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National Emission Standards for Hazardous Air Pollutants for Amino/Phenolic Resins Production; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[FRL–6513–4]

RIN 2060–AE36

National Emission Standards for Hazardous Air Pollutants for Amino/Phenolic Resins Production

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action promulgates national emission standards for hazardous air pollutants (NESHAP) to reduce emissions of hazardous air pollutants (HAPs) from existing and new facilities that manufacture amino or phenolic resins. The EPA has identified these facilities as major sources of HAPs emissions. These final standards are estimated to reduce organic HAP emissions from major existing sources by 361 tons per year, representing a 51 percent reduction from baseline emissions. This estimate is presented for 40 major existing facilities only, since no new facilities are projected to be constructed in the next three years. The major HAPs emitted by sources covered by the final rule include formaldehyde, methanol, phenol, xylene, and toluene. This rule implements section 112(d) of the Clean Air Act Amendments of 1990 (CAA) and is based on the Administrator's determination that the Amino/Phenolic Resins Production source category emits HAPs identified on the list of HAPs in CAA section 112(b). The emissions reductions achieved by these standards, when combined with the emissions reductions achieved by other similar standards, will provide protection to the public and achieve a primary goal of the CAA.

This action also announces a final change to the source category list to combine the Amino Resins and Phenolic Resins source categories into one category: the Amino/Phenolic Resins Production source category.

EFFECTIVE DATE: January 20, 2000. See the **SUPPLEMENTARY INFORMATION** section concerning judicial review.

ADDRESSES: *Docket.* Docket No. A–92–19 contains supporting information used in developing the standards and is located at the U.S. Environmental Protection Agency, 401 M Street SW, Washington, D.C. 20460 in Room M–1500, Waterside Mall (ground floor), and may be inspected from 8:30 a.m. to 5:30 p.m., Monday through Friday, excluding legal holidays.

Background Information Document. The background information document (BID) containing a summary of all the public comments received on the proposed rule and the Administrator's responses to comments may be obtained from the docket for this rule or through the Internet at http://www.epa.gov/ttn/oarpg, or from the U.S. Environmental Protection Agency Library (MD–35), Research Triangle Park, North Carolina 27711, telephone (919) 541–2777. The responses provided in section VII of this preamble to significant comments received on the rule are abbreviated. A full discussion of the comments and our responses to them can be found in the BID.

FOR FURTHER INFORMATION CONTACT: For information concerning this rule, contact Mr. John Schaefer, US EPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711, telephone (919) 541–0296, e-mail: schaefer.john@epa.gov. For information concerning applicability and rule determinations, contact your State or local representative or the appropriate EPA Regional Office representatives.

SUPPLEMENTARY INFORMATION:

Docket. The docket is an organized and complete file of all the information considered by the EPA in the development of this rulemaking. The docket is a dynamic file because material is added throughout the rulemaking process. The docketing system is intended to allow members of the public and industries involved to readily identify and locate documents so that they can effectively participate in the rulemaking process. Along with the proposed and promulgated standards and their preambles, the contents of the docket will serve as the record in case of judicial review. (See section 307(d)(7)(A) of the CAA.) The regulatory text and other materials related to this rulemaking are available for review in the docket or copies may be mailed on request from the Air Docket by calling (202) 260–7548. A reasonable fee may be charged for copying docket materials.

Technology Transfer Network. In addition to being available in the docket, an electronic copy of today's final rule is also available through the Technology Transfer Network (TTN). Following signature, a copy of the rule will be posted on the TTN's policy and guidance page for newly proposed or promulgated rules via the internet at http://www.epa.gov/ttn/oarpg. The TTN provides information and technology exchange in various areas of air pollution control. If more information regarding the TTN is needed, call the TTN Help Line at (919) 541–5384.

EPA Regional Offices

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Regulated Entities. Categories and entities potentially regulated by this action include:

Category	Standard Industrial Classification (SIC) codes	North American Classification System (NAICS) codes	Examples of regulated entities
Industry	Typically, 2821	Typically, 325211	Facilities which manufacture amino/phenolic resins.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. To determine whether your facility is regulated by this action, you should examine the

applicability criteria in section 63.1400 of 40 CFR part 63. If you have questions regarding the applicability of this action to a particular entity, consult the persons listed in the preceding **SUPPLEMENTARY INFORMATION** section.

Judicial Review. Under section 307(b)(1) of the CAA, judicial review of this rule is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit by March 20, 2000. Under section 307(b)(2) of the CAA, the requirements established by today's promulgated rule may not be challenged later in any civil or criminal proceedings brought by EPA to enforce these requirements.

Outline. The information presented in this preamble is organized as follows:

I. What is the Subject and Purpose of This Rule?

On July 16, 1992 (57 FR 31576), we published an initial list of major and area source categories to be regulated for emissions of HAPs. The Amino Resins Production and Phenolic Resins Production source categories were recorded separately on that initial list.

As we discussed in the proposal preamble (63 FR 68833), the manufacturing processes, the emission characteristics, and applicable control technologies for facilities in these two source categories are similar. Also, commenters on the proposed rule generally agreed that these two source categories should be regulated as one category. Based on these factors, we are announcing the final action to revise the source category list, published under section 112(c) of the CAA, to combine the Amino Resins Production and the Phenolic Resins Production source categories into a new category called ''Amino/Phenolic Resins Production.''

This rule protects air quality and promotes the public health by reducing emissions of some of the HAPs listed in section 112(b)(1) of the CAA. The HAPs emitted by amino/phenolic resin facilities include formaldehyde, methanol, phenol, toluene, and xylene. Exposure to these compounds at certain levels has been demonstrated to cause adverse health effects, including chronic health disorders (*e.g.,* cancer, aplastic anemia, pulmonary (lung) structural changes), acute health disorders (*e.g.,* dyspnea (difficulty in breathing)), and neurotoxic effects.

Formaldehyde is the only HAP associated with this source category that has been classified as a probable human carcinogen (Group B1). Both acute (short-term) and chronic (long-term) exposure to formaldehyde irritates the eyes, nose, and throat, and may cause coughing, chest pains, and bronchitis. Reproductive effects, such as menstrual disorders and pregnancy problems, have been reported in female workers exposed to formaldehyde. Limited human studies have reported an association between formaldehyde exposure and lung and nasopharyngeal cancer. Animal inhalation studies have reported an increased incidence of nasal squamous cell cancer.

Short-term exposure to methanol by humans through inhalation or ingestion may result in visual disturbances such as blurred or dim vision, leading to blindness. Damage to the nervous system, including permanent motor dysfunction, may also result. Long-term inhalation or oral exposure to methanol may cause conjunctivitis, headache, giddiness, insomnia, gastric disturbances, visual disturbances, and blindness in humans. No information is available on the reproductive or developmental effects of methanol in humans. Birth defects have been observed in the offspring of rats exposed to methanol by inhalation.

Inhalation and dermal exposure to phenol is highly irritating to the skin, eyes, and mucous membranes in humans. Oral exposure to phenol may cause muscle weakness and tremors, loss of coordination, paralysis, convulsions, coma, and respiratory arrest. Limited studies on chronic inhalation exposure to phenol in humans have reported liver injury and effects on the heart. No studies of developmental or reproductive effects of phenol in humans are available, but animal studies have reported reduced fetal body weights, growth retardation, and abnormal development in the offspring of animals exposed to phenol by the oral route.

Short-term inhalation of mixed xylenes (a mixture of three closely-related compounds) in humans may cause irritation of the nose and throat, nausea, vomiting, gastric irritation, mild transient eye irritation, and neurological effects. Long-term inhalation of xylenes in humans may result in nervous system effects such as headache, dizziness, fatigue, tremors, and incoordination. Other reported effects include labored breathing, heart palpitation, severe chest pain, abnormal electrocardiograms, and possible effects on the blood and kidneys.

Acute inhalation of toluene by humans may cause effects to the central nervous system (CNS), such as fatigue, sleepiness, headache, nausea, and irregular heartbeat. Adverse CNS effects have been reported in chronic abusers exposed to high levels of toluene. Symptoms include tremors, decreased brain size, involuntary eye movements, and impaired speech, hearing, and vision. Chronic inhalation exposure by humans to lower levels of toluene also causes irritation of the upper respiratory tract, eye irritation, sore throat, nausea, dizziness, headaches, and difficulty with sleep. Studies of children of pregnant women exposed by inhalation to toluene or to mixed solvents have reported CNS problems, facial and limb abnormalities, and delayed development. However, these effects may not be attributable to toluene alone.

As stated in the proposal preamble, we do not have the type of current detailed data on each of the amino/phenolic resin facilities covered by the rule, and the people living around the facilities, that would be necessary to conduct an analysis to determine the actual population exposures to the HAPs emitted from these facilities and potential for resultant health effects.

II. Does This Rule Apply to Me?

This rule applies to you if you own or operate a amino/phenolic resins production unit that is located at a facility that is a major source of HAPs emissions. You do not have to comply with the rule if your facility is a non-

major (area) source. If your facility is a major source under this rule, each group of one or more amino/phenolic resin process units (APPU), plus heat exchange systems and equipment used to comply with the rule such as control and recovery devices, are subject to the rule. Each group of one or more APPU and associated equipment is known as the affected source. You are required to meet the standards for organic HAPs emissions from the following emission points at affected sources: storage vessels, continuous process vents, batch process vents (reactor and non-reactor), heat exchange systems, and equipment leaks. These standards apply to existing and new affected sources.

III. What Procedures Did We Follow To Develop the Rule?

A. Source of Authority and Criteria for NESHAPs Development

Section 112 of the CAA gives us the authority to establish national standards to reduce air emissions from major sources that emit one or more HAPs. Section 112(b) of the CAA lists 188 chemicals, compounds, or groups of chemicals as HAPs. This rule implements section 112(d) of the Act, which requires us to regulate sources of HAPs listed in section 112(b) of the CAA.

Section 112(a)(1) of the CAA defines a major source as:

> * * * any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants. * * *

Section 112(d) requires us to develop standards to control HAPs emissions from both new and existing sources. The statute requires the standards to reflect the maximum degree of reduction in HAPs emissions that is achievable. This control level is referred to as maximum achievable control technology (MACT). New source MACT must be at least as stringent as ''the emission control achieved in practice by the best controlled similar source.'' Existing source MACT must be at least as stringent as ''the average emission limitation achieved by the best performing 12 percent of the existing sources (for which the Administrator has emissions information).'' These minimum stringency levels are known as ''MACT floors.'' Consideration of control levels more stringent than the MACT floor must reflect consideration of the cost of achieving the emission reduction, any non-air quality health and environmental impacts, and energy requirements. Section 112(h) identifies two conditions under which it is not considered feasible to prescribe or enforce emission standards. These conditions include (1) if the HAPs cannot be emitted through a conveyance device, or (2) if the application of measurement methodology to a particular class of sources is not practicable due to technological or economic limitations. If emission standards are not feasible to prescribe or enforce, then the Administrator may instead promulgate equipment, work practice, design, or operational standards, or a combination thereof.

B. Regulatory Background

We proposed the standards in the **Federal Register** on December 14, 1998 (63 FR 68832). In the proposal preamble, we described the approach used to collect and evaluate information pertaining to the MACT floor. As required by the statute (section 112(d)(2) of the Act), we considered regulatory alternatives more stringent than the MACT floor:

> * * * taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements. * * *

In section VII of this preamble, we present major comments and changes made to the proposed rule for reactor and non-reactor batch process vents, continuous process vents, storage vessels, equipment leaks, wastewater, and heat exchange systems.

For the final rule, we used the Generic MACT (GMACT) (40 CFR part 63, subparts SS, UU, and WW) for continuous process vents, equipment leaks, and storage tanks. We modeled the batch process vent provisions after the Group IV Polymers and Resins NESHAP (40 CFR part 63, subpart JJJ). In December 1996, petitions for review of the promulgated rules for the Group I and IV Polymers and Resins NESHAP were filed. The petitioners raised many technical issues and concerns with the drafting clarity of these rules. On March 9, 1999 (64 FR 11560), we proposed correcting amendments to these rules to address the petitioners' issues and any inconsistencies that were discovered during the review process. For purposes of clarity and consistency, we incorporated several changes from the March 9 proposal into this rule. The BID contains a summary of the litigation-based changes that were proposed to the Group IV Polymers and Resins NESHAP that are applicable to this rule.

IV. What are the requirements of the Rule?

A. Summary of the Standards

We are summarizing the promulgated standards for new and existing affected sources in Table 1 and Table 2, respectively. The tables below present the standards by emission point and present the alternative organic HAPs emission limit of 50 parts per million by volume (ppmv), or 20 ppmv outlet organic HAPs concentration for combustion devices.

You must comply with the standards for existing affected sources 3 years from the effective date of the rule. You must comply with the standards for new affected sources upon start-up.

TABLE 1.—STANDARDS FOR NEW AFFECTED SOURCES

Emission point	Applicability criteria	Standard
Storage Vessels	Vessels with capacities of 50,000 gallons or greater with vapor pressures of 2.45 psia or greater Vessels with capacities of 90,000 gallons or greater with vapor pressures of 0.15 psia or greater	95 percent reduction OR alternative standard of venting to a control device continuously achieving a 50 ppmv outlet organic HAPs concentration or 20 ppmv outlet organic HAPs concentration for combustion devices.
Continuous Process Vents	Process vents with a TRE value less than or equal to 1.2	85 percent reduction

TABLE 1.—STANDARDS FOR NEW AFFECTED SOURCES—Continued

Emission point	Applicability criteria	Standard
OR alternative standard of venting to a control device continuously achieving a 50 ppmv outlet organic HAPs concentration or 20 ppmv outlet organic HAPs concentration for combustion devices.		
Reactor Batch Process Vents	No applicability criteria, all reactor batch process vents are subject to control	95 percent reduction over the batch cycle OR 0.0004 lb of HAPs per 1,000 lbs of product produced and 0.045 lb of HAPs per 1,000 lbs of solvent-based product OR alternative standard of venting to a control device continuously achieving a 50 ppmv outlet organic HAPs concentration or 20 ppmv outlet organic HAPs concentration for combustion devices.
Non-Reactor Batch Process Vents	Uncontrolled emissions from the collection of non-reactor batch process vents within the affected source greater than or equal to 0.25 tpy	76 percent reduction for the collection of non-reactor batch process vents within the affected source OR alternative standard of venting to a control device continuously achieving a 50 ppmv outlet organic HAPs concentration or 20 ppmv outlet organic HAPs concentration for combustion devices.
Heat Exchange Systems	No applicability criteria	Monitor for leaks.
Equipment Leaks	The equipment contains or contacts ≥5 weight-percent organic HAP, and operates ≥300 hours per year	Comply with subpart UU leak detection and repair program.

TABLE 2.—STANDARDS FOR EXISTING AFFECTED SOURCES

Emission point	Applicability criteria	Standard
Storage Vessels	Not applicable.	No control requirements.
Continuous Process Vents	Not applicable.	No control requirements.
Reactor Batch Process Vents	No applicability criteria, all reactor batch process vents are subject to control.	83 percent reduction over the batch cycle OR 0.0057 lbs of HAPs per 1,000 lbs of product produced and 0.0567 lb of HAPs per 1,000 lbs of solvent-based product OR alternative standard of venting to a control device continuously achieving a 50 ppmv outlet organic HAPs concentration or 20 ppmv outlet organic HAPs concentration for combustion devices.
Non-Reactor Batch Process Vents	Uncontrolled emissions from collection of non-reactor batch process vents within the affected source greater than or equal to 0.25 tpy.	62 percent reduction for collection of non-reactor batch process vents within the affected source OR alternative standard of venting to a control device continuously achieving a 50 ppmv outlet organic HAPs concentration or 20 ppmv outlet organic HAPs concentration for combustion devices.
Heat Exchange Systems	No applicability criteria.	Monitor for leaks.
Equipment Leaks	The equipment contains or contacts ≥5 weight-percent organic HAP, and operates ≥300 hours per year.	Comply with subpart UU leak detection and repair program.

1. Alternative Standard

As an alternative to the standards presented above for storage vessels, continuous process vents, reactor batch process vents, and non-reactor batch process vents, you can choose to meet an alternative emission limit. Under the alternative emission limit, emissions requiring control may be vented to a control device continuously achieving an outlet concentration of 50 ppmv of organic HAPs or an outlet concentration of 20 ppmv of organic HAPs for combustion devices.

