN, controlled by vapor balance with the HCN tanks, flare scrubber, and flare.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
HCN loading rack, with steam-assisted flare and scrubber	OAC rule 3745-21-07(G)	See A.I.2.a.
	OAC rule 3745-21-09(DD)	See A.I.2.b.

2. Additional Terms and Conditions

2.a This facility is located in Allen County, which is not considered a "Priority I" county as indicated by paragraph (A) of OAC rule 3745-21-06, and is not a "new source." Therefore, pursuant to OAC rule 3745-21-07(A), this emissions unit is not subject to the requirements of OAC rule 3745-21-07.

2. b The permittee shall comply with all applicable standards in OAC rule 3745-21-09(DD) for this emissions unit. These requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

II Operational Restrictions
None

III Monitoring and/or Recordkeeping
None

IV Reporting Requirements
None

V Testing Requirements
None

VI Miscellaneous Requirements
None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Deepwell Pretreatment Area (P062)
Activity Description: General equipment in the deepwell wastewater pretreatment area. Installation authorized by PTI #03-3549.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
deepwell pretreatment area, with absorber off-gas incinerator (AOGI)	OAC rule 3745-21-07(G)	See A.I.2.a.
	OAC rule 3745-21-09(DD)	See A.I.2.b.
	40 CFR, Part 60, Subpart VV	See A.I.2.c.
	40 CFR, Part 63, Subpart F	See A.I.2.b and A.I.2.d.
	40 CFR, Part 63, Subpart G	See A.I.2.b and A.I.2.d.
	40 CFR, Part 63, Subpart H	See A.I.2.b and A.I.2.d.
	OAC rule 3745-31-05 (PTI #03-3549)	less than 1 lb of volatile organic compound (VOC)/year See A.I.2.e. The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-07(G) and 3745-21-09(DD) and 40 CFR, Part 63, Subpart F, 40 CFR, Part 63, Subpart G, 40 CFR, Part 63,

Subpart H and 40 CFR, Part 60, Subpart VV.

2. Additional Terms and Conditions

2.a The permittee does not currently employ and has never before employed any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01(C)(5). Therefore, this emissions unit is exempt from OAC rule 3745-21-07(G)(2). A process change that would result in using photochemically reactive materials would constitute a modification as defined in OAC rule 3745-31-01, and would require the permittee to obtain a PTI modification**.**

2.b The permittee shall comply with all applicable standards in OAC rule 3745-21-09(DD), 40 CFR, Part 63, Subpart F, 40 CFR, Part 63, Subpart G and 40 CFR, Part 63, Subpart H for this emissions unit. These requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

2.c 40 CFR 60 Subpart VV regulations overlap with those of 40 CFR, Part 63, Subpart H. 40 CFR 63.160(b) addresses this overlap and states that equipment subject to 40 CFR, Part 60, Subpart VV is required to comply only with the provisions of 40 CFR, Part 63, Subpart H.

2.d This emissions unit handles group 1 waste water as defined in 40 CFR 63.111 and 63.144 The process wastewater provisions of Subpart G are included in 40 CFR 63.132 through 63.149.

2.e In accordance with OAC rule 3745-31-05, best available technology (BAT) for this emissions unit has been determined to be the use of an AOGI to reduce organic compound emissions by 98%.

2.f This emissions unit is vented to an AOGI that also controls the emissions from emissions unit P035. All operational restrictions, monitoring, recordkeeping, reporting and testing requirements for the AOGI are established in the terms and conditions for emissions unit P035. Therefore, no additional monitoring, record keeping, reporting and testing requirements are necessary for this emissions unit.

II Operational Restrictions

1. The permittee shall comply with the process wastewater provisions listed in 40 CFR 63.132 through 63.139 for general requirements, wastewater tanks, surface impoundments, containers, individual drain systems, oil-water separators, performance standards, and control devices, as applicable.

III Monitoring and/or Recordkeeping

1. The permittee shall comply with the process wastewater inspection and monitoring requirements listed in 40 CFR 63.143.

2. The permittee shall comply with the process wastewater record keeping requirements as listed in 40 CFR 63.147.

IV Reporting Requirements

1. The permittee shall comply with the process wastewater reporting requirements as listed in 40 CFR 63.146 and 50 CFR 63.152.

V Testing Requirements

1. Compliance with the emission limitations in section A.I.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation: less than 1 lb VOC/year

Applicable Compliance Method: The annual emission limitation represents the potential to emit for this emissions unit. Therefore no record keeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limitation.

b. The permittee shall comply with the process wastewater provisions at 40 CFR 63.145 – Tests methods and procedures to determine compliance.

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Barex #2 Strand Dryer (P065)
Activity Description: Barex Plant #2 Strand Dryer and associated equipment. Dries strands from #2 pasteline before transport to storage. Refer to overall Barex process description and flow diagram.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Barex #2 strand dryer, with cyclone	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20%, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05.
	OAC rule 3745-21-07(G)	See A.I.2.a.
	40 CFR, Part 63, Subpart JJJ	See A.I.2.b and A.I.2.c.
	OAC rule 3745-23-06(B) OAC rule 3745-21-08(B)	See A.I.2.e.
	OAC rule 3745-31-05 (PTI #03-9718)	5.20 lbs PE/hr
		3.40 lbs PM10/hr
		3.8 lbs of acrylonitrile/hr
		3.5 lbs methyl acrylate/hr

4.8 lbs of volatile organic compounds (VOC)/hr as carbon

See A.I.2.d.

The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-07(G), 3745-23-06(B), 3745-21-08(B) and 3745-17-07(A).

2. Additional Terms and Conditions

2.a The permittee does not currently employ and has never before employed any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5) in this emissions unit. Therefore, this emissions unit is exempt from OAC rule 3745-21-07(G)(2). A process change that would result in using photochemically reactive materials would constitute a modification as defined in OAC rule 3745-31-01, and would require the permittee to obtain a PTI modification.

2.b The permittee shall comply with all applicable standards in 40 CFR, Part 63, Subpart JJJ for this emissions unit. Requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

2.c This emissions unit is a group 2 process vent as defined in 40 CFR 63.1312.

2.d This emissions unit shall be controlled with a cyclone capable of achieving greater than 95% control efficiency for particulate emissions.

2.e The permittee has satisfied the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in permit to install No. 03-9718.

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.

II Operational Restrictions

None

III Monitoring and/or Recordkeeping

1. 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 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 emission incident; and

   e. any corrective actions taken to eliminate the visible emissions.

IV Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate 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 Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

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:

   a. Emission Limitation: Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by OAC rule 3745-17-07(A).

      Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with OAC rule 3745-17-03(B)(1).

   b. Emission Limitation: 5.20 lbs PE/hr

      Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the limitation above in accordance with Methods 1 through 5 of 40 CFR, Part 60, Appendix A.

c. Emission Limitation: 3.40 lbs PM10/hr

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the limitation above in accordance with Methods 1 through 5 of 40 CFR, Part 60, Appendix A.

d. Emission Limitation: 3.8 lbs of acrylonitrile/hr

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the limitation above in accordance with Methods 1 through 4 and 18, 25 or 25A of 40 CFR, Part 60, Appendix A.

e. Emission Limitation: 3.5 lbs methyl acrylate/hr

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the limitation above in accordance with Methods 1 through 4 and 18, 25 or 25A of 40 CFR, Part 60, Appendix A.

f. Emission Limitation: 4.8 lbs of volatile organic compounds (VOC)/hr as carbon

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the limitation above in accordance with Methods 1 through 4 and 18, 25 or 25A of 40 CFR, Part 60, Appendix A.

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Barex Reactor #3 (P067)
Activity Description: Barex Reactor #3 and associated equipment. Reaction of raw materials to produce nitrile copolymer resins.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Barex reactor #3, with condenser and thermal incinerator	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to 40 CFR, Part 63, Subpart JJJ.
	40 CFR, Part 63, Subpart JJJ	See A.I.2.a, A.I.2.b and A.I.2.c.
	OAC rule 3745-31-05 (PTI #03-3369)	0.12 lb of volatile organic compounds (VOC)/hr See A.I.2.d. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(G).

2. Additional Terms and Conditions

2.a The permittee shall comply with all applicable standards in 40 CFR, Part 63, Subpart JJJ for this emissions unit. These requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

2.b This emissions unit is a group 1 batch process vent as defined in 40 CFR 63.1312 and 63.1323.

2.c The Barex Thermal Oxidizer (formerly known as N004) controls emissions from all three Barex Reactors (P009, P010, P067) and acts as the control device for Group 1 batch process vents to achieve 90 weight percent reduction of HAP emissions for the batch cycle as required by 40 CFR63.1322(a)(2). The monitoring, recordkeeping, and reporting related to the thermal oxidizer is included with this emissions unit.

2.d 40 CFR 63 63.1331(a) requires each affected source to comply with the requirements of 40 CFR Part 63 Subpart H (National Emission Standards for Organic Hazardous air Pollutants for Equipment Leaks). The provisions outlined in 40 CFR Subpart H are more stringent than the fugitive emission requirements outlined in PTI #03-3369.

In order to minimize fugitive hydrocarbon emissions from the Barex resin reactor process, the permittee shall included the appropriate process equipment in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall comply with the appropriate provisions (including operational restrictions, monitoring and record keeping, reporting, and testing) of 40 CFR 63 Subpart H.

II Operational Restrictions

1. Except as otherwise provided in Subpart JJJ, the owner or operator shall operate the thermal oxidizer (control device) such that the daily average firebox temperature remains above the minimum temperature previously established in accordance with 40 CFR 63.1324(f)(1) and 63.1334 as 1350 degrees Fahrenheit. This value may be changed in the future as allowed by these provisions. [40 CFR 63.1324(a)(2) and (f)(1)].

