WASHINGTON COUNTY

PUBLIC NOTICE
ISSUANCE OF DRAFT PERMIT TO INSTALL
SUBJECT TO PREVENTION OF SIGNIFICANT DETERIORATION REVIEW
FOR KRATON POLYMERS U.S., LLC

Public Notice is hereby given that the Staff of the Ohio Environmental Protection Agency (EPA) has recommended to the Director that Ohio EPA issue a draft action of a Permit to Install (PTI) to Kraton Polymers U.S., LLC in Washington County, Ohio.

This draft permit proposes to modify an existing unit. The resulting modification triggers Prevention of Significant Deterioration review. The modification request is for increasing the throughput of the G1 process unit, a thermoplastic elastomer line.

This facility is subject to the applicable provisions of the Prevention of Significant Deterioration (PSD) regulations as promulgated by U.S. EPA (40 CFR 52.21).

A public hearing and information session on the draft air permit is scheduled for 6:30 p.m., Thursday, February 12, 2004 at Belpre High School, Library, 612 3rd Street, Belpre, OH 45714 . A presiding officer will be present and may limit oral testimony to ensure that all parties are heard.

A draft action (permit no. 06-07260) was issued on January 8,2004. All interested persons are entitled to attend or be represented and give written or oral comments on the draft permit at the hearing. Written comments must be received by Ohio EPA at the close of the business day on January 30, 2004. Comments received after this date will not be considered to be a part of the official record. Written comments may be submitted at the hearing or sent to: Kyle Nay, Ohio Environmental Protection Agency, Southeast District Office, 2196 Front Street, Logan, Ohio, 43138.

Further information concerning this application, which is available for public inspection, may be secured from Kyle Nay at the Ohio Environmental Protection Agency, Southeast District Office at the above address during normal business hours. Telephone number: (740) 380-5299

STAFF DETERMINATION FOR THE APPLICATION TO CONSTRUCT UNDER THE PREVENTION OF SIGNIFICANT DETERIORATION REGULATIONS FOR KRATON POLYMERS BELPRE, OHIO PTI NUMBER 06-07260

DECEMBER 15, 2003

Ohio Environmental Protection Agency
Division of Air Pollution Control
Lazarus Government Center
122 South Front Street
Columbus, Ohio 43215

The Clean Air Act and regulations promulgated thereunder require that major air pollution sources undergoing construction or modification comply with all applicable Prevention of Significant Deterioration (PSD) provisions and nonattainment area New Source Review requirements. The federal PSD rules govern emission increases in attainment areas for major sources, which are sources with the potential to emit 250 tons per year or more of any pollutant regulated under the Clean Air Act, or 100 tons per year or more if the source is included in one of 28 source categories. In nonattainment areas, the definition of major source is one having at least 100 tons per year potential emissions. A major modification is one resulting in a contemporaneous increase in emissions which exceeds the significance level of one or more pollutants. Any changes in actual emissions within a five-year period are considered to be contemporaneous. In addition, Ohio now has incorporated the PSD and NSR requirements by rule under OAC 3745-31.

Both PSD and nonattainment rules require that certain analyses be performed before a facility can obtain a permit authorizing construction of a new source or major modification to a major source. The principal requirements of the PSD regulations are:

1) Best Available Control Technology (BACT) review - A detailed engineering review must be performed to ensure that BACT is being installed for the pollutants for which the new source is a major source.

2) Ambient Air Quality Review - An analysis must be completed to ensure the continued maintenance of the National Ambient Air Quality Standards (NAAQS) and that any increases in ambient air pollutant concentrations do not exceed the incremental values set pursuant to the Clean Air Act.

For nonattainment areas, the requirements are:

1) Lowest Achievable Emissions Rate (LAER) - New major sources must install controls that represent the lowest emission levels (highest control efficiency) that has been achieved in practice.

2) The emissions from the new major source must be offset by a reduction of existing emissions of the same pollutant by at least the same amount, and a demonstration must be made that the resulting air quality shows a net air quality benefit. This is more completely described in the Emission Offset Interpretative Ruling as found in Appendix S of 40 CFR Part 51.

3) The facility must certify that all major sources owned or operated in the state by the same entity are either in compliance with the existing State Implementation Plan (SIP) or are on an approved schedule resulting in full compliance with the SIP.

For rural ozone nonattainment areas, the requirements are:

1) LAER - New major sources must install controls that represent the lowest emissions levels (highest control efficiency) that has been achieved in practice.

2) The facility must certify that all major sources owned or operated in the state by the same entity are either in compliance with the existing SIP or are on an approved schedule resulting in full compliance with the SIP.

Finally, New Source Performance Standards (NSPS), SIP emission standards and public participation requirements must be followed in all cases.

Site Description

The facility is in Belpre Township, in Belpre, Ohio, which is located in Washington County. This area is classified as attainment for all of the criteria pollutants, particulate matter less than 10 microns, sulfur dioxide, nitrogen oxides, carbon monoxide, volatile organic compounds (ozone) and lead.

Facility Description and Project Introduction

Kraton Polymers (Kraton) is a PSD major facility and proposes to increase the throughput in its existing G1 process unit at 2982 Washington Boulevard in Belpre, Ohio. The G1 process is one of four elastomeric polymer production units. Polymers are produced by reacting various combinations of styrene, butadiene, and/or isoprene in organic carrier solvents. Volatile organic compounds and particulate are emitting by this process. In this project the G1 process unit will be controlled by both a flare and a wet bottom coal fired boiler. With use of these controls the permittee intends to establish federally enforceable limits for VOC and particulate so that the increase in production results in no increase of these two pollutants. The increase throughput does; however, result in an increase in upstream and down stream emissions in nitrogen oxides (NOx) and sulfur dioxide (SO_2). The increases are significant per PSD.

New Source Review (NSR)/PSD Applicability

This process will generate significant levels of criteria pollutant emissions including NO_x and SO_2. For PSD purposes, the Kraton facility is already considered a major facility. A PSD analysis is required for any increase in emissions of a pollutant exceeding the PSD threshold emissions level, or the significance levels. Non-Attainment New Source Review is not applicable, due to attainment status.

Kraton is subject to MACT. The facility is subject to 40 CFR Part 63 Subpart H and I.

Due to the fact that NO_x and SO_2 is not generated by the G1 process unit and it is the only unit to be modified, BACT will not apply to this project. The NO_x and SO_2 increase is due to the actual emissions being greater at the boilers though the existing permit allowable for the boilers will not be exceeded. The increase at the boilers is due to the added stream needed by the G1 process unit, so a debottlenecking instance will occur. Modeling of the NO_x and SO_2 was performed due to significant increases upstream and downstream. See the modeling section for more information on modelling.

Short term emissions from this Project are based upon worst case operating conditions. The annual emissions are based on pounds per hour emissions at average operating conditions at 8760 hours or synthetically limited through a throughput restriction.

TABLE 1

PRELIMINARY POLLUTANT EMISSION RATES
MODIFICATION TO INCREASE EMISSION RATES

AIR POLLUTANT	TOTAL TPY INCREASE	TOTAL TPY ALLOWABLE	PSD THRESHOLD
PM/PM_{10}	-4.19	10.18	25/15
VOC	-15.8	105.05	40

Ambient Air Quality Monitoring Requirements

The area where the Kraton facility is located is attainment for all criteria pollutants. U.S. EPA regulations require the establishment of baseline air quality in the vicinity of the proposed project. This is normally accomplished using representative air quality monitoring data. Air quality monitoring can be utilized to demonstrate that the project will have less than a threshold impact. This threshold impact is identified as the PSD monitoring de minimus level. If the projected impact from the proposed project exceeds this level, ambient data must be collected or existing representative data must be identified.

This project involved the potential increase in annual emissions but did not result in an increase of short term emission rates. Therefore, there would be no projected increase in peak short term impacts:

Pollutant	Averaging Period	Predicted Concentration	Monitoring De minimus Concentration
SO2	24-hour	0.0 ug/m3*	10 ug/m3
NOx	Annual	1.43 ug/m3	14 ug/m3

* Short term impacts were not evaluated.

Project impacts are below the PSD monitoring de minimus levels. Preconstruction monitoring is not required. Representative ambient data have been identified for use as ambient background in the NAAQS analyses for these pollutants.

Modeling

Air quality dispersion modeling was conducted to assess the effect of this modification on the national ambient air quality standards (NAAQS) and PSD increments. ISCST3 (version 02035) was used in the regulatory default, urban mode. Both Five years of meteorological data (Parkersburg/Huntington), 1973-1977) and on-site data collected during 2001 were used. This later modeling, using the onsite data, allowed the use of ISCST for all terrain levels. Building downwash was incorporated into the ISCST3 estimates.