2. Aggregating Batch Process Vent Streams

Batch process vent streams may be combined and controlled at the same level as required for an individual reactor batch process vent.

3. Pollution Prevention Alternatives

For some batch emission episodes, you can operate a condenser as a process condenser for some episodes and as a control device for other batch emission episodes (*e.g.*, gassing operations), provided that certain pollution-prevention measures are taken.

Also, you can use process modifications (*e.g.,* reduced purge rate on a reactor vessel) to reduce emissions from new and existing affected sources. You can take credit toward the emission reduction requirements as part of demonstrating compliance through the permitting process.

B. Compliance and Performance Test Provisions

We based the compliance and performance test provisions on the Hazardous Organic NESHAP (HON), with the following exceptions. First, test methods are different because of the specific HAPs emitted by resins facilities. Second, the specific provisions for batch process vents are based on the provisions from the promulgated Group IV Polymers and Resins NESHAP (40 CFR part 63, subpart JJJ).

We added the following test methods for determining compliance specifically for formaldehyde: Method 316 (a manual method) and Method 320 (a Fourier Transform Infrared Spectroscopy (FTIR) method). You must use either Method 18 or Method 308 for testing for methanol.

Under the rule, if you have control devices receiving 10 tons per year (tpy) (9.1 Mg/yr) or less of uncontrolled HAPs emissions, you are not required to conduct a performance test and instead may perform a design evaluation to demonstrate initial compliance with the rule. Compliance requirements for each type of emission point are discussed briefly in the following paragraphs.

1. Storage Vessels

The standards for new storage vessels refer directly to the Generic MACT storage vessel provisions (40 CFR part 63, subpart WW). The control status of storage vessels is determined based on the storage vessel capacity and vapor pressure of the stored material. Vessels with capacities of 50,000 gallons or greater with vapor pressures of 2.45 pounds per square inch absolute (psia) or greater, and vessels with capacities of 90,000 gallons or greater with vapor pressures of 0.15 psia or greater, are required to reduce emissions of HAPs by 95 percent.

Compliance demonstration provisions include initial and periodic visual inspections of vessels, roof seals, and fittings, as well as internal inspections.

If you choose to comply with the alternative standard for storage vessels using a control device, you must conduct a performance test as specified in the rule to show initial compliance with the standard. Existing storage vessels are not required to be controlled.

2. Continuous Process Vents

The standards for continuous process vents refer directly to the Generic MACT closed vent system provisions (40 CFR part 63, subpart SS) for compliance provisions. At new affected sources, continuous process vents with a total resource effectivess (TRE) index value less than or equal to 1.2 must reduce emissions by 85 percent. The TRE calculation involves an emissions test or engineering assessment.

3. Batch Process Vents

Compliance is demonstrated by showing that, over a batch cycle for an individual reactor, the specified percent reduction is achieved. If a collection of reactor vents is sent to the same control device, compliance is demonstrated by showing the specified percent reduction is achieved over a representative period of time. To demonstrate this, you must develop an emissions profile that identifies each batch emission episode included in the batch process vent, and characterizes emissions from each batch emission episode on a mass emitted per unit time basis. Using this emissions profile, you must show that the periods of under-control and over-control of emissions balance and the batch cycle percent reduction, or the overall percent reduction, is achieved. The rule contains procedures for estimating emissions from individual batch emission episodes, estimating control device efficiency, and for demonstrating that the required percent reduction is achieved.

Procedures for demonstrating compliance with the alternative pound of HAPs per 1,000 pounds of product emission limit are also included in the rule.

4. Heat Exchange Systems

There are no performance test requirements for heat exchange systems. Compliance is demonstrated through the monitoring of cooling water to detect leaks in heat exchange systems. If a leak is detected, you must repair the heat exchange system.

5. Equipment Leaks

The standards for equipment leaks refer directly to the Generic MACT equipment leak provisions (40 CFR part 63, subpart UU). We retained the use of Method 21 in the rule to detect leaks. Method 21 requires a portable organic vapor analyzer to monitor for leaks from equipment in use. A ''leak'' is a concentration specified in the rule for the type of equipment being monitored. In the rule, we require the use of Method 18 to determine the organic content of a process stream.

6. Alternative Standard

a. Initial Compliance Demonstration. The alternative emission limit for storage vessels, continuous process vents, reactor batch process vents, and non-reactor batch process vents differs from the 50 ppmv, or 20 ppmv for combustion devices organic HAP outlet concentration alternative that accompanies the percent reduction requirements for storage vessels and continuous process vents in that a performance test specific to an individual emission point is not required. Instead, an initial demonstration that the control device continuously achieves an organic HAP outlet concentration equal to or less than 50 ppmv, or 20 ppmv for combustion devices is required.

b. Continuous Monitoring Device. An owner or operator may also comply with the 50 ppmv or 20 ppmv for a combustion device organic HAP outlet concentration limit through the use of a continuous emission monitor. An initial compliance demonstration or parametric monitoring is not required to comply with this alternative. Instead, an FTIR is used to continuously demonstrate that a control device achieves the required organic HAP outlet concentration.

C. Monitoring Requirements

After initial compliance is achieved, we require monitoring of HAPs emissions and control and recovery device operating parameters. Under the alternative standard, HAPs emissions are monitored directly as part of the outlet organic HAPs concentration of 50 ppmv, or 20 ppmv for combustion devices. Control device operating parameters are monitored as part of complying with the percent reduction requirements of the rule. The quantity of resin produced and resulting emissions are monitored as part of complying with the pound of HAPs per 1,000 pounds of resin product emission limits for reactor

batch process vents. Emissions per batch cycle are initially determined based on emission estimation equations provided in the rule, direct measurement, or engineering assessment, depending on certain criteria in the rule. You may determine continuous compliance based on these initial emission estimates until a process change makes them no longer appropriate.

We require continuous parameter monitoring for control devices, except where the control device receives less than 1 ton per year of uncontrolled HAPs. In these cases, you must conduct a daily or per batch demonstration to demonstrate that the control device is operating properly. Additionally, if you have control devices serving storage vessels, you are not required to conduct continuous parameter monitoring unless you specify continuous monitoring in the monitoring plan required by the referenced 40 CFR part 63, subpart SS provisions. However, if you use a control device for a storage vessel, you must identify the appropriate monitoring procedures to be followed for compliance demonstration purposes. Further, if a control device serves both a storage vessel(s) and another emission point subject to the rule, the control device is subject to continuous parameter monitoring if the other emission point is subject to continuous parameter monitoring.

You must monitor parameters when emissions are vented to the control device. The rule directly references the 40 CFR part 63, subpart SS monitoring requirements for continuous process vents and storage vessels. However, there are general monitoring requirements specified in the rule (*e.g.,* establishment of parameter monitoring levels) that apply to all emission points.

In the rule, we identify parameters to be monitored for most control devices expected to be used for emission points regulated by the rule. Parameter monitoring levels are established based on design evaluation for control devices with uncontrolled emissions less than 10 tons per year. For all other control devices required to conduct continuous parameter monitoring, parameter monitoring levels are established based on a performance test, but can be supplemented by manufacturer's recommendations and/or an engineering assessment. If you choose to supplement results of the performance test using manufacturer's recommendations and/or engineering assessment, the established parameter monitoring level is subject to review and approval by the Administrator.

You can determine parameter monitoring averages based on all recorded values except for values recorded under certain conditions, for example, under conditions of start-up, shutdown, or malfunction. Parameter averages must be daily averages for control devices serving continuous process vents, storage vessels (if required), or equipment leaks. Parameter averages may be either batch cycle daily averages or block averages for batch process vents. Parameter averages based on batch cycle daily averages cover a 24-hour period, based on the defined operating day, and may or may not cover multiple batch cycles for the batch process vent. A batch cycle daily average may also cover partial batch cycles and, therefore, we require that you provide the information required to calculate parameter monitoring compliance for partial batch cycles. Parameter averages based on block averages cover the complete batch cycle, regardless of the length of time for the batch cycle.

We included provisions for alternate monitoring parameters in the rule. You must apply for approval to monitor an alternate parameter.

D. Recordkeeping and Reporting Requirements

The general recordkeeping and reporting requirements of this rule are very similar to those found in the HON (40 CFR part 63, subparts F, G, and H). You are also required to comply with the notification, recordkeeping, and reporting requirements in the general provisions for this rule, subpart A of 40 CFR part 63. We included a table in the rule that designates which sections of subpart A apply to this rule. Specific recordkeeping and reporting requirements for each type of emission point are also included in the rule. The rule references the recordkeeping and reporting requirements for continuous process vents, storage vessels, and equipment leaks.

You are required to keep records and submit reports of information necessary to document compliance for affected sources. You must keep records for 5 years. The following reports must be submitted to the Administrator as appropriate: (1) Precompliance Report, (2) Notification of Compliance Status, (3) Periodic Reports, and (4) Other Reports. The requirements for each of the four reports are summarized below. In addition, if you are complying with the equipment leak requirements contained in subpart UU, the closed vent requirements in subpart SS, or the storage tank requirements in subpart WW, you must follow the recordkeeping and reporting requirements in the respective subpart.

1. Precompliance Report

You must submit the Precompliance Report no later than 12 months prior to the compliance date. The Precompliance Report includes the following, as appropriate: compliance extension requests; requests to monitor alternative parameters; intent to use alternative controls; intent to use the alternative continuous monitoring and recordkeeping allowed by the rule; requests for approval to use engineering assessment to estimate emissions from a batch emissions episode; information related to establishing parameter monitoring levels; information specified in § 63.1417(e)(2)(iii) of subpart OOO when following the procedures in § 63.1417(e)(2) of subpart OOO for determining compliance with the batch process vent standards; and requests for ceasing to collect monitoring data during a start-up, shutdown, or malfunction when that monitoring equipment would be damaged if it did not cease to collect monitoring data.

You may submit supplements to the Precompliance Report to request the Administrator's approval of items, such as those previously discussed, or to clarify or modify information previously submitted.

2. Notification of Compliance Status

You must submit the Notification of Compliance Status 150 days after the affected source's compliance date. It includes the information necessary to demonstrate that compliance has been achieved for emission points required to be controlled by the rule. Information in the report includes, but is not limited to, the results of any performance tests, one complete test report for each test method used for a particular kind of emission point, TRE determinations for continuous process vents, design analyses for storage vessels and for certain batch process vents, data or other information used to demonstrate use of engineering assessment to estimate emissions for a batch emissions episode, the determination of applicability for flexible operation units, and monitored parameter levels for each emission point and supporting data for the designated level.

3. Periodic Reports

Generally, you are required to submit Periodic Reports semiannually. However, there is an exception. The Administrator may request that you submit quarterly reports for certain emission points that the Administrator identifies. After 1 year, semiannual

reporting can be resumed, unless the Administrator requests continuation of quarterly reports.

Periodic Reports include information required to be reported under the recordkeeping and reporting provisions for each emission point. For continuously monitored parameters, the data for those periods when the parameters are above the maximum or below the minimum established levels are included in the reports. Periodic Reports also include results of any performance tests conducted during the reporting period and instances when required inspections revealed problems.

4. Other Reports

You are also required to submit other reports, including: the notification of inspections required for storage vessels; and reports of changes to the primary product for an APPU or process unit; reports of addition of one or more APPUs, addition of one or more emission points, or change in the status of emission points.

V. What Did We Consider in Developing the Rule?

A. Relationship to Other Rules

If you have affected sources subject to this rule, you may also be subject to other existing rules (see § 63.1401(g)–(j) in the rule).

Affected sources subject to this rule may have storage vessels subject to the New Source Performance Standards (NSPS) for Volatile Organic Liquid Storage Vessels (40 CFR part 60, subpart Kb). For storage vessels subject to and complying with the NSPS, this rule requires that such storage vessels remain in compliance with the NSPS because the NSPS level of control (*i.e.*, 95 percent) is more stringent than the control level for the final rule (*i.e.*, 50 percent). For storage vessels subject to the NSPS but that did not have to apply controls (*e.g.*, the storage vessels store an organic liquid but the vapor pressure of the stored material is below the applicability criteria), this rule states that after the compliance date for the final rule, such storage vessels are only required to comply with this rule and are no longer subject to subpart Kb.

Affected sources subject to this rule may have cooling towers subject to the NESHAP for Industrial Cooling Towers (40 CFR part 63, subpart Q). There is no conflict between the requirements of subpart Q and this rule. Subpart Q prohibits the use of certain chemicals in the cooling tower water, and this rule implements a leak detection and repair program for organic HAPs. Therefore, if you have affected sources subject to both rules, you must comply with both rules. If you own or operate shared heat exchange systems, you may also find that they are already subject to the HON provisions (40 CFR part 63, subpart F). In such cases, compliance with the HON provisions constitutes compliance with the requirements of this rule.

Affected sources subject to this rule may also be subject to the NSPS for Equipment Leaks of Volatile Organic Compounds (VOC) in the Synthetic Organic Chemicals Manufacturing Industry (40 CFR part 60, subpart VV) and/or the National Emission Standards for Organic Hazardous Air Pollutants (*i.e.*, HON) for Equipment Leaks (40 CFR part 63, subpart H). After the compliance date for this final rule, you are only required to comply with this rule for such affected sources and are no longer subject to 40 CFR part 60, subpart VV, or to CFR part 63, subpart H. This rule directly references the Generic MACT equipment leak provisions contained in subpart UU. The provisions contained in subpart UU are equivalent to the HON provisions contained in the proposed rule, and therefore, equivalent to the HON. The provisions contained in subpart UU are more stringent than subpart VV.

Another likely instance of interaction between this rule and other rules is related to storage vessels already covered by the HON; this is likely to occur at amino/phenolic resins production facilities that are collocated with formaldehyde plants subject to the HON. In such cases, a formaldehyde storage vessel supplying formaldehyde to the amino/phenolic resins facility is likely to be subject to the HON. The storage vessel assignment procedures in this rule address such situations. If a storage vessel is already subject to another part 63 standard, that storage vessel is considered to be assigned to the process unit subject to the part 63 standard and is not subject to this rule.

B. Stakeholder and Public Participation

Prior to proposal of the rule, representatives from other interested EPA offices and programs, including Regional Offices and State environmental agency personnel, participated in the rulemaking process. In addition, the industry provided responses to a survey conducted in 1992, and we met with industry members to obtain their input during the regulatory development process. The proposed rule reflected the results of all of those interactions and the information provided by the industry.

We proposed the rule for Amino/Phenolic Resins Production in the **Federal Register** on December 14, 1998 (63 FR 68832), and we specifically requested comments on the basis for the percent reduction standards for reactor batch process vents, development of separate control requirements for reactor and non-reactor batch process vents, methanol emissions from amino/phenolic resins production, use of solvent-based and non-solvent-based alternative emission limits, use of Fourier Transform Infrared Spectroscopy and performance specification 15 (PS–15), definitions of amino and phenolic resin, applicability criteria alternative for storage vessels, and heat exchange systems. We received five comment letters from amino/phenolic resins producers and one letter from control device manufacturers. In addition, after proposal, we considered follow-up information provided by the industry in decisions affecting the final rule. We received no comments from environmental groups or State or local environmental agencies.

We carefully considered the comments and made changes to the proposed rule where determined to be appropriate. We discuss the most significant comments and responses in section VII of this preamble. A detailed discussion of all significant comments and responses on the proposed rule can be found in the BID for amino/phenolic resins, which is referenced in the **ADDRESSES** section of this preamble.

VI. What Are the Impacts of the Standards?

The rule affects 40 amino/phenolic resins facilities that are major sources in themselves or that are located within a major source. The impacts are presented relative to a baseline reflecting the level of control in the absence of the rule. The estimate of the impacts is presented for existing facilities only, since no new facilities are projected to be constructed. For a facility or emission point within a facility already in compliance with the standards, no impacts were estimated.

A. Primary Air Impacts

The standards are estimated to reduce organic HAPs emissions from all existing sources by 361 tpy from a baseline level of 703 tpy. This is a 51 percent reduction. Table 3 summarizes the organic HAPs emission reductions for each of the emission points.