III Monitoring and/or Recordkeeping

1. The permittee shall install a temperature monitoring device equipped with a continuous recorder. The temperature monitoring device shall be installed in the firebox of the incinerator, or ductwork immediately downstream of the firebox in a position before any heat exchange occurs. [40 CFR 63.1324(c)(1)].

   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. [40 CFR 63.1324(a)]

   The permittee shall collect and record the following information each day:

   a. continuous records of firebox temperature [40 CFR 63.1326(e)(1)];

   b. records of the batch cycle daily average temperature [40 CFR 63.1326(e)(2)];

   c. records specifying the times and durations of monitoring system breakdowns, repairs, calibration checks, zero (low-level) and high-level adjustments. . [40 CFR 63.1326(e)(5)]; and

d. records specifying any other periods of process or control device operations when monitors are not operating. [40 CFR 63.1326(e)(5)].

2. 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 the control device used to comply with 40 CFR 63.1322(a) shall comply with either 63.1324(e)(1) or (e)(2).

   The permittee shall collect and record the information specified in either 40 CFR 63.1326(e)(3) or (e)(4), depending on the bypass flow monitoring option chose above.

3. The permittee shall keep records as specified in the batch process provisions of 40 CFR 63.1326 and the general recordkeeping provisions at 40 CFR 63.1335.

4. A parameter monitoring excursion for batch process vents is defined in 40 CFR 63.1334(f)(2) and excused excursions are defined in 63.1334(g).

IV Reporting Requirements

1. The permittee shall comply with the batch process vent reporting provisions as listed at 40 CFR 63.1327 and the general reporting requirements listed in 40 CFR 63.1335.

2. The permittee shall submit quarterly summary reports that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter.

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 methods:

   a. Emission Limitation: 0.12 lb VOC/hr

      Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the limitation above in accordance with Methods 1 through 4 and 18, 25 or 25A of 40 CFR, Part 60, Appendix A.

   b. The permittee shall comply with the performance testing provisions included at 40 CFR 63.7and 40 CFR 63.1333.

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Barex #2 Pasteline (P068)
Activity Description: Barex Plant #2 Pasteline and associated equipment. Combines Barex reactor batches, coagulates latex to make strands, washes strands. Refer to overall Barex process description and flow diagram.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Barex #2 pasteline, with scrubber	OAC rule 3745-21-07(G)	See A.I.2.a.
	40 CFR, Part 63, Subpart JJJ	See A.I.2. b. and A.I.2.c.
	OAC rule 3745-31-05 (PTI #03-3369)	0.9 lb of volatile organic compounds (VOC)/hr The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(G).

2. Additional Terms and Conditions

2.a The permittee does not currently employ and has never before employed any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5) in this emissions unit. Therefore, this emissions unit is exempt from OAC rule 3745-21-07(G)(2). A process change that would result in using photochemically reactive materials would constitute a modification as defined in OAC rule 3745-31-01, and would require the permittee to obtain a PTI modification.

2.b The permittee shall comply with all the applicable standards in 40 CFR, Part 63, Subpart JJJ for this emissions unit. These requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

2.c This emissions unit is a group 2 continuous process vent as defined in 40 CFR 63.1312.

II Operational Restrictions

1. Within 9 months after the effective date of the permit, the permittee shall establish, and submit to OEPA for approval, a range of values for pressure drop across the scrubber (in inches or water) and for scrubber water flow rate (in gallons per minute). The proposed range of values (which may be expressed as a maximum, minimum or both) shall be based on testing and/or other appropriate data. The permittee may from time to time propose a revised range for either parameter based on further testing or other appropriate data or information.

   The scrubber water flow rate shall be continuously maintained within the range of values, in gallons per minute, established as indicated in the paragraph above, at all times while the emissions unit is in operation.

   The pressure drop across the scrubber shall be continuously maintained within the range of values, in inches of water, established as indicated in the paragraph above, at all times while the emissions unit is in operation.

   The Ohio EPA shall approve the operational restrictions proposed by the permittee. The permittee may petition to the OEPA for reestablishment, based on emissions testing or the collection of data, of the scrubber flow rate and pressure drop minimum values provided the permittee can demonstrate to the OEPA's satisfaction that the new minimum values will reasonably ensure compliance and the basis upon which the minimum values were previously established is no longer applicable.

   The parametric operational restrictions are included in this permit to ensure ongoing compliance with the applicable mass emission and visible emission limitations. The operation of the control equipment outside the values established above may or may not indicate a mass emission and/or visible emission violation. If required by the Ohio EPA, Northwest District Office, compliance with the mass emission limitations and visible emission limitations shall be determined by performing concurrent mass emission tests, and visible emissions readings, using USEPA-approved methods and procedures, as well as operational parameter readings. The results of any required emission tests, visible emission readings, and operational parameter readings shall be used in determining whether or not the operation of the control equipment below the minimum values that will be established above is indicative of a possible violation of the mass emission limitation and/or visible emission limitations. In addition, the permittee may provide other relevant credible evidence to the Ohio EPA to demonstrate that a deviation of an operational restriction is not a violation of the applicable mass emission and/or visible emission limitations.

III Monitoring and/or Recordkeeping

1. The permittee shall properly install not later than 3 months from the effective date of this permit, and thereafter operate and maintain equipment to monitor the static pressure drop across the

scrubber and the scrubber water flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each shift:

a. The pressure drop across the scrubber, in inches of water.

b. The scrubber water flow rate, in gallons per minute.

c. A log of the downtime for the duct scrubber and monitoring equipment when the associated emissions unit was in operation.

IV Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels established pursuant to Section A.II of this permit:

   a. The static pressure drop across the scrubber.

   b. The scrubber water flow rate.

   These reports shall be submitted in accordance with the General Terms and Conditions of this permit.

2. The permittee shall submit quarterly summary reports that include a log of the downtime for the scrubber and monitoring equipment when the associated emissions unit was in operation.

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:

   a. Emission Limitation: 0.9 lb VOC/hr

      Applicable Compliance Method:

      If required, the permittee shall demonstrate compliance with the limitation above in accordance with Methods 1 through 4 and 18, 25 or 25A of 40 CFR, Part 60, Appendix A.

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Barex #2 Fines Dryer (P069)
Activity Description: Barex Plant #2 Fines Dryer and associated equipment. Collects and dries fines from #2 Strand Dryer system and transports to strand storage.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Barex #2 fines dryer, with cyclone and baghouse	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20%, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05.
	OAC rule 3745-21-07(G)	See A.I.2.a.
	40 CFR, Part 63, Subpart JJJ	See A.I.2.b. and A.I.2.c.
	OAC rule 3745-31-05 (PTI #03-3369)	0.24 lb PE/hr 0.052 lb of volatile organic compounds (VOC)/hr The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-07(G).

2. Additional Terms and Conditions

2.a The permittee does not currently employ and has never before employed any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01(C)(5). Therefore, this emission unit is exempt from OAC rule 3745-21-07(G)(2). A process change that would result in using photochemically reactive materials would constitute a modification as defined in OAC rule 3745-31-01, and would require the permittee to obtain a PTI modification.

2.b The permittee shall comply with all the applicable standards in 40 CFR, Part 63, Subpart JJJ for this emissions unit. These requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

2.c This emissions unit is a group 2 process vent as defined in 40 CFR 63.1312.

II Operational Restrictions

None

III Monitoring and/or Recordkeeping

1. 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 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 emission incident; and

   e. any corrective actions taken to eliminate the visible emissions.

IV Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse on this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:

   a. The emission testing shall be conducted within 18 months after effective date of this permit.

   b. The emission testing shall be conducted to demonstrate compliance with the mass emission rate for PE and VOC.

   c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for PE - Method 5 of 40 CFR, Part 60, Appendix A; and for VOC - Method 18, 25 or 25A of 40 CFR, Part 60, Appendix A.

      Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

   d. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Visible emission readings, using USEPA Method 22, shall be performed during each test run.

2. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation: Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by OAC rule 3745-17-07(A).

      Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with OAC rule 3745-17-03(B)(1).

   b. Emission Limitation: 0.24 lb PE/hr

      Applicable Compliance Method: The permittee shall demonstrate compliance with the limitation above based upon the results of emissions testing conducted in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

   c. Emission Limitation: 0.052 lb VOC/hr

      Applicable Compliance Method: The permittee shall demonstrate compliance with the limitation above based upon the results of emissions testing conducted in accordance with Methods 1-4 and 18, 25 or 25A of 40 CFR, Part 60, Appendix A.

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Acetonitrile Recovery and Purification Section (P074)
Activity Description: Acetonitrile recovery and purification section, includes the aceto purification column and drying column previously permitted as P012 and P074. Refer to overall Acetonitrile process description and flow diagram.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
acetonitrile recovery and purification section, equipped with steam-assisted flare	OAC rule 3745-17-07(A)	none (See A.I.2.a.)
	OAC rule 3745-17-11(B)	none (See A.I.2.b.)
	OAC rule 3745-21-09(DD)	See A.I.2.d and A.I.2.j.
	40 CFR, Part 60, Subpart VV	See A.I.2.e.
	40 CFR, Part 60, Subpart NNN	See A.I.2.f.
	40 CFR, Part 63, Subpart A	See A.I.2.d and A.I.2.h.
	40 CFR, Part 63, Subpart F	See A.I.2.d.
	40 CFR, Part 63, Subpart G	See A.I.2. d, A.I.2.g and A.I.2.h.
	40 CFR, Part 63, Subpart H	See A.I.2.d.
	OAC rule 3745-21-07(G)(2)	See A.I.2.c
	OAC rule 3745-31-05(A)(3) (PTI #03-13534)	3.28 lbs of organic compounds (OC)/hr, 14.37 TPY OC

2. Additional Terms and Conditions

2.a This emissions unit is exempt from the visible particulate emission limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.