Predicted impacts of SO_2 and NOx were above their corresponding PSD significant impact increments. Additional modeling for compliance with both the NAAQS and PSD increments was required.

Increment

All areas surrounding the Kraton facility are Class II PSD areas. It is the Ohio EPA policy that no individual project consumes more than 50% of the available PSD increment. The NOx, and SO2 projects are constrained to no more than 50% of the PSD increment The following is the summary of the project impact and the impact of increment consuming sources (peak annual, based on the on-site meteorological data model run):

Pollutant	Averaging Period	Project Concentration	PSD Increment Concentration
SO_2	Annual	2.34 ug/m3	15.73 ug/m3
NOx	Annual	1.43 ug/m3	6.99 ug/m3

Ohio EPA restricts the amount of PSD increment that a project can consume to ½ the increment with exceptions as identified in Engineering Guide 69. The Kraton project impacts are well below the Ohio acceptable incremental impacts.

NAAQS

Existing sources at the facility, existing sources above the PSD significant rates within the Kraton significant impact area (SIA) and sources greater than 100 tons/year outside of the SIA are modeled to determine the combined impact of existing significant sources. A background value is added to account for minor sources not explicitly included in the modeling.

Pollutant	Averaging Period	Predicted Concentration	NAAQS Concentration	Concentration With Background
SO_2	Annual	60.59 ug/m3	80 ug/m3	76.31 ug/m3
NOx	Annual	20.17 ug/m3	100 ug/m3	58.90 ug/m3

Secondary Impact Analysis

Kraton has demonstrated that the predicted pollutant concentrations throughout the study area are below the secondary NAAQS thresholds. The secondary NAAQS are designed to limit the amount of pollutants in the ambient air to levels below those which could have an adverse impact on human welfare, soils and vegetation. The modeling analyses demonstrate that no significant impacts on human welfare, soils or vegetation will occur from the proposed modification.

Soil and Vegetation: EPA Air Quality Criteria documents were reviewed for information on pollutants and adverse effects on the type of vegetation and soils in the area. No adverse impact upon soils or vegetation is expected. The modeled concentrations are below the primary and secondary NAAQS limits.

Visibility: The Kraton facility is located nearly 200 miles from the closest class I area. Primary or secondary pollutants associated with this project are not anticipated to affect local or class I visibility.

Toxics Analysis

The Ohio Air Toxics Policy requires evaluation of increases in air toxics above the one ton/year threshold. Emissions rates are modeled to determine whether they exceed the Maximum Acceptable Ground Level Concentration (MAGLC) which is defined under the Air Toxics Policy. There were no new air toxics emitted at a rate greater than the state modeling threshold of one ton per year. Therefore, no toxic modeling analysis was required.

Conclusions

Based upon the review of the permit to install application and the supporting documentation provided by the applicant, the Ohio EPA staff has determined the installation will comply with all applicable State and Federal environmental regulations and that the requirements for BACT are satisfied. Therefore, the Ohio EPA staff recommends that a permit to install be issued to Kraton Polymers for the modification of the G1 process unit described in the PTI #06-07260 permit recommendation.

☒ **Synthetic Minor Determination and/or** ☐ **Netting Determination**
Permit To Install **06-07260**

A. Source Description

Kraton Polymers U.S. LLC located in Belpre, Ohio manufactures thermoplastic elastomers. This PTI will allow a series of physical changes to the G-1 process unit, which is the only unit at the facility currently classified as an existing unit and emits uncontrolled VOC emissions.

B. Facility Emissions and Attainment Status

Kraton emits or has the potential to emit emissions in amounts that presently classify the facility as a major source under PSD, a major source of HAP's and a major source under Title V of the Clean Air Act. Washington County is Attainment for all regulated pollutants.

C. Source Emissions

The G-1 process was installed prior to 1974 and does not have a PTI. For purposes of this permit the average emission for the G-1 unit for the last two years was 126.8 TPY VOC and 15.19 TPY PE. With the de-bottlenecking of G-1 the production capacity will double but the use of controls will limit the facilities' emission to 105.05 TPY VOC and 10.18 TPY PE.

D. Conclusion

This permit is sufficient to provide emission limitation and terms and conditions which are federally enforceable and show a decrease in the allowable emissions from this project.

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

RE: DRAFT PERMIT TO INSTALL
WASHINGTON COUNTY
Application No: 06-07260

CERTIFIED MAIL

Y	TOXIC REVIEW
	PSD
Y	SYNTHETIC MINOR
	CEMS
40 CFR 63, Subpart I	MACT
	NSPS
	NESHAPS
	NETTING
	MAJOR NON-ATTAINMENT
Y	MODELING SUBMITTED
	GASOLINE DISPENSING FACILITY

DATE: 1/8/2004

Kraton Polymers
Erik Sims
2982 Washington Blvd
Belpre, OH 457141842

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed of final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **$1300** will be due. Please do not submit any payment now.

The Ohio EPA is urging 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. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Very truly yours,

Michael W. Ahern

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

CC: USEPA SEDO WV PA

WASHINGTON COUNTY

PUBLIC NOTICE
ISSUANCE OF DRAFT PERMIT TO INSTALL
SUBJECT TO PREVENTION OF SIGNIFICANT DETERIORATION REVIEW
FOR DEGUSSA CORPORATION

Public Notice is hereby given that the Staff of the Ohio Environmental Protection Agency (EPA) has recommended to the Director that Ohio EPA issue a draft action of a Permit to Install (PTI) to Kraton Polymers U.S., LLC in Washington County, Ohio.

This draft permit proposes to modify an existing unit. The resulting modification triggers Prevention of Significant Deterioration review. The modification request is for increasing the throughput of the G1 process unit, a thermoplastic elastomer line.

This facility is subject to the applicable provisions of the Prevention of Significant Deterioration (PSD) regulations as promulgated by U.S. EPA (40 CFR 52.21).

A public hearing and information session on the draft air permit is scheduled for 6:30 p.m., Thursday, February 12, 2004 at Belpre High School, Library, 612 3rd Street, Belpre, OH 45714. A presiding officer will be present and may limit oral testimony to ensure that all parties are heard.

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Further information concerning this application, which is available for public inspection, may be secured from Kyle Nay at the Ohio Environmental Protection Agency, Southeast District Office at the above address during normal business hours. Telephone number: (740) 380-5299

DRAFT PERMIT TO INSTALL 06-07260

Application Number:	06-07260
APS Premise Number:	0684010011
Permit Fee:	**To be entered upon final issuance**
Name of Facility:	Kraton Polymers
Person to Contact:	Erik Sims
Address:	2982 Washington Blvd Belpre, OH 457141842

Location of proposed air contaminant source(s) [emissions unit(s)]:
2982 Washington Blvd
Belpre, Ohio

Description of proposed emissions unit(s):
G1 process unit.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install General Terms and Conditions

1. Monitoring and Related Recordkeeping and Reporting Requirements

a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, 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.

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, 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.

c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:

i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

ii. Quarterly written reports of (i) any deviations from federally enforceable <u>emission limitations</u>, <u>operational restrictions</u>, <u>and control device operating parameter limitations</u>, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written 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. See B.9 below if no deviations occurred during the quarter.

iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

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 are true, accurate, and complete.

2. 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, i.e., upset, 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. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to 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 emission unit(s) that is (are) served by such control system(s).

3. Risk Management Plans

If the permittee is required to 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"), the permittee shall comply with the requirement to register such a plan.

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.

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.

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. 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.

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. The permittee shall pay all applicable Permit To Install fees within 30 days after the issuance of this Permit To Install.

8. 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.

9. Compliance Requirements

a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this 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 ORC section 3704.08.

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.

10. Permit To Operate Application

a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be <u>obtained before</u> the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is

granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

12. 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.

B. State Only Enforceable Permit To Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

a. Reports of any required monitoring and/or recordkeeping of state-only enforceable 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 (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) 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. 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.)

3. 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.

4. Termination of Permit To Install

This permit to install shall terminate within eighteen months of the effective date of the permit to install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

5. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

6. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

7. Applicability

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

8. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit To Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

9. 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 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.

C. Permit To Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	Tons Per Year
PE	10.18
VOC	105.05

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

(Note: The terms and conditions derived directly from 40 CFR Part 63, Subparts H and I are structured as in those applicable standards.)

1. 40 CFR Part 63, Subpart I

Section 63.190: Applicability and designation of source.