TABLE 3.—ORGANIC HAPS EMISSION REDUCTIONS BY EMISSION POINT FOR EXISTING SOURCES

Emission point	Baseline emissions (tpy)	Emissions after final rule (tpy)	Emission reduction (tpy)	Percent reduction (%)
Reactor Batch Process Vents	223.1	40.2	182.87	82
Non-reactor Batch Process Vents	120.1	60.6	59.5	49.5
Continuous Process Vents	128.3	128.3	0	0
Storage Tanks	72.1	72.1	0	0
Equipment Leaks	159.4	41.0	118.4	74.3
Total	703.1	342.3	360.8	51.3

B. Non-Air Environmental Impacts

The standards are not expected to increase the generation of solid waste at any amino/phenolics resin facility. The use of scrubbers to control emissions will increase water consumption as a result of evaporation and bleed-off (see the proposal preamble at 63 FR 68854 for details). Based upon available information, we expect that affected facilities will be able to either send the scrubber wastewater to a treatment facility or recycle the scrubber wastewater back into the process. Therefore, the use of scrubbers will result in minimal, if any, adverse wastewater impacts.

C. Energy Impacts

We do not anticipate any significant increase in national annual energy usage as a result of this rule. Energy impacts include changes in energy use, typically increases, and secondary air impacts associated with increased energy use. Increases in energy use are associated with fuel for the operation of control equipment; in this case, the use of scrubbers to control reactor vents. Energy credits are attributable to the prevention of organic HAPs emissions from equipment leaks. Secondary air impacts associated with increased energy use are the emission of particulates, sulfur dioxides (SO_X), and nitrogen oxides (NO_X). These secondary impacts are associated with power plants that would supply the increased energy demand.

D. Cost Impacts

Cost impacts include the capital costs of new control equipment, the cost of energy (supplemental fuel and electricity) required to operate control equipment, operation and maintenance costs, and the cost savings generated by reducing the loss of valuable product in the form of emissions. Also, cost impacts include the costs of monitoring, recordkeeping, and reporting associated with the standards. There are no estimated cost impacts for new facilities because no new facilities are expected to be constructed.

Under the rule, the total capital costs for existing sources are estimated at $2.3 million (1998 dollars), and total annual costs are estimated at $3.3 million (1998 dollars) per year, which includes $1.4 million for monitoring, recordkeeping, and reporting. The actual compliance cost impacts of the rule may be less than presented because of the potential to use common control devices, to upgrade existing control devices, and to vent emissions streams into current control devices. Because the effect of such practices is highly site-specific and data were unavailable to estimate how often the lower cost compliance practices could be utilized, it is not possible to quantify the amount by which actual compliance costs would be reduced.

E. Economic Impacts

An economic impact analysis was performed at proposal to estimate the impacts of the rule on affected businesses in the Amino/Phenolic Resins Production source category. That analysis showed that the price and output changes for affected businesses in this source category were an increase of 0.08 percent in product price and output decrease of 0.05 percent in product output, respectively, for amino resin producers and similar estimates for phenolic resin producers (0.07 percent and 0.02 percent, respectively). No plant closures were expected in this source category.

The estimated annual compliance costs of the final rule are roughly $1.9 million as shown in section VI.C. This is a reduction from the compliance costs that were input to the economic impact analysis performed at proposal. Given this reduction in estimated costs, the economic impacts of the final rule would be lower than those estimated at proposal. We, therefore, conclude that the increase in product price would be no more than 0.08 percent for amino resin producers, and 0.07 percent for phenolic resin producers, and the decrease in product outputs would be no more than 0.05 percent for amino resin producers and 0.02 percent for phenolic resin producers.

VII. What Significant Comments Did We Consider and What Major Changes Did We Make to the Proposed Standards?

The major changes that we made to the rule based on public comments include: (1) Reducing the percent reduction standard for reactor batch process vents at existing affected sources and including different alternative emission limits for solvent-based and non-solvent-based resin production, (2) revising the standards for non-reactor batch process vents at new and existing affected sources, (3) deleting the control requirements for storage vessels at existing affected sources, (4) revising the applicability criteria for storage vessels at new affected sources, (5) deleting the HON control level of 98 percent emission reduction for continuous process vents with a TRE value less than or equal to 1.0, (6) dropping the wastewater provisions, and (7) making changes to encourage pollution prevention.

In recognition of the fact that the most commonly used control devices for the amino/phenolic resins industry are recovery devices (*e.g.,* condensers and scrubbers) and not combustion devices, and that 50 ppmv of organic HAPs is a more representative outlet concentration for a recovery device than 20 ppmv, we have increased the minimum HAPs concentration level for defining a process vent from 20 ppmv to 50 ppmv. However, the 50 ppmv mass emission limit is more stringent than the rule requirement to reduce emissions by 83 percent. The 50 ppmv is being offered as an alternative to the required control level and is not intended to be equivalent. In concert with this change in the definition of process vent, we have made changes to the alternative standards for storage vessels (§ 63.1404(c)), continuous process vents (§ 63.1405(f)), reactor batch process vents (§ 63.1406(d)), and non-reactor batch process vents (§ 63.1406(d)). These provisions have been changed to allow you to meet a 50 ppmv emission limit when using a recovery device, but you are still required to meet a 20 ppmv

emission limit when using a combustion device. We determined that 20 ppmv is a representative outlet concentration for combustion devices.

In order to minimize cross referencing and streamline the rule, we changed the proposed rule format. In changing the rule format our intent was not to change the requirements of the proposed standard, but rather to make the final rule easier to understand and implement. The most significant change has been to reference provisions promulgated for the Generic MACT (GMACT) standard (64 FR 34854, June 30, 1999). Instead of referencing the HON for requirements for continuous process vents, equipment leaks, and storage tanks, we reference equivalent GMACT provisions. For closed vent streams from continuous process vents and storage tanks, we reference 40 CFR part 63, subpart SS. For control of storage tanks through the use of floating roofs, we reference 40 CFR part 63, subpart WW. Additionally, for control of equipment leaks, we reference 40 CFR part 63, subpart UU. The control requirements are equivalent to the HON requirements in the proposed rule and do not in any way change the substantive requirements of the rule.

Additionally, we have adopted the GMACT recordkeeping and reporting requirements in the final rule where the GMACT requirements are easier to understand or less burdensome. In instances where, the GMACT requirements are less flexible or more burdensome than the requirements in the proposed rule, we have added language to preserve the flexibility of the proposed rule.

Comments: Two commenters presented new test data to replace their original data which were used in assessing the MACT floor for reactor batch process vents at proposal. In general, the new data indicated that the control devices at several facilities were achieving lower percent emission reductions than reported in the 1992 survey responses used at proposal. The commenters also presented information showing that one facility no longer produces amino/phenolic resins, and another facility does not produce amino/phenolic resins as their primary product. Also, the commenters argued that one facility shares its primary control device (a catalytic incinerator) with another operation covered by a separate MACT source category and, thus, should be removed from the analysis.

Response: Using information submitted by the industry, we revised the MACT floor based on a new set of top performing amino/phenolic resins facilities. The MACT floor for existing sources is set by the average performance achieved by the best performing 12 percent of existing sources.

We elected to set the MACT floor level of control based on the arithmetic average of the control device performance of the top five facilities, which results in a required control level of 82.6 percent (rounded to 83 percent). Although we have discretion to interpret ''average'' as either the arithmetic mean, median, or mode, we selected arithmetic average, since it corresponds to an available control device, and since the universe of control device performance across the industry is a broad continuum. The provisions in the final rule reflect this change in the percent reduction requirement for reactor batch process vents at existing affected sources.

There has been no change to the standard for new affected sources. The same facility that was selected as the best performing facility in the proposal analysis is selected for the reanalysis and, thus, represents new source MACT. We continue to require a 95 percent emission reduction across the batch cycle for reactor batch process vents at new affected sources in the final rule.

Comments: In order to better address the diversity of processes and subsequent emissions of facilities in the industry, commenters suggested that solvent-based and non-solvent-based resin processes have separate requirements, especially for the alternative emission limit (*i.e.,* pound of HAPs per 1,000 pounds of product). The commenters stated that the proposed alternative emission limit reflects only non-solvent-based resin manufacturing. One commenter submitted HAPs emissions data representing phenolic resin manufacturing at its facility, which showed that over 87 percent of the total emissions were attributed to the added solvent. The commenter concluded that failure to make this distinction in the emission standards would result in unfair competition between solvent-based and non-solvent-based resin manufacturers, as the former would need more stringent controls, resulting in a higher cost to control their higher emissions.

Response: We agree with the commenters that separate alternative emission limits to account for the different emission levels for solvent-based and non-solvent-based resin production are appropriate. At proposal, the rule offered a single alternative emission limit value, applicable to both solvent-based and non-solvent-based resin production. However, in reviewing the data and comments since proposal, we recognize that an 83 percent emissions reduction for a solvent-based process is significantly different in terms of a mass emission rate from an 83 percent reduction achieved by a non-solvent-based process. Therefore, separate emission limits (*i.e.,* one for solvent-based resins and one for non-solvent-based resins) yields an alternative that better equates to the floor-level of control than the single mass emission limit in the proposed rule.

For existing affected sources, the alternative emission limits in the final rule are 0.0057 pound of HAPs per 1,000 pounds of non-solvent-based resin produced, and 0.0567 pound of HAPs per 1,000 pounds of solvent-based resin produced. For new affected sources, the alternative emission limits are 0.0004 pound of HAPs per 1,000 pounds of non-solvent-based resin produced, and 0.045 pound of HAP per 1,000 pounds of solvent-based resin produced.

The revised alternative emission limits are based on mass emissions data from the top five performing facilities used to develop the 83 percent control level for the existing source floor. Three of the facilities in the floor were non-solvent-based resin producers and two facilities were solvent-based resin producers. The alternative emission limit for existing facilities was developed by averaging the emissions (HAPs per lb. of product) for the two solvent-based resin facilities to develop the solvent-based resin alternative emission limit. Similarly, the emissions of the three non-solvent-based resin facilities were averaged to develop the alternative emission limitation for the non-solvent-based resin facilities. In this way, we determined the mass emission limit that corresponds to the 83 percent reduction requirement for each type of facility. For new sources the best performing of the two solvent-based facilities was selected to represent the mass emission limit. The best performing non-solvent based facility was chosen for the non-solvent-based new source mass emission limit. By using the five floor facilities to develop the alternative emission limit, we ensured equivalency between the alternative limit and the floor value of an 83 percent reduction for existing sources and a 95 percent reduction for new sources.

We project that solvent-based resin manufacturers will most likely comply with the percent reduction standard, whereas most non-solvent-based resin manufacturers will comply with the alternative emission limit, potentially with little, if any, secondary control

required. A single alternative emission limit recalculated based on the average performance of the top 12 percent (5 facilities) would allow many non-solvent-based resin manufacturers to emit significantly more HAPs than they are currently emitting.

Averaging the emission limits within each industry segment (solvent-based and non-solvent-based) results in values with an order of magnitude difference. Information from other facilities in the data base supports our conclusion that solvent emissions from solvent-based resin production causes the uncontrolled HAPs emission rate to be about an order of magnitude higher than the emission rate from non-solvent-based resin production.

The pound of HAPs per 1,000 pounds of resin product emission limits are presented as alternatives to the percent reduction requirements of the rule. As such, they are meant to express a performance level equivalent to the facilities judged to represent the MACT floor. Therefore, in developing the alternative emission limits, we only considered the population making up the top five performing facilities. In calculating the separate alternative limits, we decided that the presence of two solvent-based and three non-solvent-based resin manufacturers among the top five performing facilities was adequate representation for each segment of the industry.

Comment: Commenters objected to the stringency of the proposed standard for non-reactor batch process vents at new and existing affected sources and the methodology used in developing the standards. One commenter submitted revised control device performance data and requested that the EPA recalculate the non-reactor batch process vent standards using these revised control device efficiencies.

Another commenter claimed that the EPA had mistakenly attributed control to process condensers that are used on their non-reactor batch process vents, and thereby misrepresented the actual control being achieved for non-reactor batch process vents at their facility. Through discussions with this commenter, the commenter had identified three non-reactor batch process vents where they believe the primary condenser is acting as a process condenser.

Also, one commenter objected to the EPA's use of a weighted average to represent the overall performance for an affected source and requested that a straight average be used instead.

Response: We incorporated revised control device performance data into a revised analysis of the MACT floor control level for non-reactor batch process vents. Based on the revised analysis, we are reducing the standard for non-reactor batch process vents at new affected sources from an overall emission reduction of 83 percent to 76 percent for sources with uncontrolled emissions from the collection of non-reactor batch process vents within the affected source greater than or equal to 0.25 tons per year. Similarly, we are also reducing the standard for non-reactor batch process vents at existing affected sources from an overall emission reduction of 68 percent to 62 percent for sources with uncontrolled emissions from the collection of non-reactor batch process vents within the affected source greater than or equal to 0.25 tons per year.

We disagree with using a straight average of control device efficiencies to determine the control level for an individual facility. We believe that the control level should represent the total mass reduction for that facility. Using a straight average of control device efficiencies would result in an inaccurate representation of the actual performance of a facility. For example, if a facility had five non-reactor batch process vents, controlled the single batch process vent that has 90 percent of the emissions, and did not control the other batch process vents, a straight average would represent this facility as poorly controlled; when in fact it is a well-controlled facility.

For existing sources, the MACT floor is based on averaging the individual control levels of the five best performing facilities (top 12 percent). We based the MACT floor for new sources on the single best controlled facility.

Comments: One commenter objected to the methodology used in developing the applicability criteria for non-reactor batch process vents. The commenter objected to the fact that emissions from a single vent, not emissions from a single facility, set the uncontrolled emissions applicability criteria and objected to using the lowest level of uncontrolled emissions (*i.e.*, the smallest value), contrasting this decision to the approach used for storage vessels.

The commenter requested that EPA develop new applicability criteria for non-reactor batch process vents that are based on individual non-reactor batch process vents, rather than on a facilitywide basis. The commenter requested that the new applicability criteria be expressed as pound of emissions per 1,000 pounds of product, as was done for reactor batch process vents, and that they be based on a TRE calculation or calculation from EPA's guideline document entitled ''Control of Volatile Organic Compound Emissions from Batch Processes,'' EPA–453/R–93–017.

Response: We note that not all facilities reported non-reactor batch process vents, although we assume that all facilities have non-reactor batch process vents and stated so in the preamble to the proposed rule. We requested additional data on the presence, emissions, and control status of non-reactor batch process vents in the proposal preamble. No additional data were provided as part of public comments.

Furthermore, the only data available for the reported non-reactor batch process vents are emissions. With emissions being the only information available, approaches like the TRE equation are not possible, and the ability to develop or use other vent-by-vent approaches to applicability criteria is restricted.

Based on data available to the Administrator, we are retaining the MACT floor, defined as a facilitywide control level and a facilitywide applicability criterion.

With regard to the commenter's objection that emissions from a single vent set the uncontrolled emissions cutoff, we did not seek out a single vent to represent the facilitywide emissions cutoff for existing affected sources. The available data indicated that the facility with the lowest emissions happened to only report a single, non-reactor batch process vent.

In response to the commenter's objection to using the facility with the lowest level of uncontrolled emissions to set the facilitywide uncontrolled emissions cutoff for existing affected sources, we must set applicability criteria that will continue to require control for those facilities already controlled at the baseline. We also believe that the commenter misunderstands the approach used for non-reactor batch process vents, compared to the approach used for storage vessels, because the applicability criteria define which facilities must apply controls, not which vents, and because the control requirement is on a total, facilitywide basis, not an individual vent basis. All five facilities defining the MACT floor for existing sources have applied controls to non-reactor batch process vents; therefore, the applicability criteria include all five facilities.

Comments: Some commenters challenged the accuracy of data and information used by EPA as the basis for the proposed standards for storage vessels. The commenters stated that

some of the storage vessels in the database were, in fact, not raw material storage vessels and other storage vessels were already part of their HON MACT affected source.

Response: We addressed these comments by requesting a confirmation of storage vessel data for each of the MACT floor facilities and by conducting a reanalysis of the MACT floor based on the confirmed data. Our reanalysis of the data concludes that there is no floor level of control for the existing source MACT floor and that the new source MACT floor determined at proposal continues to be appropriate.

For existing affected sources, we evaluated the HON level of control for storage vessels as a regulatory alternative beyond the MACT floor of no control. Based on this evaluation, we concluded that the HON control level for storage vessels is not appropriate for the known storage vessel population at amino/phenolic resins facilities, since none of the reported storage vessels meet the HON applicability criteria. Further, the HON control level for storage vessels is not cost effective for a projected, theoretical amino/phenolic resins facility storage vessel population.