2.b The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 lbs per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(i), Figure II of OAC rule 3745-17-11 does not apply. Table I of OAC rule 3745-17-11 does not apply because the process weight, as defined in OAC rule 3745-17-01(B)(14) does not include gaseous fuels used solely as fuel for the flare as a control device.

2.c The permittee does not currently employ and has never before employed any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01(C)(5). Therefore, this emissions unit is exempt from OAC rule 3745-21-07(G)(2). A process change that would result in using photochemically reactive materials would constitute a modification as defined in OAC rule 3745-31-01, and would require the permittee to obtain a PTI modification.

2.d The permittee shall comply with all applicable standards in OAC rule 3745-21-09(DD), and 40 CFR, Part 63, Subpart A, F, G and H for this emissions unit. These requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

2.e 40 CFR, Part 60, Subpart VV regulations overlap with those of 40 CFR, Part 63, Subpart H. 40 CFR 63.160(b) addresses this overlap and states that equipment subject to 40 CFR, Part 60, Subpart VV is required to comply only with the provisions of 40 CFR, Part 63, Subpart H.

2.f 40 CFR, Part 60, Subpart NNN regulations overlap with those of 40 CFR, Part 63, Subpart G. 40 CFR 63.110(d) addresses this overlap and states that equipment subject to 40 CFR, Part 60, Subpart NNN is required to comply only with the provisions of 40 CFR, Part 63, Subpart G.

2.g Emissions from emissions unit P074: recovery and purification section which includes the acetonitrile drying column, acetonitrile product column and associated process condensers shall be vented to a closed process vent system. The closed process vent system shall meet the following control requirements:

i. all process vent emissions shall be combusted in a flare.

The permittee shall operate the flare to meet the applicable conditions specified in OAC rule 3745-21-09(DD)(10), and 40 CFR 63 Subpart G.

2.h The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(DD), and 40 CFR 63, Subparts A, G, F, and H.

2.i This emissions unit is not required to perform group determination per 40 CFR 63.113(h) since it complies with 63.113(a)(1) and (a)(2).

2.j The permittee shall include the appropriate process equipment and regulated components for emissions unit P074 in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall comply with the appropriate provisions (including operational restrictions, monitoring and record keeping, reporting, and testing) of 40 CFR 63, Subpart H (National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks).

40 CFR 60 Subpart VV regulations overlap with those of 40 CFR, Part 63, Subpart H. 40 CFR 63.160(b) addresses this overlap and states that equipment subject to 40 CFR, Part 60, Subpart VV is required to comply only with the provisions of 40 CFR, Part 63, Subpart H.

The requirements of applicable standards in OAC rule 3745-21-09(DD), are equivalent to or less stringent that the alternative leak detection and repair (LDAR) monitoring plan submitted by the permittee, pursuant to 40 CFR Part 63, subpart H.

2.k This emissions unit does not generate wastewater as defined in 40 CFR 63.101. The aqueous streams within this emissions units are routed for recovery/recycle of organic constituents. As such, the point of determination as defined in 40 CFR 63.111 is the collection tank. Wastewater is generated upon discharge from this tank, and is covered in emissions unit P062.

2.l This emissions unit is vented to a flare that also controls the emissions from emissions unit P075. All operational restrictions, monitoring, record keeping, reporting and testing requirements for the flare are established in the terms and conditions for emissions unit P075 and are also applicable to emissions unit P074. Therefore, no additional monitoring, record keeping, reporting and testing requirements are necessary for the flare in this emissions unit.

II Operational Restrictions

1. The permittee shall operate the closed vent system at all times when emissions may be vented to it.

2. At all time including periods of startup, shutdown, and malfunction as defined by a plan developed in accordance with 63.6(e)(3), emissions unit P074 shall be operated in accordance with good air pollution control practices.

3. The permittee shall monitor all heat exchanger systems used to cool process equipment by one of the methods specified in 63.104(b) or (c) unless one or more of the exemptions contained in 63.104(a)(10 through (6) are met.

4. The permittee shall repair any heat exchanger leak as soon as practicable but not later than 45 calendar days after the permittee receives indication that a leak is present. [40 CFR 63.104(d)(1)]

   Once a leak has been repaired, the permittee shall confirm that the heat exchange system has been repaired within 7 calendar days of the repair or start-up, whichever is later. [40 CFR 63.104(d)(2)]

   Delay of repair of the heat exchange systems for which leaks have been detected is allowed provided the conditions of 40 CFR 63.104(d)(2)(e) are met.

5. The permittee shall identify each piece of equipment subject to 40 CFR 63, Subpart H and monitor in accordance with the requirements of the Subpart.

6. The permittee shall comply with the LDAR operational restrictions in accordance with 40 CFR Part 63, Subpart H.

7. Delay of repair of equipment for which leaks have been detected is allowed provided the conditions of 40 CFR 63.171 are met.

8. The permittee shall comply with the LDAR program conditions for closed-vent systems and control devices in accordance with 40 CFR 63.172.

9. The permittee shall comply with the LDAR programs for surge control vessels in accordance with 40 CFR 63.170.

III Monitoring and/or Recordkeeping

1. The permittee shall comply with the record keeping requirements contained in 40 CFR, Part 63, Subparts A, F, G, and H.

2. The permittee shall comply with all LDAR program monitoring requirements in accordance with 40 CFR 63.180. Emission monitoring shall comply with Method 21 of 40 CFR Part 60, Appendix A.

3. The permittee shall comply with all LDAR program record keeping requirements in accordance with 40 CFR 63.181. All records and information required shall be maintained in a manner that can be readily accessed at the plant site.

IV Reporting Requirements

1. All reporting shall comply with the requirements contained in 40 CFR, Part 63, Subpart A, F, G, and H.

2. The permittee shall comply with the LDAR program reporting requirements, in accordance with 40 CFR 63.182.

3. The permittee shall submit initial notifications in accordance with the provisions of 40 CFR, Part 63, Subparts G & H for this emissions unit [40 CFR 63.152(c)].

4. The permittee will submit start-up, shutdown, and malfunction reports in accordance with 40 CFR 63.10(d)(5).

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:

a. Emission Limitation: 3.28 lbs OC/hr

Applicable Compliance Method: The flare emission limitation was developed by applying a 98 percent reduction efficiency for control with a flare to a maximum uncontrolled emission rate of 164.0 lbs OC/hr. Compliance shall be demonstrated by ensuring the flare operates at the proper efficiency through the monitoring and record keeping established in the terms and conditions for emissions unit P075.

b. Emission Limitation: 14.37 tons OC/yr
Applicable Compliance Method: The annual emission limitation was developed by multiplying the hourly emission limitation by 8760, and then dividing by 2000. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual emission limitation shall be ensured.

2. The permittee shall comply with the LDAR program testing requirements, in accordance with 40 CFR 63.180.

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Acrylonitrile Plant #2 Recovery & Purification Section (P075)
Activity Description: The affected plant is the acrylonitrile unit. Acrylonitrile is produced by the vapor-phase catalytic reaction of ammonia, propylene, and air. This process produces the product acrylonitrile and co-produces acetonitrile and HCN. This source refers to the recovery and purification steps for product acrylonitrile and co-product HCN. The previous reaction and product recovery (absorption) steps of the process are addressed as emission unit P035. The subsequent purification steps for co-product acetonitrile are addressed as emission unit P012. This source includes equipment formerly permitted as P014, P019, and P037. Emissions from P075 are vented to either a vent scrubber followed by a flare or to a thermal oxidizer. Refinery emissions are also vented to this flare, but are not included or addressed in this application because the refinery is a separate facility. Refer to the overall acrylonitrile plant process description and flow diagram.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
acrylonitrile plant #2 recovery and purification section, with steam-assisted flare, packed bed scrubber and thermal oxidizer	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by rule, from the thermal oxidizer.
	OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05.
	OAC rule 3745-18-06	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05.
	OAC rule 3745-21-07(G)	See A.I.2.a.

OAC rule 3745-21-09(DD)	See A.I.2.c.
40 CFR, Part 60, Subpart VV	See A.I.2.c.
40 CFR, Part 60, Subpart NNN	See A.I.2.d.
40 CFR, Part 63, Subpart F	See A.I.2.b.
40 CFR, Part 63, Subpart G	See A.I.2.b. and A.I.2.e.
40 CFR, Part 63, Subpart H	See A.I.2.b. and A.I.2.c.
OAC rule 3745-31-05 (PTI #03-9227)	Emissions Limitations for Vent Scrubber/Flare combination only: 2.0 lbs PE/hr, 8.8 TPY PE 6.0 lbs of carbon monoxide (CO)/hr, 26.3 TPY CO 2.0 lbs of nitrogen oxides (NOx)/hr, 8.8 TPY NOx 2.0 lbs of sulfur dioxide (SO2)/hr, 8.9 TPY SO2 5.0 lbs of non-methane hydrocarbons (NMHC)/hr (as carbon), 21.9 TPY NMHC (as carbon) See A.I.2.f. through A.I.2.i. The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-07(G), 3745-21-09(DD) and 3745-17-07(A) and 40 CFR, Part 63, Subpart A, 40 CFR, Part 63, Subpart F, 40 CFR, Part 63, Subpart G, 40 CFR, Part 63, Subpart H, 40 CFR, Part 60, Subpart NNN, and 40 CFR, Part 60, Subpart VV.