(a) This subpart provides applicability provisions, definitions, and other general provisions that are applicable to sources subject to this subpart.

(b)Except as provided in paragraph (b)(7) of this section, the provisions of subparts I and H of this part apply to emissions of the designated organic HAP from the processes specified in paragraphs (b)(1) through (b)(6) of this section that are located at a plant site that is a major source as defined in section 112(a) of the Act. The specified processes are further defined in section 63.191.

(1) Styrene-butadiene rubber production (butadiene and styrene emissions only).

(2) - (7) (These sections of the federal rule do not apply to the permittee.)

(c) The owner or operator of a process listed in paragraph (b) of this section that does not have the designated organic hazardous air pollutants present in the process shall comply only with the requirements of section 63.192(k) of this subpart. To comply with this subpart, such processes shall not be required to comply with the provisions of subpart A of this part.

(d) For the purposes of subparts I and H of this part, the source includes pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, and instrumentation systems that are associated with the processes identified in paragraph (b) of this section and are intended to operate in organic hazardous air pollutant service (as defined in section 63.191 of this subpart) for 300 hours or more during the calendar year. 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 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 paragraph (e) of this section.

(e) The owner or operator of a process subject to this subpart is required to comply with the provisions of subpart H of this part on or before the dates specified in paragraph (e)(1) or (e)(2) of this section, unless the owner or operator eliminates the use or production of all HAP's that cause the process to be subject to this rule no later than 18 months after April 22, 1994.

(1) New sources that commence construction or reconstruction after December 31, 1992 shall comply upon initial start-up or April 22, 1994.

(2) Existing sources shall comply no later than October 24, 1994, except as provided in paragraphs (e)(3) through (e)(6) of this section or unless an extension has been granted by the EPA Regional Office or operating permit authority, as provided in section 63.6(i) of subpart A of this part.

(3) Existing process units shall be in compliance with the requirements of section 63.164 of subpart H no later than May 10, 1995, for any compressor meeting one or more of the criteria in paragraphs (e)(3)(i) through (e)(3)(iv) of this section, if the work can be accomplished without a process unit shutdown, as defined in section 63.161.

(i) The seal system will be replaced;

(ii) A barrier fluid system will be installed;

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

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

(4) Existing process units shall be in compliance with the requirements of section 63.164 of subpart H no later than January 23, 1996, for any compressor meeting the criteria in paragraphs (e)(4)(i) through (e)(4)(iv) of this section.

(i) The compressor meets one or more of the criteria specified in paragraphs (e)(3) (i) through (iv) of this section;

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

(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 section 63.13 of subpart A of this part no later than May 10, 1995. The request shall include the information specified in paragraphs (e)(4)(iv)(A) through (e)(4)(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 process unit, and of the specific equipment for which additional compliance time is required;

(D) The reason compliance cannot reasonably be achieved by May 10, 1995; and

(E) The date by which the owner or operator expects to achieve compliance.

(5)(i) If compliance with the compressor provisions of section 63.164 of subpart H of this part cannot reasonably be achieved without a process unit shutdown, as defined in section 63.161 of subpart H, the owner or operator shall achieve compliance no later than April 22, 1996, except as provided in paragraph (e)(5)(ii) of this section. The owner or operator who elects to use this provision shall also comply with the requirements of section 63.192(m) of this subpart.

(ii) If compliance with the compressor provisions of section 63.164 of subpart H of this part cannot 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 section 63.192(m) of this subpart.

(6) Existing sources shall be in compliance with the provisions of section 63.170 of subpart H no later than April 22, 1997.

(f) The provisions of subparts I and H of this part 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 subpart I and H of this part.

(g)(1) If an additional process unit 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 CAA, the addition shall be subject to the requirements for a new source in subparts H and I of this part if:

(i) It is an addition that meets the definition of construction in section 63.2 of subpart A of this part;

(ii) Such construction commenced after December 31, 1992; 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 process subject to this subpart, the change shall be subject to the requirements for a new source in subparts H and I of this part if:

(i) It is a change that meets the definition of reconstruction in section 63.2 of subpart A of this part;

(ii) Such reconstruction commenced after December 31, 1992.

(3) If an additional process unit is added to a plant site or a change is made to a process unit and the addition or change is determined to be subject to the new source requirements according to paragraphs (g)(1) or (g)(2) of this section:

(i) The new or reconstructed source shall be in compliance with the new source requirements of subparts H and I 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 H and I of this part that are applicable to new sources. The applicable reports include, but are not limited to:

(A) Reports required by section 63.182(b), if not previously submitted, section 63.182 (c) and (d) of subpart H of this part; and

(B) Reports and notifications required by sections of subpart A of this part that are applicable to subparts H and I of this part, as identified in section 63.192(a) of this subpart.

(4) If an additional process unit is added to a plant site, if a surge control vessel or bottoms receiver becomes subject to section 63.170 of subpart H, or if a compressor becomes subject to section 63.164 of subpart H, and if the addition or change is not subject to the new source requirements as determined according to paragraphs (g)(1) or (g)(2) of this section, the requirements in paragraphs (g)(4)(i) through (g)(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, 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 section 63.182(c) of subpart H of this part.

(i) The added emission point(s) and any emission point(s) within the added or changed process unit are subject to the requirements of subparts H and I of this part for an existing source;

(ii) The added emission point(s) and any emission point(s) within the added or changed process unit shall be in compliance with subparts H and I of this part by the dates specified in paragraphs (g)(4)(ii)(A) or (g)(4)(ii)(B) of this section, as applicable.

(A) If a process unit is added to a plant site or an emission point(s) is added to an existing process unit, the added process unit or emission point(s) shall be in compliance upon initial start-up of the added process unit or emission point(s) or by April 22, 1997, whichever is later.

(B) If a surge control vessel or bottoms receiver becomes subject to section 63.170 of subpart H, if a compressor becomes subject to section 63.164 of subpart H, or if a deliberate operational process change causes equipment to become subject to subpart H of this part, the owner or operator shall be in compliance upon initial start-up or by April 22, 1997, whichever is later, unless the owner or operator demonstrates to the Administrator that achieving compliance will take longer than making the change. The owner or operator shall submit to the Administrator for approval a compliance schedule, along with a justification for the schedule. The Administrator shall approve the compliance schedule or request changes within 120 calendar days of receipt of the compliance schedule and justification.

(iii) The owner or operator of a 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 H and I of this part that are applicable to existing sources, including, but not limited to, the reports listed in paragraphs (g)(4)(iii)(A) and (g)(4)(iii)(B) of this section.

(A) Reports required by section 63.182 of subpart H of this part; and

(B) Reports and notifications required by sections of subpart A of this part that are applicable to subparts H and I of this part, as identified in section 63.192(a) of this subpart.

(h) *(This section of the federal rule does not apply to the permittee.)*
(i) *(This section of the federal rule does not apply to the permittee.)*

(j) If a change that does not meet the criteria in paragraph (g)(4) of this section is made to a process unit subject to subparts H and I of this part, and the change causes equipment to become subject to the provisions of subpart H of this part, then the owner or operator shall comply with the requirements of subpart H of this part for the equipment as expeditiously as practical, but in no event later than three years after the equipment becomes subject.

(1) The owner or operator shall submit to the Administrator for approval a compliance schedule, along with a justification for the schedule.

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

2. 40 CFR Part 63, Subpart I

Section 63.191: Definitions.
(Applicable definitions are found in this section of the federal rule.)

3. 40 CFR Part 63, Subpart I

Section 63.192: Standard.

(a)(1) The owner or operator of a source subject to this subpart shall comply with the requirements of subpart H of this part for the processes and designated organic HAP's listed in section 63.190(b) of this subpart.

(2) *(This section of the federal rule does not apply to the permittee.)*

(b) All provisions in section 63.1 through 63.15 of subpart A of this part which apply to owners and operators of sources subject to subparts I and H of this part, are:

(1) The applicability provisions of section 63.1 (a)(1), (a)(2), (a)(10), (a)(12) through (a)(14);

(2) The definitions of section 63.2 unless changed or modified by specific entry in section 63.191 or section 63.161;

(3) The units and abbreviations in section 63.3;

(4) The prohibited activities and circumvention provisions of section 63.4 (a)(1), (a)(2), (a)(3), (a)(5), and (b);

(5) The construction and reconstruction provisions of section 63.5(a), (b)(1), (b)(3), (d) (except the review is limited to the equipment subject to the provisions of subpart H), (e), and (f);

(6)(i) The compliance with standards and maintenance requirements of section 63.6(a), (b)(3), (c)(5), (e), (i)(1), (i)(2), (i)(4)(i)(A), (i)(6)(i), (i)(8) through (i)(10), (i)(12) through (i)(14), (i)(16), and (j);

(ii) The operational and maintenance requirements of section 63.6(e). The startup, shutdown, and malfunction plan requirement of section 63.6(e)(3) is limited to control devices subject to the provisions of subpart H of part 63 and is optional for other equipment subject to subpart H. The startup, shutdown, and malfunction plan may include written procedures that identify conditions that justify a delay of repair.