Although the revised storage vessel data led us to conclude that the new source MACT floor control level is still appropriate, the applicability criteria, which determines which storage vessels must be controlled, have changed. The final rule now requires that storage vessels at new affected sources with a capacity greater than or equal to 50,000 gallons and with a vapor pressure greater than or equal to 2.45 psia must reduce emissions by 95 percent. Storage vessels at new affected sources with a capacity greater than or equal to 90,000 gallons and with a vapor pressure greater than or equal to 0.15 psia are also required to reduce emissions by 95 percent. The distinction between the storage of aqueous formaldehyde and other chemicals (non-aqueous formaldehyde) that we made in the proposed rule is no longer necessary because a large number of formaldehyde storage vessels were deleted from the analysis.

Comments: One commenter cited some issues related to the use of the TRE equation in the proposed rule. First, the commenter stated that the TRE equation is not well suited for low concentrations (*e.g.*, 100 to 200 ppmv) or low flow emission streams. Second, the commenter stated that the TRE equation should be modified to reflect the reduction of efficiency as the inlet concentration decreases. The commenter stated that the TRE equation assumes that the emission reduction achieved will always be 98 percent, but that this is not the case with low concentration emission streams. The commenter also stated that the effectiveness of incineration declines significantly at inlet concentrations of approximately 1,000 to 1,500 ppmv.

Response: We based the proposed two-tiered standard for continuous process vents at new affected sources on the MACT floor level of control (85 percent emission reduction) for vents that meet the applicability criterion and the HON process vent provisions (98 percent emission reduction). (The proposed rule did not require control of continuous process vents at existing sources.) The applicability criterion chosen to represent the specific continuous process vents that are controlled at the MACT floor is the HON TRE equation for a thermal incinerator. The HON process vent provisions were evaluated as a regulatory alternative beyond the MACT floor for continuous process vents. Although the TRE values at proposal showed that none of the continuous process vents considered in the analysis would be caught by the HON TRE applicability for new sources, we determined that if a new source were to have a continuous process vent within the accepted cost effectiveness (*i.e.*, with a TRE of 1.0 or less), it should be controlled. Therefore, the two-tiered approach was used at proposal. We agree with the commenter that the combustion efficiency is reduced as the inlet concentration decreases and, thus, the TRE equation is not an appropriate method for assessing the cost effectiveness of control beyond the MACT floor for continuous process vents in the amino/phenolic resins industry. Therefore, we deleted the second tier of the continuous process vent standard requiring 98 percent emission reduction for continuous process vents with a TRE value less than or equal to 1.0.

In the final rule, we continue to use the TRE equation as the applicability criteria for continuous process vents at the MACT floor. This decision is based on using the TRE equation to identify certain continuous process vents (*i.e.*, applicability criteria) as opposed to using the TRE equation to determine the cost effectiveness of controls. In the final rule, the standard for continuous process vents at new affected sources is 85 percent emission reduction for continuous process vents with TRE values less than or equal to 1.2.

Comments: Two commenters stated that control of wastewater streams should not be required for new affected sources. One commenter explained that the HAPs commonly present in amino/phenolic resins wastewater streams, such as formaldehyde and methanol, have low emission potential because they are highly soluble and biodegradable. In addition, the commenters stated that attempts to remove highly soluble HAPs from wastewater could lead to an increase in air emissions. The commenters challenged the assumptions used in determining that wastewater control is cost effective for new affected sources. One of the commenters disagreed with EPA's use of ''hypothetical'' wastewater streams, as opposed to data from actual facilities. The second commenter claimed that the wastewater provisions are not cost effective (ranging up to $41,000 per ton). The commenters also stated that EPA's assumption that flow and concentration data reported by industry were representative values (*i.e.*, annual averages) was in conflict with the rule's background document, which stated that the survey response data represented peak, rather than average or normal process conditions. One commenter concluded that if EPA had used the average figures for the new source applicability criteria, that no stream would have been required to control.

Response: We removed the wastewater control requirements for new affected sources from the final rule. At proposal, the new source wastewater requirements were determined to be a cost effective, above-the-floor MACT standard. We used the HON costing algorithm to estimate the cost of controlling wastewater streams which assumes that a combustion device is available to support the steam stripper; this is not an appropriate assumption for the amino/phenolic resins industry. Therefore, the cost analysis at proposal underestimated the costs of controlling wastewater streams for the amino/phenolic resins industry. We projected that if the cost of a combustion device were added to the costs estimated at proposal, the cost effectiveness of the HON wastewater requirements would not be acceptable.

Comments: One commenter requested that the rule allow approaches to encourage pollution prevention through stewardship and source control. The commenter specifically requested that the rule include pollution-prevention compliance alternatives that encourage emission reduction of HAPs through changes in operating practices, raw material substitutions, and process and equipment design modifications. In support of the commenter's request to allow the use of pollution-prevention measures, we received follow-up

information from the industry that included several examples of the environmental benefits (reduced emissions) achievable through the use of pollution-prevention measures.

The commenter stated that their facility has over-sized condensers after their reactors which operate during gassing operations to recover valuable solvent. The commenter stated that unless the rule defines their condensers as a control device during gassing operations, they would be forced to turn off the condenser during this phase to have enough emissions going to a control device to achieve the specified percent reduction. The commenter pointed out that shutting off the condenser would result in 70 pounds per hour of HAP emissions going to a control device that could have been recovered and reused.

The commenter further pointed out that other facilities in the industry typically operate smaller condensers, and they are not operated during the reactor degassing phase. Under this more typical operating scenario, the emissions exiting the process condenser would be much higher and, thus, the percentage reduction would be achievable. The commenter pointed out that under the Pharmaceuticals Production NESHAP, the condenser immediately following a reactor vessel can be a process condenser during some operations (*i.e.*, reflux) and a control device during other operations (*i.e.*, gassing). The commenter requested that EPA adopt the approach used in the Pharmaceuticals Production NESHAP.

The commenter stated that in addition to recovering material with process condensers, there are many other types of pollution prevention that the rule should encourage. One example provided was the use of a reduced nitrogen purge rate for the reactor. The commenter stated that the emission of HAPs during purging operations could be reduced by up to 80 percent if the nitrogen purge rate was reduced. The commenter pointed out that although this process change would save energy, nitrogen, and raw materials, like the condenser situation, the change would result in an emissions rate too low to then be further controlled to meet the specified percent HAPs emission reduction.

Response: We agree with the commenter that the rule should encourage compliance through pollution-prevention alternatives. To that end, we made two groups of changes to the final rule. First, we made changes to allow a condenser to operate as a process condenser for some batch emission episodes and to operate as a control device for other batch emission episodes (*e.g.,* gassing operations), provided that certain pollution-prevention measures are taken. Second, we made changes to encourage and clarify the use of process modifications (*e.g.,* reduced purge rate on a reactor vessel) to reduce emissions and to receive credit toward the emission reduction requirements of the rule.

We are establishing these changes in concert with the philosophy of pollution prevention. We have the potential to achieve equal or better pollution reduction, while also reducing emissions to other media. However, we do not have enough quantitative data to know how much of a reduction in emissions a facility can achieve through using pollution-prevention measures. Since we do not know what percent reduction in emissions to assign to the pollution-prevention approach, we cannot directly compare it to more traditional approaches. For these reasons, while there is a facility in the industry using some of these pollution-prevention approaches, we did not attempt to assign them a percent emissions reduction and include them in a determination of the floor.

To implement the changes described above, we revised several definitions, added a definition of *inprocess recycling,* specified in the batch process vent performance testing and compliance demonstration provisions when a condenser can function as a control device, and added a recordkeeping/demonstration requirement to ensure that inprocess recycling is taking place.

We revised the definitions of *air pollution control device, process condenser,* and *uncontrolled HAP emissions* as part of making this change. The revisions to the definition of *air pollution control device* specify the conditions under which a condenser, that at times operates as a process condenser, can be considered to be a control device. The revisions to the definition of *uncontrolled emissions* allow emissions to be calculated prior to a condenser that is operating as a control device provided the recovered HAPs are used in inprocess recycling. When a condenser operates as a control device, the condenser must not be operating as a process condenser. Uncontrolled emissions are still calculated after a condenser when it is operating as a process condenser.

We intended for the proposed standards to provide flexibility to use pollution-prevention measures, such as reduced purge rates. To ensure sources have the flexibility to implement a variety of pollution-prevention measures, we made minor changes in the final rule in terms of the definition of control device and added a definition of *control technology*. The new definition of control technology will allow the implementation of reduced reactor purge rates and other pollution-prevention measures.

We are adding these measures to the final rule to provide facilities flexibility and the opportunity to take credit for their pollution-prevention measures, provided certain conditions are met. We do not, however, assume that a facility using a pollution-prevention approach will be operating in compliance with the standard. Any facility using this approach must demonstrate that it is meeting the percent reduction required by the rule.

Comments: Two commenters expressed concerns regarding the equipment leak analysis supporting the proposed standard (*i.e.,* the HON leak detection and repair (LDAR) program) for equipment leaks. The commenters' main concerns were that: (1) The use of the average synthetic organic chemical manufacturing industry (SOCMI) emission factors overstated emissions from amino/phenolic resins facilities, (2) the costs were understated (*e.g.,* by always using the lower cost assumption), and (3) experience with LDAR programs at other facilities showed that LDAR programs were costly and ineffective. The commenters believed that no LDAR program should be implemented for amino/phenolic resins facilities or, at most, a LDAR program based on the presumptive MACT level (*i.e.,* the monthly LDAR program pursuant to SOCMI subpart VV to 40 CFR part 63) should be implemented. One commenter also stated that the State of Massachusetts Regulation CMR 7.18(19), upon which the MACT floor for new facilities was based, had been mischaracterized.

Response: In consideration of these comments, we conducted a reanalysis of the MACT floor and regulatory alternatives above the floor for implementing the LDAR program for emissions from equipment leaks for both new and existing affected sources. We made the following major changes in the reanalysis:

- Only included those facilities that provided facility-specific information on component counts, percent HAPs contacting the components, and time in HAPs service.
- Used the State of Massachusetts Regulation CMR 7.18(19) in lieu of SOCMI subpart VV to represent the new source MACT floor.
- Used the State of Massachusetts Regulation CMR 7.18(19) instead of

SOCMI subpart VV to 40 CFR part 63 as a regulatory alternative above the floor (MACT floor is no control) for existing sources.

The average SOCMI emission factors continue to reflect the best data available to represent LDAR emissions from this industry.

We modified the costing algorithm to include costs associated with components in heavy liquid service; these costs were not included at proposal. However, we concluded that other assumptions used in the proposal costing are valid and have been retained in the reanalysis. We continue to believe that facilities will try to minimize their costs in implementing LDAR programs, and the use of assumptions that minimize costs is, therefore, reasonable.

The results of the reanalysis confirm that it is cost effective to go beyond the MACT floor for existing and new affected sources to include a HON-based LDAR program at amino/phenolic resins facilities in the final rule. The average incremental cost effectiveness of implementing the HON-based LDAR program is $1,677 per ton of emission reduction for both new and existing affected sources.

Comments: Two commenters stated that heat exchange systems should not be regulated for the following reasons. First, there were no data or other evidence to justify including the provisions. Second, the MACT floor for the control of heat exchange systems was not determined, and an analysis of control beyond the MACT floor was not done.

These two commenters stated that the pressure on the cooling side of process condensers, which is a commonly used heat exchange system, normally exceeds the pressure on the process side. This means that the cooling water would tend to leak into the process liquid, rather than the process liquid leaking into the cooling water and ultimately resulting in HAPs emissions from the cooling towers. Therefore, the commenters reasoned that the requirement for routine measurements and recordkeeping of the heat exchange systems is not warranted.

Response: We believe that heat exchange systems are a potential source of emissions; therefore, we retained the work practice standard in the final rule. We are not aware that the operation of heat exchange systems in the amino/phenolic resins industry is different than their operation in the SOCMI, which were determined to warrant control under the HON MACT (40 CFR part 63, subpart F). The compounds in Table 4 of the HON MACT (40 CFR part 63, subpart F) include formaldehyde, methanol, phenol, toluene, and xylene as HAPs with potential to be emitted from cooling towers. These are the major HAPs emitted by the amino/phenolic resins industry.

The heat exchange system requirements are a specific example of an emission control program necessary for the source to be operated in a manner consistent with good air pollution control practices, as specified in § 63.6(e)(1)(I) of the General Provisions for 40 CFR part 63 regulations. Because some form of monitoring is already being conducted to meet State requirements or other rules, the cost of monitoring the heat exchange system for leaks is minimal. The program is already being applied if an APPU uses a shared cooling system at sites covered by the HON or other polymer and resin rules.

Finally, the final rule retains the monitoring exemption included at proposal for a heat exchange system that operates with a pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side. With this pressure differential, any leakage would be into the process fluid, not into the cooling water.

VIII. What Are the Administrative Requirements of the Rule?

A. Executive Order 12866

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the EPA must determine whether the regulatory action is ''significant'' and therefore subject to review by the Office of Management and Budget (OMB) and the requirements of the Executive Order. The Executive Order defines ''significant regulatory action'' as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

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

Pursuant to the terms of Executive Order 12866, it has been determined that this rule is not a ''significant regulatory action'' and is therefore not subject to OMB review.

B. Executive Order 13084—Consultation and Coordination with Indian Tribal Governments

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to OMB, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments ''to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities.''

Today's rule does not significantly or uniquely affect the communities of Indian tribal governments. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this rule.

C. Executive Order 13045

Executive Order 13045: ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997), applies to any rule that: (1) Is determined to be ''economically significant'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the rule meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5–501 of the Executive Order has the potential to influence the regulation. This rule is not

subject to Executive Order 13045 because it is based on technology performance and not on health or safety risks.

D. Executive Order 13132

Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure ''meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' is defined in the Executive Order to include regulations that have ''substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.'' Under Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. The EPA also may not issue a regulation that has federalism implications and that preempts State law unless the Agency consults with State and local officials early in the process of developing the proposed regulation.

If EPA complies by consulting, Executive Order 13132 requires EPA to provide to OMB, in a separately identified section of the preamble to the rule, a federalism summary impact statement (FSIS). The FSIS must include a description of the extent of EPA's prior consultation with State and local officials, a summary of the nature of their concerns and the Agency's position supporting the need to issue the regulation, and a statement of the extent to which the concerns of State and local officials have been met. Also, when EPA transmits a draft final rule with federalism implications to OMB for review pursuant to Executive Order 12866, EPA must include a certification from the Agency's Federalism Official stating that EPA has met the requirements of Executive Order 13132 in a meaningful and timely manner.

This final rule will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. Thus, the requirements of section 6 of the Executive Order do not apply to this rule.

E. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Pub. L. 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures by State, local, and tribal governments, in the aggregate, or by the private sector, of $100 million or more in any 1 year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify the least costly, most cost-effective, or least burdensome alternative that achieves the objective of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

The EPA has determined that this rule does not include a Federal mandate that may result in expenditures of $100 million or more for State, local, or tribal governments, in the aggregate, or to the private sector in any 1 year. The maximum total annual cost of this rule for any year has been estimated to be less than $3 million. Thus, today's rule is not subject to the requirements of sections 202 and 205 of the UMRA. In addition, EPA has determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments since it does not impose any obligations on such governments. Therefore, today's final rule is not subject to the requirements of section 203 of the UMRA.

F. Regulatory Flexibility

After considering the economic impacts of today's final rule on small entities, EPA has determined that this action will not have a significant economic impact on a substantial number of small entities and that it is not necessary to prepare a regulatory flexibility analysis in connection with this final rule. We have determined that of the twenty affected firms, only six are small businesses. The mean annual cost as a percentages of an affected small firm sales will be much less than 1 percent (0.08 percent), and no higher than 0.38 percent for any affected small firm

Although this final rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless has tried to reduce the impact of this rule on small entities. In order to minimize the impact of the rule for leaking equipment, we have exempted firms producing less than 881 tpy (800 Mg/yr) from complying with requirements to have a leak detection and repair program.

G. Paperwork Reduction Act

The information collection requirements in this rule will be submitted for approval to the Office of Management and Budget under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* An Information Collection Request (ICR) document has been prepared by EPA (ICR No. 1856.02) and a copy may be obtained from Sandy Farmer by mail at OP Regulatory Information Division, U.S. Environmental Protection Agency (2137), 401 M Street SW, Washington, DC 20460, by email at farmer.sandy@epa.gov, or by calling (202) 260–2740. A copy may also be downloaded off the internet at http://www.epa.gov/icr. The information requirements are not effective until OMB approves them.