2. Additional Terms and Conditions

2.a The permittee does not currently employ and has never before employed any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01(C)(5). Therefore, this emissions unit is exempt from OAC rule 3745-21-07(G)(2). A process change that would result in using photochemically reactive materials would constitute a modification as defined in OAC rule 3745-31-01, and would require the permittee to obtain a PTI modification.

2.b The permittee shall comply with all applicable standards in 40 CFR, Part 63, Subparts A, F, G and H for this emissions unit. These requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

2.c 40 CFR Part 60, Subpart VV regulations overlap with those of 40 CFR, Part 63, Subpart H. 40 CFR 63.160(b) addresses this overlap and states that equipment subject to 40 CFR, Part 60, Subpart VV is required to comply only with the provisions of 40 CFR, Part 63, Subpart H.

The requirements of applicable standards in OAC rule 3745-21-09(DD), are equivalent to or less stringent than the alternative leak detection and repair (LDAR) monitoring plan submitted by the permittee, pursuant to 40 CFR Part 63, subpart H.

The permittee shall include the appropriate process equipment and regulated components for emissions unit P075 in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall comply with the appropriate provisions (including operational restrictions, monitoring and record keeping, reporting, and testing) 40 CFR 63 Subpart H (National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks).

2.d 40 CFR, Part 60, Subpart NNN regulations overlap with those of 40 CFR, Part 63, Subpart G. 40 CFR 63.110(d) addresses this overlap and states that equipment subject to 40 CFR, Part 60, Subpart NNN is required to comply only with the provisions of 40 CFR, Part 63, Subpart G.

2.e Pursuant to 40 CFR 63.113(h), the permittee is not required to make a group determination as described in 40 CFR 63.115 because it complies with 40 CFR 63.113(a)(1) or (a)(2).

2.f Emissions from the acrylonitrile plant #2 recovery and purification section shall be controlled by use of a closed process vent system. The closed vent system stream will be required to meet at least one of the following criteria at all times:

i. control closed vent system emissions with a flare; or

ii. reduce closed vent system emissions of total organic compounds (TOC) less methane and ethane by 98% or to a concentration less than 20 ppmv, on a dry basis corrected to 3% oxygen.

2.g The control equipment shall meet the conditions specified in 40 CFR, Part 60, Subpart NNN, and 40 CFR, Part 63, Subpart G.

2.h There are two distinct operating scenarios for the acrylonitrile plant #2 recovery and purification section. Normally, the vent gases from this emissions unit are routed first to a vent scrubber, which recovers hydrogen cyanide and other useful products from the vent gases, and then to the flare. Under this operating scenario, emissions from the flare shall not exceed the following emission limitations:

Particulate Emissions:	2.0 lbs/hr, 8.8 TPY
Carbon Monoxide:	6.0 lbs/hr, 26.3 TPY
Nitrogen Oxides:	2.0 lbs/hr, 8.8 TPY
Sulfur Dioxide:	2.0 lbs/hr, 8.9 TPY
Non-Methane Hydrocarbons:	5.0 lbs/hr (as carbon), 21.9 TPY (as carbon)

In the alternative operating scenario, a portion of the vent gases are routed directly to the flare or thermal oxidizer, bypassing the vent scrubber. This scenario is used when excess hydrogen cyanide produced by the process must be destroyed rather than recovered in the vent scrubber. The permittee is required by section VI of this permit to submit an application for a permit to install for purposes of establishing emission limits and or operating restrictions for this alternative operating scenario.

2.i. The Acrylonitrile flare also controls emissions from emission units P048, P052, P074, T034, and T084. The operational restrictions, monitoring, record keeping and reporting, and testing requirements related to the flare are included with this emissions unit (P075).

II Operational Restrictions

1. Process vent operational restrictions:

The closed vent system shall be operated at all times when emissions may be vented to it.

2. Vent scrubber operational restrictions:

Within 11 months after the effective date of the permit, the permittee shall establish, and submit to OEPA for approval, a range of values for scrubber water flow rate (in gallons per minute) that indicate compliance with the mass reduction required to meet the emissions limits contained in

the Table in Section III.A.I.1. The proposed range of values (which may be expressed as a maximum, minimum, or both) shall be based on testing and/or other appropriate data. The permittee may from time to time propose a revised range based on further testing or other appropriate data or information.

The scrubber water flow rate shall be continuously maintained within the range of values, in gallons per minute, established as indicated in the paragraph above, at all times while the emissions unit is in operation.

The Ohio EPA shall approve the operational restriction proposed by the permittee. The permittee may petition to the OEPA for reestablishment, based on emissions testing or the collection of data, of the scrubber flow rate minimum value provided the permittee can demonstrate to the OEPA's satisfaction that the new minimum values will reasonably ensure compliance and the basis upon which the minimum value was previously established is no longer applicable.

The operation of the control equipment outside the value established above may or may not indicate a mass emission and/or visible emission violation. If required by the Ohio EPA, Northwest District Office, compliance with the mass emission limitations and visible emission limitations shall be determined by performing concurrent mass emission tests and visible emissions readings, using USEPA-approved methods and procedures. The results of any required emission tests and visible emission readings shall be used in determining whether or not the operation of the control equipment outside the minimum value that will be established above is indicative of a possible violation of the mass emission limitation and/or visible emission limitations. In addition, the permittee may provide other relevant credible evidence to the Ohio EPA to demonstrate that a deviation of an operational restriction is not a violation of the applicable mass emission and/or visible emission limitations.

3. Flare operational restrictions [40 CFR 63.11]:

   a. The flare shall be designed for and operated with no visible emissions as determined by "Method 22, 40 CFR, Part 60, Appendix A," except for periods not to exceed a total of five minutes during any 120 consecutive minutes.

   b. The flare shall be operated with either an electric arc ignition system or a pilot flame. If a pilot flame is employed, the flame shall be present at all times. If an electric arc ignition system is employed, the arcing shall pulse continually.

   c. The flare shall be steam-assisted.

   d. The net heating value of the gas being combusted in the flare, as determined by the method specified in 40 CFR 63.11(b)(6)(ii)], shall be 300 Btu/scf or greater.

d. The flare shall be designed and operated with an actual exit velocity, as determined by the method specified in [40 CFR 63.11(b)(7)(i)] except as provided in 40 CFR 63.11(b)(7)(ii) and 40 CFR 63.11(b)(7)(iii), shall be less than 60 feet/sec.

e. The permittee shall ensure the flare is operated and maintained in conformance with its design.

4. Thermal oxidizer operational restrictions:

The permittee shall establish a range of operating parameters that meet the requirements of 40 CFR, Part 63, Subpart G as determined from performance testing.

III Monitoring and/or Recordkeeping

1. The permittee shall keep up-to-date records of the following information:

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

b. all visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during any compliance determinations.

2. Monitoring requirements for this emissions unit:

a. Vent scrubber monitoring requirements:

i. The vent scrubber shall be equipped and operated with a scrubbing liquid flow rate monitoring device and continuous recorder. The monitoring device shall be maintained in accordance with manufacturing specifications.

b. Flare monitoring requirements:

i. The flare shall be monitored with a thermocouple or any other equivalent device to detect the presence of a pilot flame. If an electric arc ignition system is employed, the arcing shall be monitored to detect any failure [40 CFR 63.114 (a) (2)].

ii. 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 stacks serving this emissions unit including the flare. 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 location and 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.

If, during any weekly check, the permittee observes visible emissions from the flare, the permittee shall monitor the visible emissions for a minimum period of 10 minutes in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 and record the results in an operations log.

c. Thermal oxidizer monitoring requirements:

i. The permittee shall operate and monitor the thermal oxidizer control devices in accordance with the requirements of 40 CFR Part 63, Subpart G. The permittee shall operate continuous temperature monitoring and recording devices for the thermal oxidizer [40 CFR 63.114(a)(1)].

3. Record keeping requirements for this emissions unit:

a. The permittee shall comply with the record keeping requirements contained in 40 CFR, Part 60, Subpart NNN, and 40 CFR, Part 63, Subpart G.

b. The following information shall be recorded for the vent scrubber, flare, and thermal oxidizer and kept in a readily accessible location:

i. detailed schematics, design specifications, and piping and instrumentation diagram;

ii. the dates and descriptions of any changes in the design specification;

iii. a description of the parameter or parameters monitored to ensure that the vent scrubber, flare and thermal oxidizer are operated and maintained in conformance with their design, and an explanation of the reason for selecting such parameter or parameters;

iv. periods when the closed vent system and the vent scrubber, flare and thermal oxidizer are not operated as designed; and

v. dates of start-ups and shutdowns of the closed vent system, vent scrubber, flare and thermal oxidizer.

d. The permittee shall collect and record a daily log or record of operating time for the closed vent system, vent scrubber, flare and thermal oxidizer, and monitoring equipment. The information shall be maintained in the company's files for a period of five years.

e. Vent scrubber record keeping requirements:

The permittee shall maintain records of when the scrubber liquid flow rate was outside the ranges established pursuant to Section A.II.2.

f. Flare record keeping requirements:

The permittee shall comply with the flare record keeping requirements contained in 40 CFR Part 63, Subpart A and 40 CFR, Part 63, Subpart G.

g. Thermal oxidizer record keeping requirements:

The permittee shall comply with the record keeping requirements contained in 40 CFR, Part 63, Subpart G.

The permittee shall maintain continuous records of the thermal oxidizer firebox temperature in accordance with 40 CFR, Part 63, Subpart G.

IV Reporting Requirements

1. The permittee shall submit semiannual reports to the Ohio EPA, NWDO to satisfy the semiannual reporting requirements of 40 CFR 63.182(D)(1).