(7) With respect to flares, the performance testing requirements of section 63.7(a)(3), (d), (e)(1), (e)(2), (e)(4), and (h);

(8) The notification requirements of section 63.9 (a)(1), (a)(3), (a)(4), (b)(1)(i), (b)(4), (b)(5) (except, use the schedule specified in subpart H), (c), (d), and (i);

(9) The recordkeeping and reporting requirements of section 63.10(a) and (f);

(10) The control device requirements of section 63.11(b); and

(11) The provisions of section 63.12 through section 63.15.

(c) Initial performance tests and initial compliance determinations shall be required only as specified in subpart H of this part.

(1) Performance tests and compliance determinations shall be conducted according to the applicable sections of subpart H.

(2) 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.
Note: This requirement does not apply to equipment subject to monitoring using Method 21 of part 60, appendix A.

(3) Performance tests shall be conducted according to the provisions of section 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.

(d) An application for approval of construction or reconstruction, 40 CFR 63.5 of this chapter, will not be required if:

(1) The new process unit complies with the applicable standards in section 63.162 or section 63.178 of subpart H of this part; and

(2) In the next semiannual report required by section 63.182(d) of subpart H of this part, the information in section 63.182(c) of subpart H of this part is reported.

(e) (This section of the federal rule does not apply to the permittee.)

(f) Each owner or operator of a source subject to subparts I and H of this part shall keep copies of all applicable reports and records required by subpart H for at least 2 years, except as otherwise specified in subpart H. 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 section 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.

(2) The owner or operator subject to subparts I and H of this part shall keep the records specified in this paragraph, as well as records specified in subpart H of this part.

(i) Records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of a process subject to this subpart as specified in section 63.190(b) of this subpart.

(ii) Records of the occurrence and duration of each malfunction of air pollution control equipment or continuous monitoring systems used to comply with subparts I and H of this part.

(iii) For each start-up, shutdown, and malfunction, 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. These records may take the form of a "checklist," or other form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan for the event.

(g) All reports required under subpart H shall be sent to the Administrator at the addresses listed in section 63.13 of subpart A of this part.

(1) Wherever subpart A 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.

(h) 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 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 (h) 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.

(i) 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.

(1) If EPA has approved a State operating permit program under 40 CFR part 70, the permit shall be obtained from the State authority.

(2) If the State operating permit program has not been approved, the source shall apply to the EPA regional office pursuant to 40 CFR part 71.

(j) The requirements in subparts I and H of this part are Federally enforceable under section 112 of the Act on and after the dates specified in section 63.190(d) of this subpart.

(k) The owner or operator of a process unit which meets the criteria of section 63.190 (c), shall comply with the requirements of either paragraph (k)(1) or (k)(2) of this section.

(1) Retain information, data, and analysis used to determine that the process unit does not have the designated organic hazardous air pollutant present in the process. 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 have the designated organic hazardous air pollutant present in the process.

(l) (This section of the federal rule does not apply to the permittee.)
(m) (This section of the federal rule does not apply to the permittee.)

4. 40 CFR Part 63, Subpart H

Section 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 for 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 section 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.

5. 40 CFR Part 63, Subpart H

Section 63.161: Definitions.
(Applicable definitions are found in this section of the federal rule.)

6. 40 CFR Part 63, Subpart H

Section 63.162: Standards: General.

(a) Compliance with this subpart will be determined by review of the records required by section 63.181 of this subpart and the reports required by section 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 section 63.163 through 63.170, and section 63.172 through 63.174 of this subpart as provided in section 63.177.

(2) If the Administrator makes a determination that a means of emission limitation is a permissible alternative to the requirements of section 63.163 through 63.170, and section 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 section 63.163 through 63.174 of this subpart and section 63.178 of this subpart if it is identified as required in section 63.181(j) of this subpart.

(f) When each leak is detected as specified in section 63.163 and 63.164; section 63.168 and 63.169; and section 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 section63.168(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 section 63.174(c)(1)(i) of this subpart, the identification on a connector may be removed after it is monitored as specified in section 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 section 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 or 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 or 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 or tasks that must be performed weekly, at least 2 weeks or 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.

7. 40 CFR Part 63, Subpart H

Section 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 1 /2 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 startup, comply with the Phase II requirements; and

(B) Beginning no later than 1 year after initial startup, 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 or 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 section 63.180(b) of this subpart and shall comply with the requirements of paragraphs (a) through (d) of this section, except as provided in section 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 section 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 ood/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 section 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 section 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 startup 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 startup 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 section 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 or 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 section 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 section 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 section 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 section 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.

8. 40 CFR Part 63, Subpart H

Section 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 section 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 section 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 section 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 section 63.172 of this subpart.

(i) Any compressor that is designated, as described in section 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 section 63.180(c) of this subpart; and

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

9. 40 CFR Part 63, Subpart H

Section 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 section 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 section 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 section 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 section 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 section 63.171 of this subpart

10. 40 CFR Part 63, Subpart H

Section 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 section 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 section 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 section 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.

11. 40 CFR Part 63, Subpart H

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 section 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 auto catalytically polymerize or, would present an explosion, serious over-pressure, 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.

12. 40 CFR Part 63, Subpart H

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 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 startup, comply with the Phase II requirements; and

(B) Beginning no later than 1 year after initial startup, 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 section 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 section 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 sections 63.171, 63.177, 63.178, and 63.179 of this subpart.

(1) The valves shall be monitored to detect leaks by the method specified in section 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 section 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 non-repairables 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 section 63.100(k) of subpart F for existing process units, and after the date of initial startup or 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 or 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) Non-repairable valves shall be included in the calculation of percent leaking valves the first time the valve is identified as leaking and non-repairable and as required to comply with paragraph (e)(3)(ii) of this section. Otherwise, a number of non-repairable 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 or subsequent monitoring periods.

(ii) If the number of non-repairable valves exceeds 1 percent of the total number of valves in organic HAP service at a process unit, the number of non-repairable 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 section 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 sections 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 or 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 or purposes of section 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 section 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 section 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 or 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.

13. 40 CFR Part 63, Subpart H

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 section 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 section 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 pumps in food/medical service or pumps subject to section 63.163(b)(iii)(C), 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 section 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 section 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 section 63.163(c)(2) and 63.168(g) of this subpart, for pumps and valves, respectively.

14. 40 CFR Part 63, Subpart H

Section 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 section 63.172 of this subpart, except as provided in section 63.162(b) of this subpart, or comply with the requirements of section 63.119(b) or (c) of subpart G of this part.

15. 40 CFR Part 63, Subpart H

Section 63.171: Standards: Delay of repair.

(a) Delay of repair of equipment for which leaks have been detected is allowed if the repair 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 or 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 section 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 section 63.176(d) of this subpart will provide better performance or:

(i) A dual mechanical seal system that meets the requirements of section 63.163(e) of this subpart,

(ii) A pump that meets the requirements of section 63.163(f) of this subpart, or

(iii) A closed-vent system and control device that meets the requirements of section 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.

16. 40 CFR Part 63, Subpart H

Section 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 section 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 for 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 section 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 ˚C.

(d) Flares used to comply with this subpart shall comply with the requirements of section 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 section 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 section 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 carseal 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 flow 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 section 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 section 63.100 of subpart of this part, the owner or operator of any control device subject to this subpart that is also subject to monitoring, record keeping, and reporting requirements in 40 CFR part 264, subpart BB, or is subject to monitoring and record keeping requirements in 40 CFR part 265, subpart BB, may elect to comply either with the monitoring, record keeping, and reporting requirements of this subpart, or with the monitoring, record keeping, and reporting requirements in 40 CFR parts 264 and/or 265, as described in this paragraph, which shall constitute compliance with the monitoring, record keeping and reporting requirements of this subpart. The owner or operator shall identify which option has been chosen, in the next periodic report required by section 63.182(d).

17. 40 CFR Part 63, Subpart H

Section 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 section 63.180(b) of this subpart, except as provided in section 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 or 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 section 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 section 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 or 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 section 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 section 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 section 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 section 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.