The information requirements are based on notification, recordkeeping, and reporting requirements in the NESHAP General Provisions (40 CFR part 63, subpart A), which are mandatory for all operators subject to national emission standards. These recordkeeping and reporting requirements are specifically authorized by section 114 of the Act (42 U.S.C. 7414). All information submitted to the EPA pursuant to the recordkeeping and reporting requirements for which a claim of confidentiality is made is

safeguarded according to Agency policies set forth in 40 CFR part 2, subpart B.

The rule requires maintenance inspections of the control devices but would not require any notifications or reports beyond those required by the General Provisions. The recordkeeping requirements require only the specific information needed to determine compliance.

The annual monitoring, reporting, and recordkeeping burden for this collection (averaged over the first 3 years after the effective date of the rule) is estimated to be 32,252 labor hours per year at a total annual cost of $1,441,539. This estimate includes a one-time performance test and report (with repeat tests where needed); one-time purchase and installation of bag leak detection systems; one-time submission of a startup, shutdown, and malfunction plan with semiannual reports for any event when the procedures in the plan were not followed; semiannual excess emission reports; maintenance inspections; notifications; and recordkeeping. Total capital/startup costs associated with the monitoring requirements over the 3-year period of the ICR are estimated at $80,000, with no operation and maintenance costs.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An Agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR Part 9 and 48 CFR Chapter 15. The OMB control number(s) for the information collection requirements in this rule will be listed in an amendment to 40 CFR part 9 or 48 CFR Chapter 15 in a subsequent **Federal Register** document after OMB approves the ICR.

H. National Technology Transfer and Advancement Act

As noted in the proposed rule, section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Pub. L. 104–113, section 12(d) (15 U.S.C. 272 note), directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., material specifications, test method, sampling procedures, and business practices) that are developed or adopted by one or more voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This rulemaking involves technical standards. Therefore, the Agency conducted a search to identify potentially applicable voluntary consensus standards. However, we identified no such standards, and none were brought to our attention in comments. Therefore, we have decided to retain the standards in the proposed rule.

I. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801, *et seq.*, as added by the SBREFA of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. Therefore, EPA will submit a report containing this rule and other required information to the United States Senate, the United States House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A ''major rule'' cannot take effect until 60 days after it is published in the **Federal Register**. This rule is not a ''major rule'' as defined by 5 U.S.C. 804(2). This rule will be effective January 20, 2000.

List of Subjects in 40 CFR Part 63

Environmental protection, Administrative practice and procedure, Air pollution control, Amino/phenolic resins production, Hazardous substances, Reporting and recordkeeping requirements.

Dated: December 15, 1999.

Carol M. Browner,

Administrator.

For the reasons set out in the preamble, title 40, chapter I, part 63 of the Code of Federal Regulations is amended as follows:

PART 63—[AMENDED]

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401, *et seq.*

2. Part 63 is amended by adding subpart OOO to read as follows:

Subpart OOO—National Emission Standards for Hazardous Air Pollutant Emissions: Manufacture of Amino/Phenolic Resins

Sec.

§ 63.1400 Applicability and designation of affected sources.

(a) *Applicability.* The provisions of this subpart apply to the owner or operator of processes that produce amino/phenolic resins and that are located at a plant site that is a major source as defined in § 63.2.

(b) *Affected source.* The affected source is:

(1) The total of all amino/phenolic resin process units (APPU);

(2) The associated heat exchange systems;

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

(4) Equipment that does not contain organic hazardous air pollutants (HAPs) and is located within an APPU that is part of an affected source;

(5) Vessels and equipment storing and/or handling material that contain no organic HAP and/or organic HAP as impurities only;

(6) Equipment that is intended to operate in organic HAP service for less than 300 hours during the calendar year;

(7) Each waste management unit; and

(8) Maintenance wastewater.

(c) *Existing affected source.* The affected source to which the existing source provisions of this subpart apply is defined in paragraph (b) of this section.

(d) *New affected source.* The affected source to which the new source provisions of this subpart apply is:

(1) Each affected source defined in paragraph (b) of this section that commences construction or reconstruction after December 14, 1998;

(2) Each additional group of one or more APPU and associated heat exchange systems that has the potential to emit 10 tons per year or more of any organic HAP or 25 tons per year or more of any combination of organic HAP that commences construction after December 14, 1998; or

(3) Each group of one or more process units and associated heat exchange systems that are converted to APPUs after December 14, 1998, that has the potential to emit 10 tons per year or more of any organic HAP or 25 tons per year or more of any combination of organic HAP.

(e) *APPUs without organic HAP.* An APPU that is part of an affected source, as defined in paragraph (c) or (d) of this section, but that does not use or manufacture any organic HAP, is not subject to any other provisions of this subpart and is not required to comply with the provisions of subpart A of this part. When requested by the Administrator, the owner or operator shall demonstrate that the APPU does not use or manufacture any organic HAP. Types of information that could document this determination include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations, or process knowledge.

(f) *Exemption from equipment leak provisions.* Affected sources with actual annual production of amino/phenolic resin equal to or less than 800 megagrams per year (Mg/yr) for the 12-month period preceding December 14, 1998 are exempt from the equipment leak provisions specified in § 63.1410. The owner or operator utilizing this exemption shall recheck the actual annual production of amino/phenolic resins for each 12-month period following December 14, 1998. The beginning of each 12-month period shall be the anniversary of December 14, 1998. If the actual annual production of amino/phenolic resins is greater than 800 Mg/yr for any 12-month period, the owner or operator shall comply with § 63.1410 for the life of the affected source or until the affected source is no longer subject to the provisions of this subpart.

(g) *Primary product determination and applicability.* For purposes of this paragraph, amino resins and phenolic resins shall be considered to be the same product and production time or production mass of amino and phenolic resins shall be combined for purposes of determining the primary product under this paragraph (g). If the owner or operator determines that a process unit is not an APPU under paragraphs (g)(1) through (4) of this section, the owner or operator shall, when requested by the Administrator, demonstrate that the process unit is not an APPU.

(1) *Applicability determinations for process units producing multiple products.* A process unit that produces more than one intended product at the same time is an APPU if amino/phenolic resin production accounts for the greatest percent of the annual design capacity on a mass basis. If a process unit has the same annual design capacity on a mass basis for two or more products, the process unit shall be an APPU if amino/phenolic resins are one of those products.

(2) *Flexible operations process unit determination based on operating time.* A flexible operations process unit is an APPU if amino/phenolic resins will be produced for the greatest operating time over the 5 years following December 14, 1998 at existing process units, or for the first year after the process unit begins production of any product for new process units.

(3) *Flexible operations process unit determination based on mass production basis.* A flexible operations process unit that will manufacture multiple products equally based on operating time is an APPU if amino/phenolic resins account for the greatest percentage of the expected production on a mass basis over the 5 years following December 14, 1998 at existing process units, or for the first year after the process unit begins production of any product for new process units.

(4) *Flexible operations process unit default determination.* If the owner or operator cannot determine whether or not amino/phenolic resins are the primary product of a flexible operations process unit in accordance with paragraphs (g)(2) and (3) of this section, the flexible operations process unit shall be designated as an APPU if amino/phenolic resins were produced for 5 percent or greater of the total operating time since December 14, 1998 for existing process units. The flexible operations process unit shall be designated as an APPU if the owner or operator anticipates that amino/phenolic resins will be manufactured in the flexible operations process unit at any time in the first year after the date the unit begins production of any product for new process units.

(5) *Annual applicability determination for non-APPUs that have produced amino/phenolic resins.* Once per year beginning December 14, 2003, the owner or operator of each flexible operations process unit that is not designated as an APPU, but that has produced amino/phenolic resins at any time in the preceding 5-year period or since the date that the unit began production of any product, whichever is shorter, shall perform an evaluation to determine whether the process unit has become an APPU. A flexible operations process unit has become an APPU if amino/phenolic resins were produced for the greatest operating time over the preceding 5-year period or since the date that the process unit began production of any product, whichever is shorter.

(6) *Applicability determination for non-APPUs that have not produced amino/phenolic resins.* The owner or operator that anticipates the production of amino/phenolic resins in a process unit that is not designated as an APPU, and in which no amino/phenolic resins have been produced in the previous 5-year period or since the date that the process unit began production of any product, whichever is shorter, shall determine if the process unit will become an APPU. The owner or operator shall use the procedures in paragraphs (g)(1) through (4) of this section to determine if the process unit is designated as an APPU, with the following exception: for existing process units, production shall be projected for the 5 years following the date that the owner or operator anticipates initiating the production of amino/phenolic

resins, instead of the 5 years following December 14, 1998.

(7) *Redetermination of applicability to APPU that are flexible operations process units.* Whenever changes in production occur that could reasonably be expected to cause a flexible operations process unit to no longer be an APPU (*i.e.*, amino/phenolic resins will no longer be the primary product according to the determination procedures in paragraphs (g)(2) through (4) of this section), the owner or operator shall reevaluate the status of the process unit as an APPU. A flexible operations process unit has ceased to be an APPU subject to this subpart if the following criteria are met:

(i) If amino/phenolic resins were not produced for the greatest operating time over the preceding 5-year period or since the date that the process unit began production of any product, whichever is shorter;

(ii) If the new primary product, which is not amino/phenolic resins, is subject to another subpart of this part; and

(iii) If the owner or operator has notified the Administrator of the pending change in status for the flexible operations process unit, as specified in § 63.1417(h)(4).

(8) *APPU terminating production of all amino/phenolic resins.* If an APPU terminates the production of all amino/phenolic resins and does not anticipate the production of any amino/phenolic resins in the future, the process unit is no longer an APPU and is not subject to this subpart after notification is made to the Administrator, as specified in § 63.1417(h)(4).

(h) *Storage vessel applicability determination.* The owner or operator of a storage vessel at a new affected source shall determine assignment to a process unit as follows:

(1) If a storage vessel is already subject to another subpart of part 63 on January 20, 2000, said storage vessel shall continue to be assigned to the process unit subject to the other subpart.

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

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

(4) If predominant use cannot be determined for a storage vessel that is shared among process units, and if one or more of those process units is an APPU subject to this subpart, the storage vessel shall be assigned to any of the APPUs.

(5) [Reserved]

(6) If the predominant use of a storage vessel varies from year to year, then predominant use shall be determined based on the use as follows:

(i) For existing affected sources, use shall be determined based on the following:

(A) The year preceding January 20, 2000; or

(B) The expected use for the 5 years following January 20, 2000.

(ii) For new affected sources, use shall be determined based on the first 5 years after initial start-up.

(7) Where the storage vessel is located in a tank farm (including a marine tank farm), the assignment of the storage vessel shall be determined according to paragraphs (h)(7)(i) and (ii) of this section. Only those storage vessels where a portion or all of the input into or output from the storage vessel is hardpiped directly to one or more process units are covered by this paragraph.

(i) The storage vessel is assigned to a process unit if the product or raw material entering or leaving the process unit flows directly into (or from) the storage vessel in the tank farm without passing through any intervening storage vessel. An intervening storage vessel means a storage vessel connected by hardpiping both to the process unit and to the storage vessel in the tank farm.

(ii) If there are two or more process units that meet the criteria of paragraph (h)(7)(i) of this section with respect to a storage vessel, the storage vessel shall be assigned to one of those process units according to the provisions of paragraphs (h)(3) through (6) of this section.

(8) If the storage vessel begins receiving material from (or sending material to) a process unit that was not included in the initial determination, or ceases to receive material from (or send material to) a process unit, the owner or operator shall reevaluate the applicability of this subpart to the storage vessel according to the procedures in paragraphs (h)(3) through (7) of this section.

(i) *Applicability of other subparts to this subpart.* Paragraphs (i)(1) through (5) describe the applicability of other subparts to this subpart.

(1) After the compliance dates specified in this section, a storage vessel that is assigned to an affected source subject to this subpart that is also subject to and complying with the provisions of 40 CFR part 60, subpart Kb, shall continue to comply with 40 CFR part 60, subpart Kb. After the compliance dates specified in this section, a storage vessel that is assigned to an affected source subject to this subpart that is also subject to the provisions of 40 CFR part 60, subpart Kb, but the owner or operator has not been required to apply controls as part of complying with 40 CFR part 60, subpart Kb, is required to comply only with the provisions of this subpart. After the compliance dates specified in this section, said storage vessel shall no longer be subject to 40 CFR part 60, subpart Kb.

(2) Affected sources subject to this subpart that are also subject to the provisions of subpart Q of this part shall comply with both subparts.

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

(4) After the applicable compliance date specified in this subpart, if a heat exchange system subject to this subpart is also subject to a standard identified in paragraph (i)(4)(i) or (ii) of this section, compliance with the applicable provisions of the standard identified in paragraph (i)(4)(i) or (ii) of this section shall constitute compliance with the applicable provisions of this subpart with respect to that heat exchange system.

(i) Subpart F of this part.

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

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

compliance with the monitoring, recordkeeping and reporting requirements of this subpart. If the owner or operator elects to comply with the monitoring, recordkeeping, and reporting requirements in 40 CFR parts 264 and/or 265, the owner or operator shall report all information required by § 63.1417(f), Periodic Reports, as part of complying with the requirements of 40 CFR parts 264 and/or 265.

(j) *Applicability of General Provisions.* Table 1 of this subpart specifies the provisions of subpart A of this part that apply and do not apply to owners and operators of affected sources subject to this subpart.

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

(1) The emission limitations set forth in this subpart and the emission limitations referred to in this subpart shall apply at all times except during periods of non-operation of the affected source (or specific portion thereof) resulting in cessation of the emissions to which this subpart applies. The emission limitations of this subpart and the emission limitations referred to in this subpart shall not apply during periods of start-up, shutdown, or malfunction. During periods of start-up, shutdown, or malfunction, the owner or operator shall follow the applicable provisions of the start-up, shutdown, and malfunction plan required by § 63.6(e)(3). However, if a start-up, shutdown, malfunction, or period of non-operation of one portion of an affected source does not affect the ability of a particular emission point to comply with the emission limitations to which it is subject, then that emission point shall still be required to comply with the applicable emission limitations of this subpart during the start-up, shutdown, malfunction, or period of non-operation. For example, if there is an overpressure in the reactor area, a storage vessel that is part of the affected source would still be required to be controlled in accordance with § 63.1404.

(2) The emission limitations set forth in 40 CFR part 63, subpart UU, as referred to in § 63.1410, shall apply at all times except during periods of non-operation of the affected source (or specific portion thereof) in which the lines are drained and depressurized resulting in cessation of the emissions to which § 63.1410 applies, or during periods of start-up, shutdown, malfuncton, or process unit shutdown. During periods of start-up, shutdown, malfunction, or process unit shutdown, the owner or operator shall follow the applicable provisions of the start-up, shutdown, and malfunction plan required by § 63.6(e)(3).

(3) The owner or operator shall not shut down items of equipment that are required or utilized for compliance with this subpart during periods of start-up, shutdown, or malfunction; or during times when emissions are being routed to such items of equipment if the shutdown would contravene requirements of this subpart applicable to such items of equipment. This paragraph does not apply if the item of equipment is malfunctioning. This paragraph also does not apply if the owner or operator shuts down the compliance equipment (other than monitoring systems) to avoid damage due to a contemporaneous start-up, shutdown, or malfunction of the affected source or portion thereof. If the owner or operator has reason to believe that monitoring equipment would be damaged due to a contemporaneous start-up, shutdown, or malfunction of the affected source or portion thereof, the owner or operator shall provide documentation supporting such a claim in the Precompliance Report as provided in § 63.1417(d)(9) or in a supplement to the Precompliance Report. Once approved by the Administrator in accordance with § 63.1417(d)(9), the provision for ceasing to collect, during a start-up, shutdown, or malfunction, monitoring data that would otherwise be required by the provisions of this subpart shall be incorporated into the start-up, shutdown, malfunction plan for the affected source, as stated in paragraph (k) of this section.