2. The permittee shall comply with the reporting requirements contained in 40 CFR, Part 60, Subpart NNN, and 40 CFR, Part 63, Subpart G.

3. The permittee shall submit quarterly reports that include the following information:

   a. all exceedances of all monitored parameters;

   b. a log of the operating time for the closed vent system, vent scrubber, flare, and thermal oxidizer;

   c. all periods of time when the vent scrubber, flare, and/or thermal oxidizer was not operational; and

   d. all periods of time when the required monitoring data was not collected.

The permittee shall submit the quarterly reports by January 31, April 30, July 31, and October 31 of each year and shall cover the records for the previous calendar quarters.

4. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stacks, including the flare, serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Ohio EPA Southeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

5. The permittee shall submit quarterly reports which include all visible emission readings conducted pursuant to the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 as a result of the presence of visible emissions from the flare. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter.

V Testing Requirements

1. Compliance with the emission limitations for the flare in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation: 2.0 lbs PE/hr

      Applicable Compliance Method:

      The permittee shall demonstrate compliance with the limitation above based upon the results of off-gas emissions testing for the vent scrubber (for organics) and applying published emissions factors for flares. Emissions testing for the vent scrubber shall be conducted in accordance with Test Methods 1 - 4, 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A or approved alternates.

   b. Emission Limitation: 8.8 TPY PE

      Applicable Compliance Method:

      The annual limitation was established by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual limitation.

   c. Emission Limitation: 6.0 lbs CO/hr

      Applicable Compliance Method:

      The permittee shall demonstrate compliance with the limitation above based upon the results of off-gas emissions testing for the vent scrubber (for organics) and applying published emissions factors for flares. Emissions testing for the vent scrubber shall be conducted in accordance with Test Methods 1 - 4, 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A or approved alternates.

d. Emission Limitation: 26.3 TPY CO

Applicable Compliance Method:

The annual limitation was established by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual limitation.

e. Emission Limitation: 2.0 lbs NOx/hr

Applicable Compliance Method:

The permittee shall demonstrate compliance with the limitation above based upon the results of off-gas emissions testing for the vent scrubber (for organics) and applying published emissions factors for flares based on the Btu content of the gases combusted. Emissions testing for the vent scrubber shall be conducted in accordance with Test Methods 1 - 4, 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A or approved alternates.

f. Emission Limitation: 8.8 TPY NOx

Applicable Compliance Method:

The annual limitation was established by multiplying the hourly limitation by 8760, and then, dividing by 2000. Therefore, provided compliance is shown with the hourly limitation compliance shall also be shown with the annual limitation.

g. Emission Limitation: 2.0 lbs SO2/hr

Applicable Compliance Method:

The permittee shall demonstrate compliance with the limitation above based upon documentation of the sulfur contents of the raw material feeds to the process, i.e., natural gas and propylene.

h. Emission Limitation: 8.9 TPY SO2

Applicable Compliance Method:

The annual limitation was established by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual limitation.

i. Emission Limitation: 5.0 lbs NMHC/hr (as carbon)

Applicable Compliance Method:

The permittee shall demonstrate compliance with the limitation above based upon the results of off-gas emissions testing for the vent scrubber (for organics) and applying published emissions factors for flares. Emissions testing for the vent scrubber shall be conducted in accordance with Test Methods 1 - 4, 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A or approved alternates.

j. Emission Limitation: 21.9 TPY NMHC (as carbon)

Applicable Compliance Method:

The annual limitation was established by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual limitation.

2. Compliance with the visible emission limitation for the thermal oxidizer shall be determined in accordance with the following methods:

Emission Limitation: Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule

Applicable compliance method:

If required, permittee shall demonstrate compliance with this emission limitation in accordance with OAC rule 3745-17-03(B)(1)

3. The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements for the vent scrubber:

a. The emission testing for the vent scrubber shall be conducted within 12 months after the effective date of this permit and within 6 months prior to permit expiration.

b. The emission testing shall be conducted for the vent scrubber to demonstrate compliance with the mass emission rates for PE, CO, NOx, and NMHC (as carbon) for the flare.

c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for control efficiency and vent scrubber organics - Methods 18, 25 or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

d. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA Northwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northwest District Office. 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 Ohio EPA Northwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northwest District Office 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 Ohio EPA Northwest District Office 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 Ohio EPA Northwest District Office.

VI Miscellaneous Requirements

In 1996, the permittee applied for, and in 1997 obtained, a permit to install (PTI No. 03-09227), authorizing the permittee to “debottleneck” this emissions unit. That PTI established emission limits for the normal mode of operation in which all vent gases are routed first to a vent scrubber for recovery of hydrogen cyanide and other compounds and then to the flare for destruction of the remaining hydrocarbons in the gas stream. However, while both the permit application and the permit recognized that there was an alternative operating scenario in which vent gases are routed directly to the thermal oxidizer for destruction rather than recovery of excess hydrogen cyanide, the permit did not establish emission limits for this alternative operating scenario.

To rectify this omission, the permittee shall:

1. Submit to Ohio EPA, within 180 days of the effective date of this permit, an application to modify PTI No. 03-09227 so as to incorporate those operational restrictions and/or emission limits (together with appropriate compliance determination methods and monitoring, record keeping, and reporting requirements) that should have been included in the original permit to install for any operating scenario(s) in which vent gases from this emissions unit are routed directly to either the thermal oxidizer or the flare.

2. This plan shall include:

   a. During the 180-day period, the permittee shall submit an intent to test notification for

testing of the thermal oxidizer. This emission testing shall serve as the basis for development of appropriate emission factors to be used in estimating emissions resulting from the alternative operating scenario(s) and/or in determining compliance with any emission limits that may ultimately be imposed with respect to the alternative operating scenario(s) for the thermal oxidizer.

The emission testing shall also include a compliance test for the thermal oxidizer to demonstrate a 98 weight-percent reduction in TOC (less methane and ethane) emission or to a TOC (less methane and ethane) concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen.

3. The permit modification application required by this section shall include proposed operating conditions and/or emission limitations (together with appropriate compliance determination methods and monitoring, record keeping, and reporting requirements) for particulate emissions, NOx, CO, SO2 and NMHC. In addition, the application shall demonstrate that the proposed operational restrictions and/or emission limits would have been sufficient, if they had been incorporated into the original debottlenecking permit, to assure either:

   a. that there would have been no significant net emission increase in emissions of that pollutant relative to baseline at the time of the original debottlenecking permit; or

   b. that the then-applicable requirements of the PSD regulations would have been met.

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: BDO Plant #1 Cooling Tower System (P076)
Activity Description: Non-contact cooling tower system (Butanediol manufacturing plant no. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
butanediol (BDO) plant #1 non-contact cooling tower system	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05.
	40 CFR, Part 63, Subpart F	See A.I.2.a.
	OAC rule 3745-31-05 (PTI #03-11250)	0.184 lb PE/hr, 0.81 TPY PE 0.21 lb of volatile organic compounds (VOC)/hr, 0.92 TPY VOC The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and 40 CFR, Part 63, Subpart F.

2. Additional Terms and Conditions

2.a This emissions unit is exempt from the requirements of this rule pursuant to 40 CFR 63.104(a)(5).

II Operational Restrictions

1. The permittee shall maintain a rolling, 4-week average total dissolved solids content of 3500 mg/l or less in the cooling water.

III Monitoring and/or Recordkeeping

1. The permittee shall perform the following:

   a. The permittee shall test and record the total dissolved solids content (mg/l) of the cooling water on a weekly basis using a conductivity meter or other USEPA-approved test procedures.

   b. Each week, the permittee shall calculate and record the average total dissolved solids content value based on the four most current readings from A.III.1.a.

IV Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the total dissolved solids restriction of 3500 mg/l. These quarterly deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

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:

a. Emission Limitation: Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

   Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with OAC rule 3745-17-03(B)(1).

b. Emission Limitation: 0.184 lb PE/hr

   Applicable Compliance Method: Compliance with the hourly allowable PE limitation shall be demonstrated by multiplying the maximum total dissolved solids content of the cooling water by the maximum water flow rate (gallons/hr) and by a maximum drift loss factor of 0.0005%, and then by a conversion factor of (3.785 liter/gallon x lb/453,592 mg).

The permittee shall maintain documentation from the manufacturer of the cooling tower drift loss eliminators demonstrating that the cooling tower design specifications meet the maximum drift loss of 0.0005%.

In the event of equipment modification to the drift loss eliminators, specifications demonstrating compliance with a maximum drift loss of 0.0005% shall be submitted to the OEPA and maintained by the permittee.

c. Emission Limitation: 0.81 TPY PE

Applicable Compliance Method: The annual emission limitation was developed by multiplying the hourly emission limitation by 8760 hrs/yr, and then dividing by 2000 lbs/ton. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual emission limitation shall be ensured.

d. Emission Limitation: 0.21 lb VOC/hr

Applicable Compliance Method: Compliance with the hourly allowable VOC emission limitation may be determined by multiplying an emission factor of 0.175 lb VOC/1,000,000 gallons by the maximum cooling water throughput capacity of 1,200,000 gallons per hour.

e. Emission Limitation: 0.92 TPY VOC

Applicable Compliance Method: The annual emission limitation was developed by multiplying the hourly emission limitation by 8760 hrs/yr, and then dividing by 2000 lbs/ton. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual emission limitation shall be ensured.