18. 40 CFR Part 63, Subpart H

Section 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 section 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 section 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 startup 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.

(iii) 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 section 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 non-repairable, in which case it is counted as a non-repairable 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 non-repairable connectors for the purposes of paragraph (i)(2) of this section. The owner or operator shall calculate the percent leaking connectors or the monitoring periods described in paragraph (b) of this section, by setting the non-repairable 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 section 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 section 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 section 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 section 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 section 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 record keeping and reporting requirements of sections 63.181 and 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 section 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) x100

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 section 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 startup 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 non-repairables, measured at 500 parts per million or greater, by the method specified in section 63.180(b) of this subpart.

CAN = Number of allowable non-repairable 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 non-repairables, 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 startup 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 section 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.

19. 40 CFR Part 63, Subpart H

Section 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 section 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 section 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 section 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 sections 63.168 and 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 section 63.168(e).

(2) If the owner or operator elects to comply with both paragraph (e) of this section and section 63.168 of this subpart, he may also take advantage of the lower monitoring frequencies associated with lower leak rates in sections 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 section 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 section 63.181(h)(1) of this subpart, or 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.

(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 section 63.168(d)(1)(i) of this subpart using monthly monitoring or shall comply using a quality improvement program or 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:

$$\%RR = \frac{\%V_L - 2\%}{0.10}$$

% RR = percent reduction required each quarter, as calculated according to section 63.168(e)

% V_L = percent leaking valves, calculated according to section 63.168(e), at the time elected to use provisions of section 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 section 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 section 63.168 of this subpart except the requirement or monthly monitoring in section 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 section 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.

(4) The owner or operator shall inspect all valves removed from the process unit due to leaks. The inspection shall determine which parts of the valve have failed and shall include recommendations, as appropriate, or 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 (e)(2) of this section to determine the services, operating or maintenance practices, and valve 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 identify any superior performing valve technologies that are applicable to the service(s), operating conditions, or valve designs associated with poorer than average emission performance. A superior performing valve technology is one for which a group of such valves has a leak frequency of less than 2 percent for specific applications in such a process unit. A candidate superior performing valve 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 2 percent leaking valves in the process unit.

(iii) The analysis shall include consideration of:

(A) The data obtained from the inspections of valves 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 valve designs or technologies and operating conditions associated with low emission performance or specific services, and

(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, for 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 online trials of valves for 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 section 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 or 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 offline 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 non-leaking.

(D) Require that all valves repaired on-line be monitored using the method specified in section 63.180(b) of this subpart for leaks for 2 successive months, after repair.

(E) Provide for an audit procedure or 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 offline 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.

20. 40 CFR Part 63, Subpart H

Section 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 section 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 section 63.163 of this subpart.

(2) The owner or operator shall collect the following data, and maintain records as required in section 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 for 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 for 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 or specific services; and

(C) Information on limitations on the service conditions or 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 or 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 for 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 online 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 or rejecting specific technologies from consideration shall be documented as required in section 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 for 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 or 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 or 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 offline 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 for 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 non-zero 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 section 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.

21. 40 CFR Part 63, Subpart H

Section 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 section 63.6(g) of subpart A of this part shall be responsible or 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.

22. 40 CFR Part 63, Subpart H

Section 63.178: Alternative means of emission limitation: Batch processes.
(*This section of the federal rule does not apply to the permittee.)*

23. 40 CFR Part 63, Subpart H

Section 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 section 63.172 of this subpart are exempt from the requirements of sections 63.163, through 63.171, and sections 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.

24. 40 CFR Part 63, Subpart H

Section 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 or 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 sections 63.168(d)(2) and (d)(3) or section 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 section 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 section 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 section 63.172(d) of this subpart, the compliance determination shall be conducted using Method 22 of 40 CFR part 60, appendix A to determine visible emissions.

(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 section 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:

$$\Delta\left(\frac{P}{t}\right) = \frac{\left(\left|P_f - P_i\right|\right)}{\left(t_f - t_i\right)}$$

where:

$\Delta(P/t)$ = Change in pressure, psig/hr,

P_f = Final pressure, psig,

P_i = Initial pressure, psig,

$t_f - t_i$ = 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 or 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 section 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.

25. 40 CFR Part 63, Subpart H

Section 63.181: Record keeping requirements.

(a) An owner or operator of more than one process unit subject to the provisions of this subpart may comply with the record keeping requirements for these process units in one record keeping 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 section 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 record keeping identified in section 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 section 63.174 (b)(1) or (b)(2) of this subpart.

(ii) A schedule by process unit for monitoring connectors subject to the provisions of section 63.174(a) of this subpart and valves subject to the provisions of section 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 section 63.163(g), 63.164(h), 63.165(c), or 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 section 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 section 63.170 of this subpart.

(3)(i) A list of identification numbers for pressure relief devices subject to the provisions in section 63.165(a) of this subpart.

(ii) A list of identification numbers for pressure relief devices equipped with rupture disks, under the provisions of section 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 section 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 section 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 section 63.163(j), valves subject to the provisions of sections 63.168(h) and (i) of this subpart, agitators subject to the provisions of sections 63.173(h) through (j), and connectors subject to the provisions of sections 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 or 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 or 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 section63.168(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 section 63.174(i)(1) of this subpart, and documentation of the integrity of the weld for any removed connectors, as required in section 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 section63.178(c) of this subpart, a list of equipment added to batch product process units since the last monitoring period required in sections 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 section 63.178(c)(3)(iii) of this subpart.

(c) For visual inspections of equipment subject to the provisions of this subpart (e.g., sections 63.163(b)(3), 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 or 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 section 63.163 and 63.164; section 63.168 and 63.169; and section 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 non-repairable.

(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 section 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 or 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 onsite 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 section 63.174(b) of this subpart, as described in section 63.174(c)(1) of this subpart, unless the owner or operator elects to comply with the provisions of section 63.174(c)(1)(ii) of this subpart.

(ii) The date and results of monitoring as required in section 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 section 63.178(c)(3)(i) of this subpart for equipment added to a batch process unit since the last monitoring period required in section 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 section 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 section 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 section 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 section 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 section 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 section 63.11(b) of subpart A of this part.

(iv) A description of the parameter or parameters monitored, as required in section 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 sections 63.163 through 63.166, and 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 startups and shutdowns of control devices required in sections 63.163 through 63.166, and 63.170 of this subpart.

(3) Records of inspections of closed-vent systems subject to the provisions of section 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 section 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 section 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 section 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 section 63.175(d) of this subpart:

(i) All data required in section 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 section 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 section 63.175(e) of this subpart:

(i) All data required in section 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 section 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 section 63.175(e) of this subpart.

(3) For owners or operators subject to the requirements of the pump quality improvement program as specified in section 63.176 of this subpart:

(i) All data required in section 63.176(d)(2) of this subpart.

(ii) The rolling average percent leaking pumps.

(iii) Documentation of all inspections conducted under the requirements of section 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 section 63.176(d) of this subpart.

(4) If a leak is not repaired within 15 calendar days after discovery of the leak, the reason or the delay and the expected date of successful repair.

(5) Records of all analyses required in section 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 section63.175(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 or valves or pumps as specified in section 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 sections 63.175(e)(7) and 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 section 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) 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 or 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 section 63.160 of this subpart.

(k) Owners and operators choosing to comply with the requirements of section 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.

26. 40 CFR Part 63, Subpart H

Section 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 section 63.6(i) of subpart A of this part or 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 sections 63.6(i)(6)(i)(A), (B), and (D) of subpart A of this part.

(iii) The requirements in sections 63.6(i)(8) through (i)(14) of subpart A of this part 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 sections 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 startup 90 days after the date of promulgation of this subpart or later, the application or approval of construction or reconstruction required by section 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 startup 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 sections 63.163 through 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 or each phase of the requirements in sections 63.163 and 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 section 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 section 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 section 63.172 of this subpart.

(4) For existing sources subject to subpart of this part, the Notification of Compliance Status shall be submitted for the group of process units with the earliest compliance date specified in section 63.100(k) of subpart 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 section 63.100(k)(3) of subpart. Each subsequent periodic report shall cover the 6 month period following the preceding period.