(4) During start-ups, shutdowns, and malfunctions when the emission limitations of this subpart do not apply pursuant to paragraphs (k)(1) through (3) of this section, the owner or operator shall implement, to the extent reasonably available, measures to prevent or minimize excess emissions to the extent practical. For purposes of this paragraph, the term ''excess emissions'' means emissions in excess of those that would have occurred if there were no start-up, shutdown, or malfunction and the owner or operator complied with the relevant provisions of this subpart. The measures to be taken shall be identified in the applicable start-up, shutdown, and malfunction plan, and may include, but are not limited to, air pollution control technologies, recovery technologies, work practices, pollution prevention, monitoring, and/or changes in the manner of operation of the affected source. Back-up control devices are not required, but may be used if available.

§ 63.1401 Compliance schedule.

(a) New affected sources that commence construction or reconstruction after December 14, 1998, shall be in compliance with this subpart upon initial start-up or January 20, 2000, whichever is later.

(b) Existing affected sources shall be in compliance with this subpart no later than 3 years after January 20, 2000.

(c) If an affected source using the exemption provided in § 63.1400(f) has an actual annual production of amino/phenolic resins exceeding 800 Mg/yr for any 12-month period, the owner or operator shall comply with the provisions of § 63.1410 for the affected source within 3 years. The starting point for the 3-year compliance time period shall be the end of the 12-month period in which actual annual production for amino/phenolic resins exceeds 800 Mg/yr.

(d) Pursuant to section 112(i)(3)(B) of the Clean Air Act, an owner or operator may request an extension allowing the existing affected source up to 1 additional year to comply with section 112(d) standards. For purposes of this subpart, a request for an extension shall be submitted to the permitting authority as part of the operating permit application or to the Administrator as a separate submittal or as part of the Precompliance Report.

(1) Requests for extensions shall be submitted no later than 120 days prior to the compliance dates specified in paragraphs (a) and (b) of this section and shall include the data described in § 63.6(i)(6)(i)(A), (B), and (D). The dates specified in § 63.6(i) for submittal of requests for extensions shall not apply to this subpart.

(2) An owner or operator may submit a compliance extension request less than 120 days prior to the compliance dates specified in paragraphs (a) and (b) of this section provided that the need for the compliance extension arose after that date, and the need arose due to circumstances beyond reasonable control of the owner or operator. This request shall include, in addition to the information specified in § 63.6(i)(6)(i)(A), (B), and (D), a statement of the reasons additional time is needed and the date when the owner or operator first learned of the circumstances necessitating a request for compliance extension.

(e) All terms in this subpart that define a period of time for completion of required tasks (*e.g.*, weekly, monthly, quarterly, annual), unless specified

otherwise, refer to the standard calendar periods.

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

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

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

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

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

§ 63.1402 Definitions.

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

Act (§ 63.2)
Administrator (§ 63.2)
Annual average concentration (§ 63.111)
Annual average flow rate (§ 63.111)
Automated monitoring and recording system (§ 63.111)
Boiler (§ 63.111)
Bottoms receiver (§ 63.161)
By compound (§ 63.111)
By-product (§ 63.101)
Car-seal (§ 63.111)
Closed-vent system (§ 63.111)
Combustion device (§ 63.111)
Commenced (§ 63.2)
Compliance date (§ 63.2)
Connector (§ 63.161)
Construction (§ 63.2)
Continuous monitoring system (§ 63.2)
Distillation unit (§ 63.111)
Duct work (§ 63.161)
Emission standard (§ 63.2)
EPA (§ 63.2)
External floating roof (§ 63.111)
First attempt at repair (§ 63.111)
Flame zone (§ 63.111)
Floating roof (§ 63.111)
Flow indicator (§ 63.111)
Fuel gas (§ 63.101)
Fuel gas system (§ 63.101)
Hard-piping (§ 63.111)
Hazardous air pollutant (§ 63.2)
Impurity (§ 63.101)
Inorganic hazardous air pollutant service (§ 63.161)
Incinerator (§ 63.111)
Instrumentation system (§ 63.161)
Internal floating roof (§ 63.111)
Lesser quantity (§ 63.2)
Major source (§ 63.2)
Open-ended valve or line (§ 63.161)
Operating permit (§ 63.101)
Organic monitoring device (§ 63.111)
Owner or operator (§ 63.2)
Performance evaluation (§ 63.2)
Performance test (§ 63.2)
Permitting authority (§ 63.2)
Plant site (§ 63.101)
Potential to emit (§ 63.2)
Primary fuel (§ 63.111)
Process heater (§ 63.111)
Process unit shutdown (§ 63.161)
Process wastewater (§ 63.111)
Reactor (§ 63.111)
Reconstruction (§ 63.2)
Routed to a process or route to a process (§ 63.161)
Run (§ 63.2)
Secondary fuel (§ 63.111)
Sensor (§ 63.161)
Specific gravity monitoring device (§ 63.111)
Start-up, shutdown, and malfunction plan (§ 63.101)
State (§ 63.2)
Surge control vessel (§ 63.161)
Temperature monitoring device (§ 63.111)
Test method (§ 63.2)
Total resource effectiveness (TRE) index value (§ 63.111)
Treatment process (§ 63.111)
Unit operation (§ 63.101)
Visible emission (§ 63.2)

(b) All other terms used in this subpart shall have the meaning given them in this section. If a term is defined in §§ 63.2, 63.101, 63.111, or 63.161 or defined in 40 CFR part 63, subparts SS, UU, or WW and in this section, it shall have the meaning given in this section for purposes of this subpart.

Aggregate batch vent stream means a process vent containing emissions from at least one reactor batch process vent and at least one additional reactor or non-reactor batch process vent where the emissions are ducted, hardpiped, or otherwise connected together for a continuous flow.

Amino resin means a thermoset resin produced through the reaction of formaldehyde, or a formaldehyde containing solution (e.g., aqueous formaldehyde), with compound(s) that contain the amino group; these compounds include melamine, urea, and urea derivatives. Formaldehyde substitutes are exclusively aldehydes.

Amino/phenolic resin means one or both of the following:

(1) Amino resin; or

(2) Phenolic resin.

Amino/phenolic resin. process unit (APPU) means a collection of equipment assembled and connected by hardpiping or ductwork used to process raw materials and to manufacture an amino/phenolic resin as its primary product. This collection of equipment includes unit operations; process vents; storage vessels, as determined in § 63.1400(h); and the equipment that is subject to the equipment leak provisions as specified in § 63.1410. Utilities, lines and equipment not containing process fluids, and other non-process lines, such as heating and cooling systems which do not combine their materials with those in the processes they serve, are not part of the amino/phenolic resin process unit. An amino/phenolic resin process unit consists of more than one unit operation.

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

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

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

Batch process vent means a process vent from a batch unit operation within an affected source. Batch process vents are either reactor batch process vents or non-reactor batch process vents.

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

Block means the time period that comprises a single batch cycle.

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

Continuous mode means the continuous movement of material through a unit operation. Mass, temperature, concentration, and other

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

Continuous process vent means a process vent from a continuous unit operation within an affected source. Process vents that are serving as control devices are not subject to additional control requirements.

Continuous record means documentation, either in hard copy or computer readable form, of data values measured at least once every 15 minutes and recorded at the frequency specified in § 63.1416(c) or (h).

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

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

Control device means any combustion device, recovery device, or recapture device. Such equipment includes, but is not limited to, absorbers, carbon adsorbers, condensers, incinerators, flares, boilers, and process heaters. For continuous process vents, recapture devices are considered control devices but recovery devices are not considered control devices. Condensers operating as process condensers are not considered control devices. For a condenser that sometimes operates as a process condenser to be considered a control device, it shall not be operating as a process condenser for a given batch emission episode, and it shall recycle of the recovered material within the process.

Control technology means any process modification or use of equipment that reduces organic HAP emissions. Examples include, but are not limited to, product reformulation to reduce solvent content and/or use, batch cycle time reduction to reduce the duration of emissions, reduction of nitrogen purge rate, and the lowering of process condenser coolant temperatures.

Controlled organic HAP emissions means the quantity of organic HAP discharged to the atmosphere from a control device.

Emission point means an individual continuous process vent, batch process vent, aggregate batch vent stream, storage vessel, equipment leak, or heat exchange system.

Equipment means , for the purposes of the provisions in § 63.1410, each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, and instrumentation system in organic HAP service; and any control devices or systems required by § 63.1410. For purposes of this subpart, surge control vessels and bottom receivers are not equipment for purposes of regulating equipment leak emissions. Surge control vessels and bottoms receivers are regulated as non-reactor batch process vents for the purposes of this subpart.

Equipment leak means emissions of organic HAP from a pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, or instrumentation system that either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP.

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

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

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

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

Initial start-up means the first time a new or reconstructed affected source begins production, or, for equipment added or changed, the first time the equipment is put into operation. Initial start-up does not include operation solely for testing equipment. Initial start-up does not include subsequent start-ups of an affected source or portion thereof following malfunctions or shutdowns, or following changes in product for flexible operation process units, or following recharging of equipment in batch operation. Further, for purposes of §§ 63.1401 and 63.1410, initial start-up does not include subsequent start-ups of affected sources or portions thereof following malfunctions or process unit shutdowns.

Inprocess recycling means a recycling operation in which recovered material is used by a unit operation within the same affected source. It is not necessary for recovered material to be used by the unit operation from which they were recovered.

Maintenance wastewater means wastewater generated by the draining of process fluid from components in the APPU into an individual drain system prior to or during maintenance activities. Maintenance wastewater can be generated during planned and unplanned shutdowns and during periods not associated with a shutdown. Examples of activities that can generate maintenance wastewaters include descaling of heat exchanger tubing bundles, cleaning of distillation column traps, draining of low legs and high point bleeds, draining of pumps into an individual drain system, and draining of portions of the APPU for repair. The generation of wastewater from the routine rinsing or washing of equipment in batch operation between batches is not maintenance wastewater for the purposes of this subpart.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment or process equipment, or failure of a process to operate in a normal or usual manner, or opening of a safety device. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Maximum representative operating conditions means, for purposes of testing or measurements required by § 63.1413, those conditions which reflect the highest organic HAP emissions reasonably expected to be vented to the control device or emitted to the atmosphere. For affected sources that produce the same product(s) using multiple recipes, the production of the highest-HAP recipe is reflective of maximum representative operating conditions.

Maximum true vapor pressure means the equilibrium partial pressure exerted by the total organic HAP in the stored liquid at the temperature equal to the highest calendar-month average of the liquid storage temperature for liquids stored above or below the ambient temperature, or at the local maximum monthly average temperature as reported by the National Weather Service for liquids stored at the ambient temperature, as determined:

(1) In accordance with methods described in American Petroleum Institute Publication 2517, Evaporative Loss From External Floating-Roof Tanks (incorporated by reference as specified in § 63.14); or

(2) As obtained from standard reference texts; or

(3) As determined by the American Society for Testing and Materials Method D2879–83 (incorporated by reference as specified in § 63.14); or

(4) Any other method approved by the Administrator.

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

Net heating value means the difference between the heat value of the recovered chemical stream and the minimum heat value required to ensure a stable flame in the combustion device. This difference must have a positive value when used in the context of ''recovering chemicals for fuel value'' (*e.g.*, in the definition of ''recovery device'' in this section).

New process unit means a process unit for which the construction or reconstruction commenced after December 14, 1998.

Non-reactor batch process vent means a batch process vent originating from a unit operation other than a reactor. Non-reactor batch process vents include, but are not limited to, batch process vents from filter presses, surge control vessels, bottoms receivers, weigh tanks, and distillation systems.

Non-solvent-based resin means an amino/phenolic resin manufactured without the use of a solvent as described in the definition of solvent-based resin.

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

Operating day means the period defined by the owner or operator in the Notification of Compliance Status required by § 63.1417(e). The operating day is the period for which daily average monitoring values and batch cycle daily average monitoring values are determined.

Organic hazardous air pollutant(s) (organic HAP) means one or more of the chemicals listed in Table 2 of this subpart or any other chemical which is:

(1) Knowingly produced or introduced into the manufacturing process other than as an impurity; and

(2) Listed in Table 2 of subpart F of this part.

Phenolic resin means a thermoset resin that is a condensation product of formaldehyde and phenol, or a formaldehyde substitute and/or a phenol substitute. Substitutes for formaldehyde are exclusively aldehydes and include acetaldehyde or furfuraldehyde. Substitutes for phenol include other phenolic starting compounds such as cresols, xylenols, p-tert-butylphenol, p-phenylphenol, nonylphenol, and resorcinols.

Process condenser means a condenser functioning so as to recover material as an integral part of a unit operation(s). A process condenser shall support a vapor-to-liquid phase change for periods of equipment operation that are at or above the boiling or bubble point of substance(s) at the liquid surface. Examples of process condensers include distillation condensers, reflux condensers, and condensers used in stripping or flashing operations. In a series of condensers, all condensers up to and including the first condenser with an exit gas temperature below the boiling or bubble point of the substance(s) at the liquid surface are considered to be process condensers. All condensers in line prior to a vacuum source are considered process condensers when the vacuum source is being operated. A condenser may be a process condenser for some batch emission episodes and, when meeting certain conditions, may be a control device for other batch emission episodes.

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

Process vent means a gaseous emission stream from a unit operation where the gaseous emission stream is discharged to the atmosphere either directly or after passing through one or more control, recovery, or recapture devices. Unit operations that may have process vents are condensers, distillation units, reactors, or other unit operations within the APPU. Emission streams that are undiluted and uncontrolled containing less than 50 parts per million volume (ppmv) organic HAP, as determined through process knowledge that no organic HAP are present in the emission stream or using an engineering assessment as discussed in § 63.1414(d)(6); test data using the test methods specified in § 63.1414(a); or any other test method that has been validated according to the procedures in Method 301 of appendix A of this part are not considered process vents. Process vents exclude relief valve discharges, gaseous streams routed to a fuel gas system(s), and leaks from equipment regulated under § 63.1410. Process vents that are serving as control devices are not subject to additional control requirements.

Product means a resin, produced using the same monomers and varying in additives (e.g., initiators, terminators, etc.), catalysts, or in the relative proportions of monomers, that is manufactured by a process unit. With respect to resins, more than one recipe may be used to produce the same product. Product also means a chemical that is not a resin that is manufactured by a process unit. By-products, isolated intermediates, impurities, wastes, and trace contaminants are not considered products.

Reactor batch process vent means a batch process vent originating from a reactor.

Recapture device means an individual unit of equipment capable of and used for the purpose of recovering chemicals, but not normally for use, reuse, or sale. For example, a recapture device may recover chemicals primarily for disposal. Recapture devices include, but are not limited to, absorbers, carbon adsorbers, and condensers.

Recipe means a specific composition from among the range of possible compositions that may occur within a product, as defined in this section. A recipe is determined by the proportions of monomers and, if present, other reactants and additives that are used to make the recipe. For example, a methylated amino resin and a non-methylated amino resin are both different recipes of the same product, amino resin.

Recovery device means an individual unit of equipment capable of and normally used for the purpose of recovering chemicals for use, reuse, fuel value (i.e., net heating value); or for sale for use, reuse, or fuel value (i.e., net heating value). Examples of equipment that may be recovery devices include absorbers, carbon adsorbers, condensers, oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin-film evaporation units. For the purposes of the monitoring, recordkeeping, or reporting requirements of this subpart, recapture devices are considered recovery devices.

Safety device means a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device which functions exclusively to prevent physical damage or permanent deformation to a unit or its air emission control equipment by venting gases or vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental, or emergency event. For the purposes of this subpart, a safety device is not used for routine

venting of gases or vapors from the vapor headspace underneath a cover such as during filling of the unit or to adjust the pressure in this vapor headspace in response to normal daily diurnal ambient temperature fluctuations. A safety device is designed to remain in a closed position during normal operations and open only when the internal pressure, or another relevant parameter, exceeds the device threshold setting applicable to the air emission control equipment as determined by the owner or operator based on manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, combustible, explosive, reactive, or hazardous materials.

Shutdown means for purposes including, but not limited to, periodic maintenance, replacement of equipment, or repair, the cessation of operation of an affected source, an APPU(s) within an affected source, or equipment required or used to comply with this subpart, or the emptying or degassing of a storage vessel. For purposes of the batch process vent provisions in §§ 63.1406 through 63.1408, the cessation of equipment in batch operations is not a shutdown, unless the equipment undergoes maintenance, is replaced, or is repaired.

Solvent-based resin means an amino/phenolic resin that consumes a solvent (*i.e.,* methanol, xylene) as a reactant in the resin producing reaction. The use of a solvent as a carrier (i.e., adding methanol to the product/water solution after the reaction is complete) does not meet this definition.