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Ammonia Recovery System (P077)
Activity Description: The ammonia recovery system will remove ammonia from an aqueous co-product stream (supplied by a neighboring chemical plant) in order to utilize the recovered ammonia as part of the feed to the existing Acrylonitrile plant. This system is integrated with the steam generation and distribution system, and will utilize the cooling water system, existing wastewater treatment systems, and raw material supply systems. Primary process equipment for the ammonia recovery system are the ammonia recovery column (C-102), feed drum (V-108) and ancillary equipment. Refer to Section 11 of this EU for a more detailed process description.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
ammonia recovery system, equipped with non-assisted flare	OAC rule 3745-21-07(G)	See A.I.2.a.
	OAC rule 3745-31-05 (PTI #03-13232)	Flare emissions: 0.12 lb of ammonia (NH3)/hr, 0.52 TPY NH3 0.001 lb of organic compounds (OC)/hr, 0.006 TPY VOC The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(G) .

2. Additional Terms and Conditions

2.a The permittee does not currently employ and has never before employed any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01(C)(5). Therefore, this emissions unit is exempt from OAC rule 3745-21-07(G)(2). A

process change that would result in using photochemically reactive materials would constitute a modification as defined in OAC rule 3745-31-01, and would require the permittee to obtain a PTI modification.

2.b Process vent streams from the ammonia recovery system shall be combusted with a flare.

II Operational Restrictions

1. A pilot flame shall be maintained at all times in the flare's pilot light burner.

2. The net heating value of the gas being controlled in the flare, as determined by the method specified in paragraph (P)(2) of Rule 3745-21-10 of the Administrative Code, shall be 300 Btu/scf or greater.

3. The flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of Rule 3745-21-10 of the Administrative Code, less than 60 feet per second.

4. The flare shall be designed for and operated with no visible emissions as determined by "Method 22, 40 CFR, Part 60, Appendix A," except for periods not to exceed a total of five minutes during any 120 consecutive minutes.

III Monitoring and/or Recordkeeping

1. The permittee shall properly install, operate, and maintain a device to continuously monitor the pilot flame when the emissions unit is in operation. The monitoring device and any recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

   The permittee shall record the following information each day:

   a. All periods during which there was no pilot flame.

   b. The operating times for the flare, monitoring equipment, and the associated emissions unit.

2. The permittee shall inspect all fittings (valves, flanges, etc.) associated with the ammonia recovery system on a monthly basis. Any component found to be leaking or in need of repair shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected. For the purposes of this monitoring program, a leak is detected by visual, audible or olfactory methods.

3. The permittee shall maintain records of all repairs made to process equipment components.

4. 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 stacks serving this

emissions unit including the flare. 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 location and 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.

If, during any weekly check, the permittee observes visible emissions from the flare, the permittee shall monitor the visible emissions for a minimum period of 10 minutes in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 and record the results in an operations log.

IV Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods during which the pilot flame was not functioning properly.

2. The permittee shall submit quarterly reports which include all visible emission readings conducted pursuant to the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 as a result of the presence of visible emissions from the flare. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter.

3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stacks, including the flare, serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Ohio EPA Southeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

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:

   a. Emissions Limitation: 0.12 lb NH3/hr

      Applicable Compliance Method: The emission limitation was developed by applying a 98% flare destruction efficiency to a maximum uncontrolled emission rate of 5.9 lbs/hr

NH3. Compliance shall be demonstrated through the monitoring and record keeping requirements in A.III. If required, the permittee shall demonstrate compliance by testing in accordance with the methods specified in paragraphs (P)(2) and (P)(3) of OAC Rule 3745-21-10.

b. Emissions Limitation: 0.52 TPY NH3

Applicable Compliance Method: The TPY limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

c. Emissions Limitation: 0.001 lb OC/hr

Applicable Compliance Method: Emission limitations were developed by applying a 98% flare destruction efficiency to a maximum uncontrolled emission rate of 0.065 lb/hr OC. Compliance shall be demonstrated through the monitoring and record keeping requirements in A.III. If required, the permittee shall demonstrate compliance by testing in accordance with the methods specified in paragraphs (P)(2) and (P)(3) of OAC Rule 3745-21-10.

d. Emissions Limitation: 0.006 TPY OC

Applicable Compliance Method: The TPY limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

2. The permittee shall conduct, or have conducted, testing for this emissions unit in accordance with the following requirements:

a. The testing shall be conducted approximately12 months after permit issuance.

b. The testing shall be conducted to determine the net heating value of the gas being combusted in the flare and the actual exit velocity of the flare in accordance with the operational restrictions and equations specified in sections A.II.1. for net heating value, and section A.II.2 for actual exit velocity.

c. The following test method(s) shall be employed to determine the actual exit velocity of the flare:

Method 2, 2A, 2C or 2D of 40 CFR, Part 60, Appendix A. 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 the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northwest District Office. 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 Ohio EPA Northwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northwest District Office 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 Ohio EPA Northwest District Office 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 Ohio EPA Northwest District Office.

VI Miscellaneous Requirements

1. All start-up and shutdown activities for emissions unit P077 shall be reported in accordance with the provisions of OAC rule 3745-15-06.

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
ammonia recovery system, equipped with non-assisted flare	none	none

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

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install**.**

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Barex Dust Collection system (P078)
Activity Description: Dust collection system for the barex plastic resin extrusion and packaging process. Refer to Barex process description and flow diagram.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
dust collection system for plastic resin (barex) extrusion and packaging process, equipped with two baghouses	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity as a six-minute average, except as provided by rule
	OAC rule 3745-17-11(B)	See A.I.2.a.
	OAC rule 3745-31-05(A)(3) (PTI #03-13520)	0.31 lb PE/hr, 1.36 TPY PE See A.I.2.b. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-11(B).

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 PE limitations are for 2 emission points, combined, the north Torit baghouse and the south torit baghouse. The emission limit of 0.31 lb PE/hr is the summation of the emissions from both points and was established in accordance with the following:

0.31 lb PE/hr = (NBHS) + (SBHS)

NBHS = PE emissions from north torit baghouse
= (0.01 gr/scf)(2370 dscf/min)(1 lb/7000 gr)(60 min/hour)
= 0.203 lb PE/hr

SBHS = PE emissions from south torit baghouse
= (0.01 gr/scf)(1240 dscf/min)(1 lb/7000 gr)(60 min/hour)
= 0.106 lb PE/hr

0.31 lb PE/hr = (0.203 + 0.106) lb PE/hr

II Operational Restrictions

None

III Monitoring and/or Recordkeeping

1. 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 baghouses 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 emission incident; and

   e. any corrective action taken to eliminate the visible emissions.

IV Reporting Requirements

1. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the baghouses serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V Testing Requirements

1. Compliance with the requirements of section A.***I.***1. of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation: Visible PE shall not exceed 20% opacity as a six-minute average, except as provided by rule

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible emissions limitation above pursuant to OAC rule 3745-17-03(B)(1).

b. Emission Limitation: 0.31 lb PE/hr

Applicable Compliance Method:

.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A

c. Emission Limitation: 1.36 TPY PE

Applicable Compliance Method: The annual emission limitation was developed by multiplying the hourly emission limitation by 8760, and then dividing by 2000. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual limitation.

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Cooling Tower #1 (P080)
Activity Description: Cooling Tower #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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
cooling tower #1 (18,000 gpm)	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)	98.8 lbs PE/hr
	40 CFR, Part 63, Subpart F	See A.I.2.a and A.I.2.b.

2. Additional Terms and Conditions

2.a The permittee shall comply with all the applicable standards in 40 CFR, Part 63, Subpart F for this emissions unit. These requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

2.b The applicable portions of Subpart F that apply to these cooling towers are listed in 40 CFR 63.104, Heat exchange system requirements.

II Operational Restrictions

1. The permittee shall monitor all heat exchanger systems used to cool process equipment by one of the methods specified in 63.104(b) or (c) unless one or more of the exemptions contained in 63.104(a)(1) through (6) are met.

2. If a leak is detected, the permittee shall comply with the requirements of 40 CFR 63.104(d), including the repair of any heat exchanger leak as soon as practicable but not later than 45 calendar days after the permittee receives indication that a leak is present. [40 CFR 63.104(d)(1)]

Once a leak has been repaired, the permittee shall confirm that the heat exchange system has been repaired within 7 calendar days of the repair or startup, whichever is later. [40 CFR 63.104(d)(2)].

Delay of repair of the heat exchange systems for which leaks have been detected is allowed provided the conditions of 40 CFR 63.104(e) are met. [40 CFR 63.104(3)].

III Monitoring and/or Recordkeeping

1. The permittee shall test and record the total dissolved solids concentration (mg/l) of the cooling water on a weekly basis using a conductivity meter or other USEPA-approved test procedures.

2. Each week, the permittee shall calculate and record the PE rate, in pounds/hr, using the methodology outlined in section A.V.1.b of this permit.

IV Reporting Requirements

1. The permittee shall submit quarterly deviation reports, in accordance with the General Terms and Conditions of this permit, that identify all exceedances of the hourly PE limitation of 98.8 pounds.

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:

a. Emission Limitation: Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by OAC rule 3745-17-07(A).

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with OAC rule 3745-17-03(B)(1).

b. Emission Limitation: 98.8 lbs PE/hr

Applicable Compliance Method: Compliance with the lbs PE/hr limitation may be determined by multiplying the maximum water flow rate (18,000 gallons/min * 60 min/hr) by the maximum dissolved solids level based on the record keeping established in section A.III.1 and by the maximum drift loss factor (0.0002*), and then by 3.785 l/gal x lb/453,592 mg.

*based on AP-42, Table 13.4-1 drift loss of 0.02% of circulating liquid entrained with exit air

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Cooling Tower #2 (P081)
Activity Description: Cooling Tower #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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Cooling tower #2 (56,000 gpm)	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)	117.2 lbs PE/hr
	40 CFR, Part 63, Subpart F	See A.I.2.a and A.I.2.b.