(2) For each process unit complying with the provisions of sections 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 section 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 section 63.168(f) of this subpart, identifying the number of those that are determined non-repairable;

(iii) The number of pumps for which leaks were detected as described in section 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 section 63.163(c) of this subpart;

(v) The number of compressors for which leaks were detected as described in section 63.164(f) of this subpart;

(vi) The number of compressors for which leaks were not repaired as required in section 63.164(g) of this subpart;

(vii) The number of agitators for which leaks were detected as described in sections 63.173(a) and (b) of this subpart;

(viii) The number of agitators for which leaks were not repaired as required in section 63.173(c) of this subpart;

(ix) The number of connectors for which leaks were detected as described in section 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 section 63.174(d) of this subpart, identifying the number of those that are determined non-repairable;

(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 section63.164(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 section 63.168(d)(1)(i) of this subpart, or a quality improvement program under either section 63.175 or 63.176 of this subpart.

(xvi) If applicable, notification of a change in connector monitoring alternatives as described in section 63.174(c)(1) of this subpart.

(xvii) If applicable, the compliance option that has been selected under section 63.172(n).

(3) For owners or operators electing to meet the requirements of section 63.178(b) of this subpart, the report shall include the information listed in paragraphs (i) through (v) of this paragraph or 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 section 63.172(f) of this subpart.

(4) The information listed in paragraph (c) of this section or 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.

27. Requirements A.1 through A.26 apply to the following emissions units:

P004 - G-1 Process Unit,
P006 - K-3 Process Unit,
P007 - G-2 Process Unit,
P010 - K-1 Process Unit,
T036 - Butadiene Sphere V-945,
Z017 - Butadiene Sphere V-936,
T054 - Styrene Tank T-920, and
T055 - Styrene Tank T-921.

28.a The permittee may be subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for industrial boilers, 40 CFR Part 63, Subpart DDDD, and for reciprocating internal combustion engines, 40 CFR Part 63, Subpart ZZZZZ. USEPA failed to promulgate this standard by May 15, 2002, the Maximum Achievable Control Technology (MACT) hammer date. In accordance with 40 CFR Part 63, Subpart B (40 CFR Parts 63.50 through 63.56), the permittee shall submit an application to revise this permit to include equivalent emission limitations as a result of a case-by-case MACT determination. The application shall be submitted in two parts. The deadline to submit the Part I application, as specified in 40 CFR Part 63.53, was May 15, 2002.

28.b If the final NESHAP standard is not promulgated by the deadline specified by USEPA, the permittee shall submit the Part II application as specified in 40 CFR Part 63.53. The Part II application shall be submitted within 60 days after the deadline to promulgate the respective standard or by May 15, 2003, whichever is later. It must contain the following information, unless otherwise specified by future USEPA regulations:

i. for a new affected source, the anticipated date of startup of operation;

ii. the hazardous air pollutants (HAPs) emitted by each affected source in the relevant source category and an estimated total uncontrolled and controlled emission rate for HAPs from the affected source;

iii. any existing federal, State, or local limitations or requirements applicable to the affected source;

iv. for each affected emission point or group of affected emission points, an identification of control technology in place;

v. information relevant to establishing the MACT floor (or MACT emission limitation), and, at the option of the permittee, a recommended MACT floor; and

vi. any other information reasonably needed by the Director including, at the discretion of the Director, information required pursuant to 40 CFR Part 63, Subpart A.

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

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

ii. a description of the control technologies that would be applied to meet the emission limitation, including technical information on the design, operation, size, estimated control efficiency and any other information deemed appropriate by the permitting authority, and identification of the affected sources to which the control technologies must be applied; and

iii. relevant parameters to be monitored and frequency of monitoring to demonstrate continuous compliance with the MACT emission limitation over the applicable reporting period.

28.d If the NESHAP is promulgated before the Part II application is due for the relevant source category, the permittee may be subject to the rule as an existing major source with a compliance date as specified in the NESHAP. If subject, the permittee shall submit the following notifications:

i. Unless otherwise specified in the relevant Subpart, within 120 days after promulgation of a 40 CFR Part 63 Subpart to which the source is subject, the permittee shall submit an Initial Notification Report that contains the following information, in accordance with 40 CFR Part 63.9(b)(2):

(a) the name and mailing address of the permittee;

(b) the physical location of the source if it is different from the mailing address;

(c) identification of the relevant MACT standard and the source's compliance date;

(d) a brief description of the nature, design, size, and method of operation of the source, and an identification of the types of emission points within the affected source subject to the relevant standard and the types of HAPs emitted; and

(e) a statement confirming the facility is a major source for HAPs.

ii. Unless otherwise specified in the relevant Subpart, within 60 days following completion of any required compliance demonstration activity specified in the relevant Subpart, the permittee shall submit a notification of compliance status that contains the following information:

(a) the methods used to determine compliance;

(b) the results of any performance tests, visible emission observations, continuous monitoring systems performance evaluations, and/or other monitoring procedures or methods that were conducted;

(c) the methods that will be used for determining continuous compliance, including a description of monitoring and reporting requirements and test methods;

(d) the type and quantity of HAPs emitted by the source, reported in units and averaging times in accordance with the test methods specified in the relevant Subpart;

(e) an analysis demonstrating whether the affected source is a major source or an area source;

(f) a description of the air pollution control equipment or method for each emission point, including each control device or method for each HAP and the control efficiency (percent) for each control device or method; and

(g) a statement of whether or not the permittee has complied with the requirements of the relevant Subpart.

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

None.

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

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
P004 - Process unit G-1, Wet end of the process equipped with a flare for the control of organic material emissions.	OAC rule 3745-31-05(A)(3)	Emissions of VOC shall not exceed 18.25 lbs/hr of flare emissions as a monthly average. Visible emissions from the smokeless flare shall not exceed five (5) minutes during any 2 hour observation period. The requirements of this rule include the development and implementation of a VOC Leak Detection and Repair program. See term A.I.2.e below. The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-07(J)(2), 3745-31-05(C) and 40 CFR Part 63 Subparts I. and H. See terms A.I.2.b, A.I.2.c and A.I.2.d
Finishing end of the G-1 process including the front end dryer, tail end dryer and packaging, equipped with one cyclone, and two baghouses for the control of particulate emissions. Boiler B005 or B007 used as a control device for organic material emissions from the front-end dryer.	OAC rule 3745-31-05(A)(3)	Emissions of VOC shall not exceed 5.37 lbs/hr from the finishing end of the G-1 Process. The particulate emissions from the process integral cyclone and the two process integral baghouses shall not exceed 0.01 gr/dscf and 5% opacity as a six-minute average. The requirements of this rule also include compliance with the requirements of OAC

		rules 3745-21-07(J)(2), 3745-31-05(C) and 40 CFR Part 63 Subparts I and H. See terms A.I.2.b, A.I.2.c and A.I.2.d
Process Water Tanks	OAC rule 3745-31-05(A)(3)	VOC emissions from the process water tanks shall not exceed 1.6 TPY
Process unit G-1 including the wet end of the process, and the finishing end of the process and packaging	OAC rule 3745-31-05(C)	Annual emissions of VOC's shall not exceed 105.06 tons as a rolling 12-month summation. Annual emissions of PM-PM10 shall not exceed 10.18 tons as a rolling 12-month summation. See section A.I.2.a below.
	40 CFR Part 63, Subparts I and H OAC rule 3745-21-07(J)(2)	The permittee shall not emit organic materials from a waste gas flare system unless such materials are burned by smokeless flares, or equally effective control equipment as approved by the Director.
	OAC rule 3745-17-07(A)(1) OAC rule 3745-17-11 OAC rule 3745-21-07(G)(2) OAC rule 3745-21-07(G)(6)	The emissions limitation established by these rules are less stringent than that established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

2.a Refer to Part II - Specific Facility Terms and Conditions for the requirements of 40 CFR Part 63, Subpart I "National Emission Standards for Organic Hazardous Air Pollutants for Certain Processes Subject to the Negotiated Regulation for Equipment Leaks." Equipment in 1,3-butadiene and styrene service in this emissions unit is subject to the leak detection and repair requirements of 40 CFR Part 63 subpart I.

2.b Where emissions of organic materials from the wet end are controlled by a flare, the control device shall achieve a minimum of 98% control efficiency.

2.c The VOC emissions from the front end dryers shall be controlled by at least 98% by routing the emissions to an operating boiler (either boiler B005 or boiler B007) as a VOC control device. Compliance with 98% control requirement is based on monitoring or record keeping in Section A.III. The assumption used to determine 98% control efficiency was based on the design of a wet bottom boiler which maintains a combustion temperature of approximately 2500 ^{o}F and residence time of 1.56 seconds. According to theoretical data,

the carrier solvent used in this process is 98% destroyed at 1550 ^{o}F and typical retention times for thermal incineration is less than 1 sec.