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

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

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

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

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

(3) Vessels with capacities smaller than 38 cubic meters;

(4) Vessels and equipment storing and/or handling material that contains no organic HAP and/or organic HAP as impurities only;

(5) Wastewater storage tanks;

(6) Surge control vessels or bottoms receivers; and

(7) Vessels and equipment storing and/or handling amino/phenolic resin.

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

Uncontrolled organic HAP emissions means the organic HAP emitted from a unit operation prior to introduction of the emission stream into a control device. Uncontrolled HAP emissions are determined after any condenser that is operating as a process condenser. If an emission stream is not routed to a control device, uncontrolled organic HAP emissions are those organic HAP emissions released to the atmosphere.

Vent stream, as used in reference to batch process vents, aggregate batch vent streams, continuous process vents, and storage vessels, means the emissions from that emission point.

Waste management unit means the equipment, structure(s), and/or device(s) used to convey, store, treat, or dispose of wastewater streams or residuals. Examples of waste management units include: wastewater tanks, surface impoundments, individual drain systems, and biological wastewater treatment units. Examples of equipment that may be waste management units include containers, air flotation units, oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin-film evaporation units. If such equipment is used for recovery, then it is part of an APPU and is not a waste management unit.

Wastewater is either a process wastewater or maintenance wastewater and means water that:

(1) Contains either:

(i) An annual average concentration of organic HAP, as indicated on Table 2 of this subpart, of at least 5 parts per million by weight and has an annual average flow rate of 0.02 liter per minute or greater; or

(ii) An annual average concentration of organic HAP, as indicated on Table 2 of this subpart, of at least 10,000 parts per million by weight at any flow rate.

(2) Is discarded from an APPU that is part of an affected source.

(3) Does not include:

(i) Stormwater from segregated sewers;

(ii) Water from fire-fighting and deluge systems in segregated sewers;

(iii) Spills;

(iv) Water from safety showers;

(v) Water from testing of deluge systems; and

(vi) Water from testing of firefighting systems.

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

§ 63.1403 Emission standards.

(a) *Provisions of this subpart.* Except as allowed under paragraph (b) of this section, the owner or operator of an affected source shall comply with the provisions of §§ 63.1404 through 63.1410, as appropriate. When emissions are vented to a control device or control technology as part of complying with this subpart, emissions shall be vented through a closed vent system meeting the requirements of 40 CFR part 63, subpart SS (national emission standards for closed vent systems, control devices, recovery devices).

(b) *Combined emission streams.* When emissions of different kinds (*e.g.,* emissions from continuous process vents, storage vessels, etc.) are combined at a new affected source, and at least one of the emission streams would be required by this subpart to apply controls in the absence of combination with other emission streams, the owner or operator shall comply with the requirements of paragraph (b)(1) or (2) of this section, as appropriate.

(1) For any combined vent stream that includes one or more aggregate batch vent streams, comply with the provisions for aggregate batch vent streams.

(2) For any combined vent stream that does not include one or more aggregate batch vent streams:

(i) Reactor batch process vents and non-reactor batch process vents shall

comply with the provisions for reactor batch process vents and non-reactor batch process vents, as appropriate.

(ii) The remaining emissions (*i.e.*, storage vessel and/or continuous process vent emissions) included in the combined vent stream shall comply the provisions for storage vessels when storage vessel emissions are included and shall comply with the provisions for continuous process vents in the absence of storage vessel emissions (*i.e.*, when only continuous process vents are included).

(c) *Compliance for flexible operations process units.* With the exceptions specified in paragraphs (c)(1) and (2) of this section, owners or operators of APPUs that are flexible operations process units shall comply with the provisions of this subpart at all times, regardless of the product being manufactured. Once it has been determined that an emission point requires control during manufacture of amino/phenolic resins, that emission point shall be controlled at all times regardless of the product being manufactured.

(1) When a flexible operations process unit is manufacturing a product in which no organic HAP are used or manufactured, the owner or operator is not required to comply with the provisions of this subpart or with the provisions of subpart A of this part during manufacture of that product. When requested by the Administrator, the owner or operator shall demonstrate that no organic HAP are used or manufactured.

(2) When a flexible operations process unit is manufacturing a product subject to subpart GGG of this part, the owner or operator is not required to comply with the provisions of this subpart during manufacture of that product (*i.e.*, a pharmaceutical).

§ 63.1404 Storage vessel provisions.

(a) *Emission standards.* For each storage vessel located at a new affected source that has a capacity of 50,000 gallons or greater and vapor pressure of 2.45 pounds per square inch absolute (psia) or greater or has a capacity of 90,000 gallons or greater and vapor pressure of 0.15 psia or greater, the owner or operator shall comply with either paragraph (a) (1) or (2) of this section. As an alternative to complying with paragraph (a) of this section, an owner or operator may comply with paragraph (b) of this section.

(1) Reduce emissions of total organic HAP by 95 weight-percent. Control shall be achieved by venting emissions through a closed vent system to any combination of control devices meeting the requirements of 40 CFR part 63, subpart SS (national emission standards for closed vent systems, control devices, recovery devices). When complying with the requirements of 40 CFR part 63, subpart SS, the following apply for purposes of this subpart:

(i) Design evaluations are allowed for control devices that control emission points with total emissions less than 10 tons of organic HAP per year before control (i.e., small control devices).

(ii) When 40 CFR part 63, subpart SS refers to specific test methods for the measurement of organic HAP concentration, the test methods presented in § 63.1414(a) shall be used.

(iii) The option to measure TOC instead of organic HAP, as a basis for demonstrating compliance, is not allowed.

(iv) Excused excursions are not allowed.

(v) The provisions in § 63.1403(b), rather than the provisions in § 63.982(f), are to be followed for combined vent streams.

(vi) When a scrubber is used as a control device, the owner or operator shall follow the guidance provided in this subpart for design evaluations or performance tests, as appropriate, and for monitoring, recordkeeping, and reporting.

(vii) When there are conflicts between the due dates for reports presented in 40 CFR part 63, subpart SS and this subpart, reports shall be submitted according to the due dates presented in this subpart.

(viii) When there are conflicts between the recordkeeping and reporting requirements presented in 40 CFR part 63, subpart SS and this subpart, the owner or operator shall either follow both sets of requirements (*i.e.,* follow the requirements in 40 CFR part 63, subpart SS for emission points covered by 40 CFR part 63, subpart SS and follow the requirements of this subpart for emission points covered by this subpart) or shall follow the set of requirements they prefer. If an owner or operator chooses to follow just one set of requirements, the owner or operator shall identify which set of requirements are being followed and which set of requirements are being disregarded in the appropriate report.

(2) Comply with the requirements of 40 CFR part 63, subpart WW (national emission standards for storage vessels (control level 2)). When complying with the requirements of 40 CFR part 63, subpart WW, the following apply for purposes of this subpart:

(i) When there are conflicts between the due dates for reports presented in 40 CFR part 63, subpart WW and this subpart, reports shall be submitted according to the due dates presented in this subpart.

(ii) When there are conflicts between the recordkeeping and reporting requirements presented in 40 CFR part 63, subpart WW and this subpart, the owner or operator shall either follow both sets of requirements (*i.e.,* follow the requirements in 40 CFR part 63, subpart WW for emission points covered by 40 CFR part 63, subpart WW and follow the requirements of this subpart for emission points covered by this subpart) or shall follow the set of requirements they prefer. If an owner or operator chooses to follow just one set of requirements, the owner or operator shall identify which set of requirements are being followed and which set of requirements are being disregarded in the appropriate report.

(b) *Alternative standard.* Vent all organic HAP emissions from a storage vessel meeting either of the capacity and vapor pressure criteria specified in paragraph (a) of this section to a combustion control device achieving an outlet organic HAP concentration of 20 ppmv or less or to a non-combustion control device achieving an outlet organic HAP concentration of 50 ppmv or less. Any storage vessels that are not vented to a control device meeting these conditions shall be controlled in accordance with the provisions of paragraph (a)(1) or (2) of this section.

§ 63.1405 Continuous process vent provisions.

(a) *Emission standards.* For each continuous process vent located at a new affected source with a Total Resource Effectiveness (TRE) index value, as determined following the procedures specified in § 63.1412(j), less than or equal to 1.2, the owner or operator shall comply with either paragraph (a)(1) or (2) of this section. As an alternative to complying with paragraph (a) of this section, an owner or operator may comply with paragraph (b) of this section.

(1) Vent all emissions of organic HAP to a flare.

(2) Reduce emissions of total organic HAP by 85 weight-percent or to a concentration of 20 ppmv when using a combustion control device or to a concentration of 50 ppmv when using a non-combustion control device, whichever is less stringent. Control shall be achieved by venting emissions through a closed vent system to any combination of control devices meeting the requirements of 40 CFR part 63, subpart SS (national emission standards for closed vent systems, control devices, recovery devices). When complying

with the requirements of 40 CFR part 63, subpart SS, the following apply for purposes of this subpart:

(i) Design evaluations are allowed for control devices that control emission points with total emissions less than 10 tons of organic HAP per year before control (*i.e.,* small control devices).

(ii) When 40 CFR part 63, subpart SS refers to specific test methods for the measurement of organic HAP concentration, the test methods presented in § 63.1414(a) shall be used.

(iii) The option to measure TOC instead of organic HAP, as a basis for demonstrating compliance, is not allowed.

(iv) Excused excursions are not allowed.

(v) The provisions in § 63.1403(b), rather than the provisions in § 63.982(f), are to be followed for combined vent streams.

(vi) When a scrubber is used as a control device, the owner or operator shall follow the guidance provided in this subpart for design evaluations or performance tests, as appropriate, and for monitoring, recordkeeping, and reporting.

(vii) When there are conflicts between the due dates for reports presented in 40 CFR part 63, subpart SS and this subpart, reports shall be submitted according to the due dates presented in this subpart.

(viii) When there are conflicts between the recordkeeping and reporting requirements presented in 40 CFR part 63, subpart SS and this subpart, the owner or operator shall either follow both sets of requirements (*i.e.,* follow the requirements in 40 CFR part 63, subpart SS for emission points covered by 40 CFR part 63, subpart SS and follow the requirements of this subpart for emission points covered by this subpart) or shall follow the set of requirements they prefer. If an owner or operator chooses to follow just one set of requirements, the owner or operator shall identify which set of requirements are being followed and which set of requirements are being disregarded in the appropriate report.

(b) *Alternative standard.* Vent all organic HAP emissions from a continuous process vent meeting the TRE value specified in paragraph (a) of this section to a combustion control device achieving an outlet organic HAP concentration of 20 ppmv or less or to a non-combustion control device achieving an outlet organic HAP concentration of 50 ppmv or less. Any continuous process vents that are not vented to a control device meeting these conditions shall be controlled in accordance with the provisions of paragraphs (a)(1) or (2) of this section.

§ 63.1406 Reactor batch process vent provisions.

(a) *Emission standards.* Owners or operators of reactor batch process vents located at new or existing affected sources shall comply with paragraph (a)(1) or (2) of this section, as appropriate. As an alternative to complying with paragraph (a) of this section, an owner or operator may comply with paragraph (b) of this section.

(1) The owner or operator of a reactor batch process vent located at a new affected source shall control organic HAP emissions by complying with either paragraph (a)(1)(i), (ii), or (iii) of this section.

(i) Vent all emissions of organic HAP to a flare.

(ii) Reduce organic HAP emissions for the batch cycle by 95 weight percent using a control device or control technology.

(iii) Reduce organic HAP emissions from the collection of all reactor batch process vents within the affected source, as a whole, to 0.0045 kilogram of organic HAP per megagram of product or less for solvent-based resin production, or to 0.0004 kilogram of organic HAP per megagram of product or less for non-solvent-based resin production.

(2) The owner or operator of a reactor batch process vent located at an existing affected source shall control organic HAP emissions by complying with either paragraph (a)(2)(i), (ii), or (iii) of this section.

(i) Vent all emissions of organic HAP to a flare.

(ii) Reduce organic HAP emissions for the batch cycle by 83 weight percent using a control device or control technology.

(iii) Reduce organic HAP emissions from the collection of all reactor batch process vents within the affected source, as a whole, to 0.0567 kilogram of organic HAP per megagram of product or less for solvent-based resin production, or to 0.0057 kilogram of organic HAP per megagram of product or less for non-solvent-based resin production.

(b) *Alternative standard.* Vent all organic HAP emissions from a reactor batch process vent to a combustion control device achieving an outlet organic HAP concentration of 20 ppmv or less or to a non-combustion control device achieving an outlet organic HAP concentration of 50 ppmv or less. Any reactor batch process vents that are not vented to a control device meeting these conditions shall be controlled in accordance with the provisions of paragraph (a)(1)(ii), or paragraph (a)(2)(ii) of this section.

(c) *Use of boiler or process heater.* If a boiler or process heater is used to comply with the requirements of paragraph (a)(1)(i) or (ii), or paragraph (a)(2)(i) or (ii) of this section, the reactor batch process vent shall be introduced into the flame zone of such a device.

§ 63.1407 Non-reactor batch process vent provisions.

(a) *Emission standards.* (1) Owners or operators of non-reactor batch process vents located at new or existing affected sources with 0.25 tons per year (0.23 megagrams per year) of uncontrolled organic HAP emissions or greater from the collection of non-reactor batch process vents within the affected source shall comply with the requirements in paragraph (a)(2) or (3) of this section, as appropriate. As an alternative to complying with paragraph (a)(2) or (3) of this section, an owner or operator may comply with paragraph (b) of this section. Owners or operators shall determine uncontrolled organic HAP emissions from the collection of non-reactor batch process vents within the affected source as specified in paragraph (d) of this section. If the owner or operator finds that uncontrolled organic HAP emissions from the collection of non-reactor batch process vents within the affected source are less than 0.25 tons per year (0.23 megagrams per year), non-reactor batch process vents are not subject to the control requirements of this section. Further, the owner or operator shall, when requested by the Administrator, demonstrate that organic HAP emissions for the collection of non-reactor batch process vents within the affected source are less than 0.25 tons per year (0.23 megagrams per year).

(2) The owner or operator of a non-reactor batch process vent located at a new affected source shall:

(i) Vent all emissions of organic HAP to a flare; or

(ii) For the collection of non-reactor batch process vents within the affected source, reduce organic HAP emissions for the batch cycle by 76 weight percent using a control device or control technology.

(3) The owner or operator of a non-reactor batch process vent located at an existing affected source shall:

(i) Vent all emissions of organic HAP to a flare; or

(ii) For the collection of non-reactor batch process vents within the affected source, reduce organic HAP emissions for the batch cycle by 62 weight percent

using a control device or control technology.

(b) *Alternative standard.* Comply with either paragraph (b)(1) or (2) of this section.

(1) *Control device outlet concentration.* Vent all organic HAP emissions from a non-reactor batch process vent to a combustion control device achieving an outlet organic HAP concentration of 20 ppmv or less or to a non-combustion control device achieving an outlet organic HAP concentration or 50 ppmv or less. Any reactor batch process vents that are not vented to a control device meeting these conditions shall be controlled in accordance with the provisions of paragraph (a)(2) or (3) of this section.

(2) *Mass emission limit.* Include the emissions from all non-reactor batch process vents in the compliance demonstration required for reactor batch process vents complying with the mass emission limits specified in § 63.1406(a)(1)(iii) and (a)(2)(iii), as appropriate. This compliance option may only be used when the owner or operator has elected to comply with the mass emission limit for reactor batch process vents.

(c) *Use of boiler or process heater.* If a boiler or process heater is used to comply with paragraph (a)(2)(ii) or (a)(3)(ii) of this section, the reactor batch process vent shall be introduced into the flame zone of such a device.

(d) *Determining uncontrolled organic HAP emissions.* Owners or operators shall determine uncontrolled organic HAP emissions from the collection of non-reactor batch process vents within the affected source based on engineering assessment as described in § 63.1414(d)(6).

§ 63.1408 Aggregate batch vent stream provisions.

(a) *Emission standards.* Owners or operators of aggregate batch vent streams at a new or existing affected source shall comply with either paragraph (a)(1) or (2) of this section, as appropriate. As an alternative to complying with paragraph (a)(1) or (2) of this section, an owner or operator may comply with paragraph (b) of this section.