2. Additional Terms and Conditions

2.a The permittee shall comply with all the applicable standards in 40 CFR, Part 63, Subpart F for this emissions unit. These requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

2.b The applicable portions of Subpart F that apply to these cooling towers are listed in 40 CFR 63.104, Heat exchange system requirements.

II Operational Restrictions

1. The permittee shall monitor all heat exchanger systems used to cool process equipment by one of the methods specified in 63.104(b) or (c) unless one or more of the exemptions contained in 63.104(a)(1) through (6) are met.

2. If a leak is detected, the permittee shall comply with the requirements of 40 CFR 63.104(d), including the repair of any heat exchanger leak as soon as practicable but not later than 45 calendar days after the permittee receives indication that a leak is present. [40 CFR 63.104(d)(1)]

Once a leak has been repaired, the permittee shall confirm that the heat exchange system has been repaired within 7 calendar days of the repair or startup, whichever is later. [40 CFR 63.104(d)(2).

Delay of repair of the heat exchange systems for which leaks have been detected is allowed provided the conditions of 40 CFR 63.104(e) are met. [40 CFR 63.104(3)]

III Monitoring and/or Recordkeeping

1. The permittee shall test and record the total dissolved solids concentration (mg/l) of the cooling water on a weekly basis using a conductivity meter or other USEPA-approved test procedures.

2. Each week, the permittee shall calculate and record the PE rate, in pounds/hr, using the methodology outlined in section A.V.1.b of this permit.

IV Reporting Requirements

1. The permittee shall submit quarterly deviation reports, in accordance with the General Terms and Conditions of this permit, that identify all exceedances of the hourly PE limitation of 117.2 pounds.

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:

a. Emission Limitation: Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by OAC rule 3745-17-07(A).

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with OAC rule 3745-17-03(B)(1).

b. Emission Limitation: 117.2 lbs PE/hr

Applicable Compliance Method: Compliance with the lbs PE/hr limitation may be determined by multiplying the maximum water flow rate (56,000 gallons/min * 60 min/hr) by the maximum dissolved solids level based on the record keeping established in section A.III.1 and by the maximum drift loss factor (0.0002*), and then by 3.785 l/gal x lb/453,592 mg.

*based on AP-42, Table 13.4-1 drift loss of 0.02% of circulating liquid entrained with exit air

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Butanediol Mfg Plant No. 1: Various (P801)
Activity Description: Maleic anhydride reactor and recovery section, Maleic acid hydrogenation section, batanediol recovery and purification section, butane feedstock supply section

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
butanediol (BDO) manufacturing plant #1 (maleic anhydride reactor and recovery section, maleic acid solution surge tank, maleic acid hydrogenation section, BDO recovery and purification section and butane feedstock supply section), with flare and scrubber off-gas boiler (i.e., the SOGB for N006)	OAC rule 3745-21-07(G)	See A.I.2.a.
	OAC rule 3745-21-09(DD)	See A.I.2.b and A.I.2.j.
	OAC rule 3745-21-09(EE)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05.
	40 CFR, Part 60, Subpart VV	See A.I.2.c.
	40 CFR, Part 60, Subpart III	See A.I.2.d.
	40 CFR, Part 60, Subpart NNN	See A.I.2.e.
	40 CFR, Part 60, Subpart RRR	See A.I.2.f.
	40 CFR, Part 63, Subpart F	See A.I.2.b and A.I.2.g.
	40 CFR Part 63 Subpart A	See A.I.2.b.
	40 CFR, Part 63, Subpart G	See A.I.2.b.
	40 CFR, Part 63, Subpart H	See A.I.2.b.
	OAC rule 3745-31-05 (PTI #03-11250)	Emissions from this process vented to the flare:

0.04 lb of particulate emissions (PE)/hr, 0.17 TPY PE

7.5 lbs of volatile organic compounds (VOC)/hr, 32.85 TPY VOC

4.8 lbs of carbon monoxide (CO)/hr, 21.02 TPY CO

0.88 lb of nitrogen oxides (NOx)/hr, 3.86 TPY NOx

0.47 lb of sulfur dioxides (SO2)/hr, 2.06 TPY SO2

no visible emissions from the flare (See A.II.2.a.i.)

Fugitive Process Emissions:

5.37 TPY VOC

See A.I.2.h.

The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-07(G) and 3745-21-09(DD) and 40 CFR Part 60 Subpart A, 40 CFR, Part 60, Subpart VV, 40 CFR, Part 60, Subpart III, 40 CFR, Part 60, Subpart NNN, 40 CFR, Part 60, Subpart RRR, 40 CFR Part 63 Subpart A, 40 CFR, Part 63, Subpart F, 40 CFR, Part 63, Subpart G and 40 CFR, Part 63, Subpart H.

[The emissions from this process that are vented to the scrubber off-gas boiler (SOGB) are accounted for in the emissions allowables for emissions unit N006.]

2. Additional Terms and Conditions

2.a The permittee does not currently employ and has never before employed any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5) in this emissions unit. Therefore, this emissions unit is exempt from OAC rule 3745-21-07(G)(2). A process change that would result in using photochemically reactive materials would constitute a modification as defined in OAC rule 3745-31-01, and would require the permittee to obtain a PTI modification.

2.b The permittee shall comply with all applicable standards in 40 CFR Part 63 Subpart A, 40 CFR, Part 63, Subpart F, 40 CFR, Part 63, Subpart G and 40 CFR, Part 63, Subpart H for this emissions unit. Requirements are listed in Part II - Specific Facility Terms and Conditions of this permit.

2.c 40 CFR, Part 60, Subpart VV regulations overlap with those of 40 CFR, Part 63, Subpart H. 40 CFR 63.160(b) and (c) address this overlap and state that equipment subject to 40 CFR, Part 60, Subpart VV is required to comply only with the provisions of 40 CFR, Part 63, Subpart H.

2.d 40 CFR, Part 60, Subpart III regulations overlap with those of 40 CFR, Part 63, Subpart G. 40 CFR 63.110(d) addresses this overlap and states that equipment subject to 40 CFR, Part 60, Subpart III is required to comply only with the provisions of 40 CFR, Part 63, Subpart G.

2.e 40 CFR, Part 60, Subpart NNN regulations overlap with those of 40 CFR, Part 63, Subpart G. 40 CFR 63.110(d) addresses this overlap and states that equipment subject to 40 CFR, Part 60, Subpart NNN is required to comply only with the provisions of 40 CFR, Part 63, Subpart G.

2.f 40 CFR, Part 60, Subpart RRR regulations overlap with those of 40 CFR, Part 63, Subpart G. 40 CFR 63.110(d) addresses this overlap and states that equipment subject to 40 CFR, Part 60, Subpart RRR is required to comply only with the provisions of 40 CFR, Part 63, Subpart G.

2.g Pursuant to 40 CFR 63.113(h), the permittee is not required to make a group determination as described in 40 CFR 63.115 because it complies with 40 CFR 63.113(a)(1) or (a)(2).

2.h Emissions from this emissions unit shall be vented to a closed process vent. The closed process vent system shall meet the following control requirements:

i. maleic acid scrubber vent emissions shall be reduced by 99% utilizing a thermal oxidizer; and

ii. all process vent emissions not routed to a thermal oxidizer shall be combusted in a flare.

2.i This emissions unit is vented to a thermal oxidizer that also controls the emissions from emissions unit N006. All operational restrictions, monitoring, record keeping, reporting and testing requirements for the thermal oxidizer are established in the terms and conditions for emissions unit N006. Therefore, no additional monitoring, record keeping, reporting and testing requirements are necessary for this emissions unit.

2.j 40 CFR, Part 60, Subpart VV regulations overlap with those of 40 CFR, Part 63, Subpart H. 40 CFR 63.160(b) and (c) address this overlap and state that equipment subject to 40 CFR, Part 60, Subpart VV is required to comply only with the provisions of 40 CFR, Part 63, Subpart H.

The requirements of the applicable standards in OAC rule 3745-21-09(DD) are equivalent to or less stringent than the alternative leak detection and repair (LDAR) monitoring plan submitted by the permittee, pursuant to 40 CFR Part 63, Subpart H.

The permittee shall include the appropriate process equipment and regulated components for emissions unit P801 in the current site fugitive leak detection and repair (LDAR) program. The LDAR program shall comply with the appropriate provisions (including operational restrictions, monitoring and recordkeeping, reporting, and testing)) 40 CFR 63 Subpart H (National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks.)

II Operational Restrictions

1. The closed vent system shall be operated at all times when emissions may be vented to it.

2. The permittee shall comply with the following operational requirements of 40 CFR 63 Subparts A, F, G and H:

   a. Flare operational restrictions [40CFR63.11(a)(4)]:

      i. The flare shall be designed for and operated with no visible emissions as determined by "Method 22, 40 CFR, Part 60, Appendix A," except for periods not to exceed a total of five minutes during any 120 consecutive minutes.

      ii. The flare shall be operated with either an electric arc ignition system or a pilot flame. If a pilot flame is employed, the flame shall be present at all times. If an electric arc ignition system is employed, the arcing shall pulse continually.

      iii. The flare shall be steam-assisted.

      iv. The net heating value of the gas being controlled in the flare shall meet the requirements of 40 CFR 63.11, as determined by the specified analytical methods.

      v. The flare shall be designed and operated to meet the requirements for actual exit velocity, as determined by the method specified in 40CFR 63.11.

vi. The permittee shall ensure the flare is operated and maintained in conformance with its design.

vii. The flare shall be operated at all times when emissions may be vented to it.