2.d All the particulate emissions from the transfer of materials from the finishing and packaging sections of this emissions unit shall be vented to the particulate control equipment.

2.e The permittee shall develop and implement a VOC Leak Detection and Repair Program (LDRP). Within 90 days of issuance of this permit, the permittee shall submit, to the Southeast District Office of the Ohio EPA, a written LDRP. The LDRP for this emissions unit may be revised with the written approval of the Ohio EPA.

2.f The VOC emissions from this emission unit shall be controlled through the application of a permanent total enclosure (PTE) with a 100% capture efficiency and an operating boiler with a 98% removal/destruction efficiency. The PTE serving this emissions unit shall be maintained in such a manner as to meet the criteria established for a PTE in Method 204 (40 CFR Part 51, Appendix M) whenever the emissions unit is in operation, unless the permittee is successful in making the determination described in A.I.2.g.

2.g The permittee has the option to perform a demonstration to show that the PTE can not be compromised, under normal plant conditions, when the emissions unit is in operation (i.e., the air flow through the PTE to the control device is always maintained under negative pressure even when all openings (including, non-natural draft openings) which could affect the PTE are opened) in lieu of installing, maintaining and operating monitoring devices and a recorder which simultaneously measure and record the pressure inside and outside the PTE.

If the PTE can not be compromised, under normal plant conditions, when the emissions unit is in operation, the permittee will not be required to comply with the differential pressure operational restriction, monitoring, record keeping, and reporting requirements specified below to ensure the ongoing integrity of the PTE.

If the permittee elects not to perform the demonstration to show that the PTE can not be compromised or the demonstration indicates that the PTE can be compromised, the permittee will be required to comply with the differential pressure operational restriction, monitoring, record keeping, and reporting requirements specified below (see Sections A.II, A.III, and A.IV below) to ensure the ongoing integrity of the PTE and meet the criteria specified in Method 204.

II. Operational Restrictions

1. The flare shall be operated at all times when emissions may be vented to it.

2. The flare shall be operated with a pilot flame present at all times.

3. The flare shall be used only when the net heating value of the gas being combusted is 300 Btu/scf or greater.

4. The flare shall meet one of the following criteria:

   a. the flare shall be designed and operated with an exit velocity of less than 60 ft/sec; or

   b. the flare shall be designed and operated with an exit velocity equal to or greater than 60 ft/sec, but less than 400 ft/sec, if the net heating value of the gas being combusted is greater than 1000 Btu/scf; or

   c. the flare shall be designed and operated with an exit velocity less than the velocity, Vmax (see section A.V.2.b), but less than 400 ft/sec.

5. Except as provided in A.I.2.g, the permanent total enclosure shall be maintained under negative pressure, at a minimum pressure differential that is not less than the minimum pressure differential (inches of water) established during the most recent emission test that demonstrated the emissions unit was in compliance, whenever the emissions unit is in operation. For initial compliance, the company has committed to a differential pressure of not less than a 0.5 (inches of water).

6. The net annual amount of carrier solvent / organic solvent process aid added to this emissions unit shall not exceed 9.2 million pounds as a rolling, 12-month summation. (Where net means the amount of solvent added to the process minus the amount removed from the process)

7. To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the limitation on the net amount of carrier solvent / organic solvent process aid added to this emissions unit as specified in the following table:

Month(s)	Maximum Allowable Cumulative Net Amount of Carrier Solvent / Organic Solvent Process Aid Added (pounds)
1	1,534,000
1-2	3,068,000
1-3	3,835,000
1-4	4,602,000
1-5	5,369,000
1-6	6,136,000
1-7	6,903,000
1-8	7,670,000
1-9	8,054,000
1-10	8,438,000
1-11	8,821,000
1-12	9,200,000

After the first 12 calendar months of operation following the issuance of this permit, compliance with the net annual amount of carrier solvent / organic solvent process aid added limitation shall be based upon a rolling, 12-month summation of the net amount of carrier solvent / organic solvent process aid added figures.

8. The boiler tube temperature within the boiler used as the control device for the finishing end dryer for this emissions unit shall not be less than 600 degrees Fahrenheit when the emissions unit is in operation. Boiler tube temperature serves as a surrogate parameter, which indicates that the minimum temperature of the combustion chamber of the boiler during normal operation is 2200 degrees Fahrenheit.

III. Monitoring and/or Recordkeeping Requirements

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 all 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.

2. The permittee shall operate and maintain a device (including, but not limited to, a thermocouple, an ultraviolet beam sensor, or an infrared sensor) capable of continuously detecting the presence of the flare pilot flame. All monitoring equipment shall be calibrated, maintained, and operated according to the manufacturer's specifications.

3. 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.

4. The permittee shall record the following information each day:
   a. all periods during which the flare was not operating and emissions were vented to it;
   b. all periods during which there was no pilot flame; and
   c. the operating times for the flare and the continuous monitoring equipment for flame presence.

5. When the VOC emissions from this emissions unit are vented to either boiler B005 or Boiler B007, the permittee shall collect and record each day for that boiler: A log of the downtime for the capture (collection) system, the boiler and monitoring equipment when this emissions unit was in operation.

6. The permittee shall maintain the following monthly records for this emissions unit:

   a. For the first 12 calendar months following the startup of the modified emissions unit, the cumulative net amount of carrier solvent/organic solvent process aid added calculated by adding the current month's net amount of carrier solvent/organic solvent process aid added to the net amount of carrier solvent/organic solvent process aid added for each calendar month since the startup of the modified emissions unit.

   b. Beginning after the first 12 calendar months following the startup of the modified emissions unit, the net amount of carrier solvent or organic solvent process aid added to this emissions unit during any calendar month, in pounds.

   c. The rolling, 12-month summation (in pounds) of carrier solvent or organic solvent process aids added to this emissions unit, calculated by adding the amount for the current calendar month to the amount for the preceding eleven calendar months.

   d. The number of hours the front end dryer was in operation. "In operation" means that product is being dried.

   e. The number of hours the tail end dryers were in operation "In operation" means that product is being dried.

   f. The uncontrolled VOC emission rate from the front end dryer determined as follows:

      U (fdryer) = VOC mass emission rate at the front end dryer outlet, measured during the most recent compliance test (pounds per hour)

   g. The uncontrolled VOC emission rate from the tail end dryer determined as follows:

      U (tdryer) = VOC mass emission rate at the tail end dryer outlet, measured during the most recent compliance test (pounds per hour)

   h. The VOC emissions from the wet end shall be calculated as follows:

      VOC emissions from the wet end, in pounds,
      = (a) * (100%-98% control efficiency for flare)

   i. The VOC emissions from the finishing end shall be calculated as follows:

      = [controlled front end dryer] + [tail end dryer]

      = [c * e(1-0.98)] + [d * f]

7. The permittee shall continuously monitor and record the position of the bypass valve on the closed vent system from the front end dryer to boilers B005 and B007.

8. A monitoring log shall be maintained in accordance with the requirements of the VOC LDRP plan specified in section A.I.2.e of these terms and conditions. The monitoring log shall be retained for a minimum of two years after the date on which the record was made or the report using the monitoring record was prepared. A copy of the monitoring log shall be made available to the Director or an authorized representative of the Director, upon verbal or written request, at any reasonable time.

9. Except as provided in A.I.2.g, the permittee shall maintain and operate monitoring devices and a recorder which simultaneously measure and record the pressure inside and outside the permanent total enclosure. The monitoring and recording devices shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

10. Except as provided in A.I.2.g, the difference in pressure between the permanent total enclosure and the surrounding area(s), in inches of water.

11. The permittee shall operate and maintain a continuous temperature monitor which measures the boiler tube temperature within the boiler used for OC control (either Boiler B005 or B007) of the finishing dryer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring device shall be capable of accurately measuring the desired parameter. The temperature monitor shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

12. The permittee shall collect and record the following information, at a minimum frequency of once per twelve-hour shift, for each day the emissions unit is in operation:

    a. the boiler(s) to which the finishing end dryer is being vented; and

    b. the boiler tube temperature.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods during which the flare pilot flame was not functioning properly. The reports shall include the date, time, and duration of each such period, as well as the cause of each deviation.

2. The permittee shall submit quarterly summaries 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 summaries shall be submitted on the same time schedule as the deviation reports.

3. 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.

4. The permittee shall submit quarterly deviation reports identifying any exceedance of the 18.25 lbs/hr as a monthly average from the flare and the 5.37 lb/hr VOC emission limitations from the finishing end of the G-1 Process.