3. At all times including periods of startup, shutdown, and malfunction as defined by a plan developed in accordance with 63.103(c)(2), emissions unit P801 shall be operated in accordance with good air pollution control practices.

4. The permittee shall comply with the heat exchanger system requirements by one of the methods specified in 63.104(b) or (c) unless one or more of the exemptions contained in 63.104(a)(1) through (6) are met.

III Monitoring and/or Recordkeeping

1. The permittee shall comply with the following monitoring requirements:

a. The permittee shall comply with the monitoring requirements contained in and 40 CFR 63, Subparts A, F, G and H.

b. Flare monitoring requirements:

i. The flare shall be monitored with a thermocouple or any other equivalent device to detect the presence of a pilot flame. If an electric arc ignition system is employed, the arcing shall be monitored to detect any failure. [40 CFR 63.114(a)(2).

ii. 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 stacks serving this emissions unit including the flare. 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 location and 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.

If, during any weekly check, the permittee observes visible emissions from the flare, the permittee shall monitor the visible emissions for a minimum period of 10 minutes in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 and record the results in an operations log.

c. LDAR monitoring requirements:

i. The permittee shall comply with the LDAR program monitoring requirements in accordance with 40 CFR 63.180. Monitoring shall comply with Method 21 of 40 CFR Part 60, appendix A.

2. The permittee shall comply with the following record keeping requirements:

a. The permittee shall comply with the record keeping requirements contained in and 40 CFR, Part 63, Subparts A, F, G and H.

b. The permittee shall maintain records of whether or not the flow indicator specified in 40 CFR Part 63.114(o)(1) was operating and whether or not a diversion was detected [40 CFR 63.118(a)(3)].

c. The following information shall be recorded for the flare and kept in a readily accessible location:

i. detailed schematics, design specifications, and piping and instrumentation diagrams;

ii. the dates and descriptions of any changes in the design specification;

iii. a description of the parameter or parameters monitored to ensure that the flare is operated and maintained in conformance with its design, and an explanation of the reason for selecting such parameter or parameters;

iv. periods when the closed vent system and the flare are not operated as designed; and,

v. dates of start-ups and shutdowns of the closed vent system flare.

d. The permittee shall collect and record a daily log or record of operating time for the closed vent system, flare and monitoring equipment. The information shall be maintained in the company's files for a period of five years.

e. Flare record keeping requirements:

i. The permittee shall maintain records of all hourly periods when the flare pilot flame is absent [40 CFR 60.118(a)(1)].

f. The permittee shall comply with all LDAR program record keeping requirements in accordance with 40 CFR 63.181. All records and information required shall be maintained in a manner that can be readily accessed at the plant site.

g. 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 unless otherwise specified in this permit and/or required by either state or federal applicable regulations. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings, if a strip-chart recorder is employed, for continuous monitoring instrumentation, and copies of all reports required by the permit. Such records may be maintained in computerized form.

IV Reporting Requirements

1. The permittee shall comply with the following reporting requirements:

   a. all reporting shall comply with the requirements contained in and 40 CFR, Part 63, Subparts A, F, G and H; and

   b. the permittee shall submit the following reports for criteria pollutants:

      i. exceedances of all monitored parameters;

      ii. a log of the operating time for the closed vent system and flare;

      iii. all periods of time when the flare was not operational; and

      vi. all periods of time when required monitoring data was not collected.

   c. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stacks, including the flare, serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Ohio EPA Southeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

   d. The permittee shall submit quarterly reports which include all visible emission readings conducted pursuant to the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 as a result of the presence of visible emissions from the flare. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter.

2. The permittee shall comply with the LDAR program reporting requirements in accordance with 40 CFR 63.182.

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:

   a. Emission Limitations:
   Flare emissions - 0.04 lb PE/hr, 7.5 lbs VOC/hr, 4.8 lbs CO/hr, 0.88 lb NOx/hr, 0.47 lb SO2/hr

   Applicable Compliance Method: Compliance shall be demonstrated by ensuring the flare operates at the proper efficiency through the monitoring and record keeping specified in sections A.III.1.a. and A.III.2.e.

   The flare emission limitations were developed by applying a 98% reduction efficiency for control with a flare to calculated engineering estimates of flare vent streams. The flare emission limitations also account for combustion emissions from the natural gas pilot flame. Pilot flame emissions were established by multiplying the emission factors for NOx, PE, CO and SO2 of 0.068 lb NOx/mmBtu, 0.003 lb PE/mmBtu, 0.37 lb CO/mmBtu and 0.0006 lb SO2/mmBtu by the maximum hourly heat input capacity (13mmBtu/hr) of the pilot flame.

   b. Emission Limitations:
   0.17 TPY PE, 32.85 TPY VOC, 21.02 TPY CO, 3.86 TPY NOx, 2.06 TPY SO2

   Applicable Compliance Method: The annual emission limitation for each pollutant above was developed by multiplying the hourly emission limitation for each pollutant by 8760, and then dividing by 2000. Therefore, as long as compliance with the hourly allowable emission limitation for each pollutant is maintained, compliance with the annual emission limitation for the pollutant shall be ensured.

   c. Emission Limitation: No visible flare emissions

   Applicable Compliance Method: The test method employed to demonstrate compliance with the emission limitation shall be Method 22, which is located in 40 CFR Part 60, Appendix A.

   d. Emission Limitation: Fugitive Process Emissions - 5.37 TPY VOC

   Applicable Compliance Method: The process fugitive emission limitation was developed in accordance with the following equation:

   PFE = [summation of NiSi x (hrs/yr) x (ton/2000 lbs)] for i=1 to n

   where:

PFE = process fugitive VOC emissions, tons/yr

Ni = number of pipe fitting components i

Si = SOCMI emission factor for pipe fitting component i(EPA-450/3-010, April 1982) for pipe fitting component i and/or site specific emission factors derived in accordance with USEPA approved protocols.

Compliance shall be demonstrated by calculations of annual emissions using the above equation and the actual annual hours of operation.

2. The permittee, shall comply with the performance testing requirements of and 40 CFR 63 Subparts A, F, G and H.

VI Miscellaneous Requirements

None

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Catalyst Handling System (P905)
Activity Description: Maleic anhydride reactor catalyst handling system; catalyst make-up transfers and catalyst drum handling

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
catalyst handling system, equipped with a cartridge filter	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-07(B)	none (See A.I.2.a.)
	OAC rule 3745-17-08(B)	none (See A.I.2.b.)
	OAC rule 3745-17-11(B)	See A.I.2.c.
	OAC rule 3745-31-05(A) (PTI #03-11250)	Stack emissions: 0.20 lb of particulate emissions (PE)/hr, 0.14 TPY PE Fugitive emissions: 0.05 TPY of fugitive dust Visible emissions of fugitive dust shall not exceed 20%, as a 3-minute average. The requirements of this rule also include compliance with the

requirements of OAC rule 3745-17-07(A).

2. Additional Terms and Conditions

2.a This emissions unit is exempt from the visible emissions limitation specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).

2.b This facility is not located within an "Appendix A" area as identified in OAC rule 3745-17-08 (it is located in Allen County, but outside the city limits of Lima). Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).

2.c The emission limitation based on this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05.

2.d The catalyst transfer operations for this emissions unit shall be controlled with a cartridge filter.

II Operational Restrictions

1. The maximum annual catalyst usage for this emissions unit shall not exceed 1367 tons/year.

2. The permittee shall maintain on site, a Preventive Maintenance Malfunction Abatement Plan (PMMAP) for this emissions unit. The PMMAP shall include a description of steps or procedures reasonably available to be taken order to prevent or minimize the emission of PE during the transfer of catalyst between the maleic anhydride reactor and the catalyst hopper.

III Monitoring and/or Recordkeeping

1. The permittee shall collect and record the amount of catalyst handled per year (from January to December), in tons.

2. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions form the cartridge filter and for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) 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 location and 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.

IV Reporting Requirements

1. The permittee shall submit annual reports that summarize the actual annual catalyst throughput for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the cartridge filter and/or visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V Testing Requirements

1. Compliance with the emission limitations in section A.I.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:

   a. Emission Limitation: Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by OAC rule 3745-17-07(A).

      Applicable Compliance Method: If required, compliance with the visible PE limitation shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

   b. Emission Limitation: 0.20 lb PE/hr (stack emissions)

      Applicable Compliance Method: The hourly allowable PE limitation was established by applying a 99% removal efficiency for control with a cartridge filter to the calculated uncontrolled mass rate of emissions based on engineering estimates of 20 lbs/hr.

      If required, compliance with the limitation shall be determined in accordance with the methods specified in Methods 1-5 of 40 CFR, Part 60, Appendix A.

   c. Emission Limitation: 0.14 TPY PE (stack emissions)

      Applicable Compliance Method: The annual emissions shall be determined by multiplying the total amount of catalyst loaded each year by a site-specific emission factor of 0.20 lb PE/ton of catalyst loaded, and then dividing by 2000 lbs/ton.

   d. Emission Limitation: 0.05 TPY PE (fugitive emissions)

Applicable Compliance Method: The annual emission limitation was developed by multiplying a 0.08 lb PE/ton of catalyst handled emission factor (based on engineering estimates) by a maximum operational restriction of 1367 tons per year.

Compliance shall be demonstrated by multiplying the above emission factor (0.08 lb PE/ton of catalyst handled) by the total annual amount (in tons) of catalyst handled (from the record keeping specified in Section III.1), and then dividing by 2000 lbs/ton.

e. Emission Limitation: Visible emissions of fugitive dust shall not exceed 20%, as a 3-minute average.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance pursuant to the methods specified in Method 9 of 40 CFR, Part. 60, Appendix A.

VI Miscellaneous Requirements

None

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

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