5. The permittee shall submit quarterly deviation (excursion) reports that identify the following:

   a. All exceedances of the 12-month rolling carrier solvent or organic process aid usage rate limitation, and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative carrier solvent or organic process aid usage rate limitation in Section III.

   b. All exceedances of the 12-month rolling VOC emission limitation and,

   c. All exceedances of the 12-month rolling PM/PM10 emission limitation.

6. Except as provided in A.I.2.g, the permittee shall submit quarterly pressure differential deviation (excursion) reports that identify all periods of time during which the permanent total enclosure was not maintained at the required differential pressure specified above.

7. The permittee shall submit quarterly deviation (excursion) reports of all times during which the boiler tube temperature within the boiler used as a control device, when the emissions unit was in operation, did not comply with the temperature limitation specified in term A.II. 8 . These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31, and shall cover the records for the previous calendar quarters.

8. The deviation (excursion) reports shall be submitted in accordance with section A.1.c. of the General Terms and Conditions of this permit.

9. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the stacks serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the appropriate Ohio EPA District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

10. As a part of the VOC Leak Detection and Repair Program specified in section A.I.2.e of these terms and conditions, the permittee shall submit semi-annual written reports that give the total number of components which were found leaking during the previous six months but which were not repaired within fifteen days and identify all leaking components which cannot be repaired until the next process unit turnaround. 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:

1.a. Emission Limitation:

5% opacity as a 6-minute average

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and in OAC rule 3745-17-03(B)(1).

1.b. Emission Limitation:

Emissions of VOC shall not exceed 18.25 lbs/hr of flare emissions as a monthly average.
Emissions of VOC shall not exceed 5.37 lbs/hr from the finishing end of the G-1 Process.

Applicable Compliance Method:

The hourly emissions limitation is based on the maximum capacity of the emissions unit and minimum control efficiency requirements. Compliance with the annual emissions limitation shall be determined by the record-keeping in term A.III.6.

1c. Emission Limitation:
Annual emissions of VOC's shall not exceed 105.06 tons as a rolling 12-month summation.

Applicable Compliance Method:

Compliance with the annual emission limitation shall be determined by the monitoring and recordkeeping in Section A.III.

1.d. Emission Limitation:
The particulate emissions from the process integral cyclone and the two process integral baghouses shall not exceed 0.01 gr/dscf

Applicable Compliance Method:

If required, compliance shall be determined in accordance with Test Methods 1-5 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

1.e. Emission Limitation:
Annual emissions of PM-PM10 shall not exceed 10.18 tons as a rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be determined based upon the following equation:

E = 0.01 gr/dscf * acfm * 60 min/hr * 1/7000 lb/gr * 8760 hr/yr * 0.0005 ton/lb = TPY

provided compliance is shown with the short term limitation, compliance shall also be shown with the annual emission limitation.

1.f. Emission Limitation:
1.6 tpy of VOC emissions from process water tanks.

Applicable Compliance Method:

Compliance shall be determined by a calculation using the ASPEN simulation system using the Redlich/Kwong method for vapor pressures or other methods acceptable to the Ohio EPA Southeast District Office as submitted by the permittee in the permit to install application. Raoults's Law is normally used to estimate the vapor pressure for purely organic systems, and is an important part of the "working loss" equation in USEPA TANKS 4.0 program. However, for hydrocarbons in water systems, Raoult's Law will under predict the vapor pressure. Thus, Redlich/Kwong corrects the vapor pressure using interaction parameters.

1.g. Emission Limitation:

Visible emissions from the smokeless flare shall not exceed five (5) minutes during any 2 hour observation period.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22.

2. Compliance with the operational restrictions in section A.II. of these terms and conditions shall be determined in accordance with the following methods:

2.a Operational Restriction:

The flare shall be used only with the net heating value of the gas being combusted at 300 Btu/scf or greater.

Applicable Compliance Method:
The net heating value of the gas being combusted in the flare shall be calculated using the following equation:

HT = K [sum of (Ci) * (Hi), for i = 1 to n]

where:
HT = net heating value of the sample, in MJ/scm [n.b., 1 MJ/scm = 26.81 Btu/scf]; where the net enthalpy per mole of off-gas is based on combustion at 25 degrees Celsius and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 degrees Celsius;
K = constant = 1.740 x 10 E-7 (1/ppm)(g-mole/scm)(MJ/kcal) [where the standard temperature for (g-mole/scm) is 20 degrees Celsius];
Ci = concentration of sample component "i" in ppmv on a wet basis, as measured for organics by 40 CFR Part 60, Appendix A, Method 18 and measured for hydrogen and carbon monoxide by ASTM method D1946-77 or D1946-90;
Hi = net heat of combustion of sample component "i," in kcal/g-mole, at 25 degrees Celsius and 760 mm Hg
[The heats of combustion may be determined using ASTM Method D2382-76, D2382-88 or D4809-95 if published values are not available or cannot be calculated.]; and
n = number of sample components.

2.b Operational Restriction:

The flare shall be designed and operated with an exit velocity of less than 60 ft/sec; or the flare shall be designed and operated with an exit velocity equal to or greater than 60 ft/sec, but less than 400 ft/sec, if the net heating value of the gas being combusted is greater than 1000 Btu/scf; or the flare shall be designed and operated with an exit velocity less than the velocity, Vmax, but less than 400 ft/sec.

Applicable Compliance Method:
The actual exit velocity of the flare shall be determined by dividing the volumetric flow rate of gas being combusted (in units of emission standard temperature and pressure), as determined by the methods and procedures in 40 CFR Part 60, Appendix A, Method 2, 2A, 2C or 2D, by the unobstructed (free) cross-sectional area of the flare tip. The maximum permitted velocity, Vmax, shall be determined using the following equation:

Log 10(Vmax) = (HT + 28.8)/31.7

where:
Vmax = maximum permitted velocity, in m/sec;
HT = the net heating value determined in accordance with section A.V.2.a;
28.8 = a constant; and 31.7 = a constant.

2.c Operational Restriction:
The net annual amount of carrier solvent or organic solvent process aid added to this emissions unit shall not exceed 9.2 million pounds as a rolling, 12-month summation. (Where net means the amount of solvent added to the process minus the amount removed from the process)

Applicable Compliance Method:
Compliance shall be determined by the record-keeping in term A.III.6.

2.d Operational Restriction:
Except as provided in A.I.2.g, the permanent total enclosure shall be maintained under negative pressure, at a minimum pressure differential that is not less than the minimum pressure differential (inches of water) established during the most recent emission test that demonstrated the emissions unit was in compliance, whenever the emissions unit is in operation. For initial compliance, the company has committed to a differential pressure of not less than a 0.5 (inches of water).

Applicable Compliance Method:

Compliance shall be determined by the record-keeping in term A.III.10.

3. The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:

3.a The emission testing shall be conducted within 180 days of startup of this emissions unit following the modifications authorized by this permit.

3.b The emission testing shall be conducted to determine the uncontrolled emission rate from the front end dryer and from the tail end dryer. These values, U(fdryer) and U(tdryer), respectively are used in the recordkeeping requirements in term A.III.6, to determine compliance with the 18.25 lb/hr monthly average from the flare and 5.37 lb/hr VOC emission limitations from the finishing end of the G-1 Process for the point sources from this emissions unit. The uncontrolled emissions tests are being required because a controlled emission rate from the finishing end of the G-1 unit cannot be determined by testing the boiler exhaust.

3.c Unless a determination is made pursuant to A.I.2.g, the overall capture efficiency from the front end dryer and from the tail end dryer shall be determined using Methods 204 through 204F, as specified in 40 CFR part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) Compliance with the 98% control requirement is assumed based on the design of a wet bottom boiler which maintains a combustion temperature of approximately 2500 ^{o}F and residence time of 1.56 seconds. According to theoretical data, the carrier solvent used in this process is 98% destroyed at 1550 ^{o}F and typical retention times for thermal incineration is less than 1 sec.

3c USEPA Methods 1 through 4, and 25 or 25A, or other approved USEPA test methods, shall be used to determine the uncontrolled mass emission rate of VOC. 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.

3.d The emission 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.

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.. 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 refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA 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 appropriate Ohio EPA 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 appropriate Ohio EPA District Office.

VI. Miscellaneous Requirements

None.

B. State Only 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
P004 - Process unit G-1, equipped with a flare for the control of organic material emissions, and one cyclone, and two baghouses for the control of particulate emissions. Boiler B005 or B007 used as a control device for the front-end dryer.	None	None

2. Additional Terms and Conditions

2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.