(1) The owner or operator of an aggregate batch vent stream located at a new affected source shall:

(i) Vent all emissions of organic HAP to a flare; or

(ii) Reduce organic HAP emissions by 95 weight percent or to a concentration of 20 ppmv when using a combustion control device or to a concentration of 50 ppmv when using a non-combustion control device, whichever is less stringent, on a continuous basis.

(2) The owner or operator of an aggregate batch vent stream located at an existing affected source shall:

(i) Vent all emissions of organic HAP to a flare; or

(ii) Reduce organic HAP emissions by 83 weight percent or to a concentration of 20 ppmv when using a combustion control device or to a concentration of 50 ppmv when using a non-combustion control device, whichever is less stringent, on a continuous basis.

(b) *Alternative standard.* Comply with either paragraph (b)(1) or (2) of this section.

(1) *Control device outlet concentration.* Vent all organic HAP emissions from an aggregate batch vent stream to a combustion control device achieving an outlet organic HAP concentration of 20 ppmv or less or to a non-combustion control device achieving an outlet organic HAP concentration of 50 ppmv or less. Any aggregate batch vent streams that are not vented to a control device meeting these conditions shall be controlled in accordance with the provisions of paragraphs (a)(1) or (a)(2) of this section.

(2) *Mass emission limit.* Include the emissions from all aggregate batch vent streams in the compliance demonstration required for reactor batch process vents complying with the mass emission limits specified in § 63.1406(a)(1)(iii) and (a)(2)(iii), as appropriate. This compliance option may only be used when the owner or operator has elected to comply with the mass emission limit for reactor batch process vents.

§ 63.1409 Heat exchange system provisions.

(a) Unless one or more of the conditions specified in paragraphs (a)(1) through (6) of this section are met, owners and operators of sources subject to this subpart shall monitor each heat exchange system used to cool process equipment in an affected source, according to the provisions in either paragraph (b) or (c) of this section. Whenever a leak is detected, the owner or operator shall comply with the requirements in paragraph (d) of this section.

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

(2) There is an intervening cooling fluid, containing less than 5 percent by weight of total HAP listed in column A of Table 2 of this subpart, between the process and the cooling water. This intervening fluid serves to isolate the cooling water from the process fluid, and the intervening fluid is not sent through a cooling tower or discharged. For purposes of this section, discharge does not include emptying for maintenance purposes.

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

(4) The once-through heat exchange system is subject to an NPDES permit that:

(i) Requires monitoring of a parameter(s) or condition(s) to detect a leak of process fluids into cooling water;

(ii) Specifies or includes the normal range of the parameter or condition;

(iii) Requires monitoring for the parameters selected as leak indicators no less frequently than monthly for the first 6 months and quarterly thereafter; and

(iv) Requires the owner or operator to report and correct leaks to the cooling water when the parameter or condition exceeds the normal range.

(5) The recirculating heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total HAP listed in column A of Table 2 of this subpart.

(6) The once-through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total HAP listed in column B of Table 2 of this subpart.

(b) The owner or operator who elects to comply with the requirements of paragraph (a) of this section by monitoring the cooling water for the presence of one or more organic HAP or other representative substances whose presence in cooling water indicate a leak shall comply with the requirements specified in paragraphs (b)(1) through (6) of this section. The cooling water shall be monitored for total HAP, total volatile organic compounds, total organic carbon, one or more speciated HAP compounds, or other representative substances that would indicate the presence of a leak in the heat exchange system.

(1) The cooling water shall be monitored monthly for the first 6 months and quarterly thereafter to detect leaks.

(2)(i) For recirculating heat exchange systems (cooling tower systems), the monitoring of speciated HAP or total HAP refers to the HAP listed in column A of Table 2 of this subpart.

(ii) For once-through heat exchange systems, the monitoring of speciated HAP or total HAP refers to the HAP listed in column B of Table 2 of this subpart.

(3) The concentration of the monitored substance(s) in the cooling water shall be determined using any EPA-approved method listed in part 136 of this chapter, as long as the method is sensitive to concentrations as low as 10 parts per million and the same method is used for both entrance and exit samples. Alternative methods may be used upon approval by the Administrator.

(4) The samples shall be collected either at the entrance and exit of each heat exchange system or at locations where the cooling water enters and exits each heat exchanger or any combination of heat exchangers.

(i) For samples taken at the entrance and exit of recirculating heat exchange systems, the entrance is the point at which the cooling water leaves the cooling tower prior to being returned to the process equipment, and the exit is the point at which the cooling water is introduced to the cooling tower after being used to cool the process fluid.

(ii) For samples taken at the entrance and exit of once-through heat exchange systems, the entrance is the point at which the cooling water enters, and the exit is the point at which the cooling water exits the plant site or chemical manufacturing process units.

(iii) For samples taken at the entrance and exit of each heat exchanger or any combination of heat exchangers, the entrance is the point at which the cooling water enters the individual heat exchanger or group of heat exchangers, and the exit is the point at which the cooling water exits the heat exchanger or group of heat exchangers.

(5) A minimum of three sets of samples shall be taken at each entrance and exit as defined in paragraph (b)(4) of this section. The average entrance and exit concentrations shall then be calculated. The concentration shall be corrected for the addition of any makeup water or for any evaporative losses, as applicable.

(6) A leak is detected if the exit mean concentration is found to be greater than the entrance mean concentration using a one-sided statistical procedure at the 0.05 level of significance, and the amount by which it is greater is at least 1 part per million or 10 percent of the entrance mean, whichever is greater.

(c) The owner or operator who elects to comply with the requirement of paragraph (a) of this section by monitoring using a surrogate indicator of heat exchange system leaks shall comply with the requirements specified in paragraphs (c)(1) through (3) of this section. Surrogate indicators that could be used to develop an acceptable monitoring program are ion specific electrode monitoring, pH, conductivity or other representative indicators.

(1) The owner or operator shall prepare and implement a monitoring plan that documents the procedures that will be used to detect leaks of process fluids into cooling water. The plan shall require monitoring of one or more surrogate indicators or monitoring of one or more process parameters or other conditions that indicate a leak. Monitoring that is already being conducted for other purposes may be used to satisfy the requirements of this section. The plan shall include the information specified in paragraphs (c)(1)(i) and (ii) of this section.

(i) A description of the parameter or condition to be monitored and an explanation of how the selected parameter or condition will reliably indicate the presence of a leak.

(ii) The parameter level(s) or conditions(s) that constitute a leak. This shall be documented by data or calculations showing that the selected levels or conditions will reliably identify leaks. The monitoring must be sufficiently sensitive to determine the range of parameter levels or conditions when the system is not leaking. When the selected parameter level or condition is outside that range, a leak is indicated.

(iii) The monitoring frequency which shall be no less frequent than monthly for the first 6 months and quarterly thereafter to detect leaks.

(iv) The records that will be maintained to document compliance with the requirements of this section.

(2) If a substantial leak is identified by methods other than those described in the monitoring plan and the method(s) specified in the plan could not detect the leak, the owner or operator shall revise the plan and document the basis for the changes. The owner or operator shall complete the revisions to the plan no later than 180 days after discovery of the leak.

(3) The owner or operator shall maintain, at all times, the monitoring plan that is currently in use. The current plan shall be maintained on-site, or shall be accessible from a central location by computer or other means that provides access within 2 hours after a request. If the monitoring plan is superseded, the owner or operator shall retain the most recent superseded plan at least until 5 years from the date of its creation. The superseded plan shall be retained on-site (or accessible from a central location by computer or other means that provides access within 2 hours after a request) for at least 6 months after its creation.

(d) If a leak is detected according to the criteria of paragraph (b) or (c) of this section, the owner or operator shall comply with the requirements in paragraphs (d)(1) and (2) of this section, except as provided in paragraph (e) of this section.

(1) The leak shall be repaired as soon as practical but not later than 45 calendar days after the owner or operator receives results of monitoring tests indicating a leak. The leak shall be repaired unless the owner or operator demonstrates that the results are due to a condition other than a leak.

(2) Once the leak has been repaired, the owner or operator shall confirm that the heat exchange system has been repaired within 7 calendar days of the repair or startup, whichever is later.

(e) Delay of repair of heat exchange systems for which leaks have been detected is allowed if the equipment is isolated from the process. Delay of repair is also allowed if repair is technically infeasible without a shutdown and any one of the conditions in paragraph (e)(1) or (2) of this section are met. All time periods in paragraphs (e)(1) and (2) of this section shall be determined from the date when the owner or operator determines that delay of repair is necessary.

(1) If a shutdown is expected within the next 2 months, a special shutdown before that planned shutdown is not required.

(2) If a shutdown is not expected within the next 2 months, the owner or operator may delay repair as provided in paragraph (e)(2)(i) or (ii) of this section. Documentation of a decision to delay repair shall state the reasons repair was delayed and shall specify a schedule for completing the repair as soon as practical.

(i) If a shutdown for repair would cause greater emissions than the potential emissions from delaying repair, the owner or operator may delay repair until the next shutdown of the process equipment associated with the leaking heat exchanger. The owner or operator shall document the basis for the determination that a shutdown for repair would cause greater emissions than the emissions likely to result from delaying repair as specified in paragraphs (e)(2)(i)(A) and (B) of this section.

(A) The owner or operator shall calculate the potential emissions from the leaking heat exchanger by multiplying the concentration of total HAP listed in column A of Table 2 of

this subpart in the cooling water from the leaking heat exchanger by the flowrate of the cooling water from the leaking heat exchanger by the expected duration of the delay. The owner or operator may calculate potential emissions using total organic carbon concentration instead of total HAP listed in column A of Table 2 of this subpart.

(B) The owner or operator shall determine emissions from purging and depressurizing the equipment that will result from the unscheduled shutdown for the repair.

(ii) If repair is delayed for reasons other than those specified in paragraph (e)(2)(i) of this section, the owner or operator may delay repair up to a maximum of 120 calendar days. The owner shall demonstrate that the necessary parts or personnel were not available.

§ 63.1410 Equipment leak provisions.

The owner or operator of each affected source shall comply with the requirements of 40 CFR part 63, subpart UU (national emission standards for equipment leaks (control level 2)) for all equipment, as defined under § 63.1402, that contains or contacts 5 weight-percent HAP or greater and operates 300 hours per year or more. The weight-percent HAP is determined for equipment using the organic HAP concentration measurement methods specified in § 63.1414(a). When complying with the requirements of 40 CFR part 63, subpart SS, as referred to by 40 CFR part 63, subpart UU, the following apply for purposes of this subpart:

(a) Design evaluations are allowed for control devices that control emission points with total emissions less than 10 tons of organic HAP per year before control (*i.e.,* small control devices).

(b) When 40 CFR part 63, subpart SS refers to specific test methods for the measurement of organic HAP concentration, the test methods presented in § 63.1414(a) shall be used.

(c) The option to measure TOC instead of organic HAP, as a basis for demonstrating compliance, is not allowed.

(d) Excused excursions are not allowed.

(e) The provisions in § 63.1403(b), rather than the provisions in § 63.982(f), are to be followed for combined vent streams.

(f) When a scrubber is used as a control device, the owner or operator shall follow the guidance provided in this subpart for design evaluations or performance tests, as appropriate, and for monitoring, recordkeeping, and reporting.

(g) When there are conflicts between the due dates for reports presented in 40 CFR part 63, subpart SS and this subpart, reports shall be submitted according to the due dates presented in this subpart.

(h) When there are conflicts between the recordkeeping and reporting requirements presented in 40 CFR part 63, subpart SS and this subpart, the owner or operator shall either follow both sets of requirements (*i.e.,* follow the requirements in 40 CFR part 63, subpart SS for emission points covered by 40 CFR part 63, subpart SS and follow the requirements of this subpart for emission points covered by this subpart) or shall follow the set of requirements they prefer. If an owner or operator chooses to follow just one set of requirements, the owner or operator shall identify which set of requirements are being followed and which set of requirements are being disregarded in the appropriate report.

§ 63.1411 [Reserved]

§ 63.1412 Continuous process vent applicability assessment procedures and methods.

(a) *General.* The provisions of this section provide procedures and methods for determining the applicability of the control requirements specified in § 63.1405 to continuous process vents.

(b) *Sampling sites.* Sampling sites shall be located as follows:

(1) *Sampling site location.* The sampling site for determining volumetric flow rate, regulated organic HAP concentration, total organic HAP, net heating value, and TRE index value, shall be after the final recovery device (if any recovery devices are present) but prior to the inlet of any control device that is present and prior to release to the atmosphere.

(2) *Sampling site selection method.* Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate, shall be used for selection of the sampling site. No traverse site selection method is needed for process vents smaller than 0.33 foot (0.10 meter) in nominal inside diameter.

(c) *Applicability assessment requirement.* The organic HAP concentrations, volumetric flow rates, heating values, organic HAP emission rates, TRE index values, and engineering assessment control applicability assessment requirements are to be determined during maximum representative operating conditions for the process, except as provided in paragraph (d) of this section, or unless the Administrator specifies or approves alternate operating conditions. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of an applicability test.

(d) *Exceptions.* The owner or operator is not required to conduct a test that will cause any of the following situations:

(1) Causing damage to equipment;

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

(3) Necessitating that the owner or operator make a product in excess of demand.

(e) *Organic HAP concentration.* The organic HAP concentrations, used for TRE index value calculations in paragraph (j) of this section, shall be determined using the procedures specified in either § 63.1414(a) or by using the engineering assessment procedures in paragraph (k) of this section.

(f) *Volumetric flow rate.* The volumetric flow rate shall be determined using the procedures specified in § 63.1414(a), or by using the engineering assessment procedures in paragraph (k) of this section.

(g) *Heating value.* The net heating value shall be determined as specified in paragraphs (g)(1) and (2) of this section, or by using the engineering assessment procedures in paragraph (k) of this section.

(1) The net heating value of the continuous process vent shall be calculated using Equation 1:

$$H_T = K_1\left(\sum_{j=1}^{n} D_j H_j\right) \qquad [\text{Eq. 1}]$$

Where:

H_T=Net heating value of the sample, megaJoules per standard cubic meter, where the net enthalpy per mole of process vent is based on combustion at 25 °C and 760 millimeters of mercury, but the standard temperature for determining the volume corresponding to 1 mole is 20 °C, as in the definition of Q_S (process vent volumetric flow rate).

K_1 = Constant, 1.740×10^{-7} (parts per million)$^{-1}$ (gram-mole per standard cubic meter) (megaJoules per kilocalorie), where standard temperature for (gram-mole per standard cubic meter) is 20 °C.

D_j=Organic HAP concentration on a wet basis of compound j in parts per million, as measured by procedures indicated in paragraph (e) of this section. For process vents that pass through a final stream jet and are not condensed, the moisture is assumed to be 2.3 percent by volume.

H_j=Net heat of combustion of compound j, kilocalorie per gram-mole, based on combustion at 25 °C and 760 millimeters of mercury.

(2) The molar composition of the process vent (D_j) shall be determined using the methods specified in paragraphs (g)(2)(i) through (iii) of this section:

(i) The methods specified in § 63.1414(a) to measure the concentration of each organic compound.

(ii) American Society for Testing and Materials D1946–90 to measure the concentration of carbon monoxide and hydrogen.

(iii) Method 4 of 40 CFR part 60, appendix A to measure the moisture content of the stack gas.

(h) *Organic HAP emission rate.* The emission rate of organic HAP in the continuous process vent, as required by the TRE index value equation specified in paragraph (j) of this section, shall be calculated using Equation 2:

$$E = K_2\left(\sum_{j=1}^{n} C_j M_j\right) Q_S \qquad [Eq.\ 2]$$

Where:

E=Emission rate of organic HAP in the sample, kilograms per hour.

K_2=Constant, 2.494×10^{-6} (parts per million)$^{-1}$ (gram-mole per standard cubic meter) (kilogram/gram) (minutes/hour), where standard temperature for (gram-mole per standard cubic meter) is 20 °C.

n=Number of components in the sample.

C_J=Organic HAP concentration on a dry basis of organic compound j in parts per million as determined by the methods specified in paragraph (e) of this section.

M_j=Molecular weight of organic compound j, gram/gram-mole.

Q_S=Continuous process vent flow rate, dry standard cubic meter per minute, at a temperature of 20 °C.

(i) [Reserved]

(j) *TRE index value.* The owner or operator shall calculate the TRE index value of the continuous process vent using the equations and procedures in this paragraph, as applicable, and shall maintain records specified in § 63.1416(f).

(1) *TRE index value equation.* The equation for calculating the TRE index value is Equation 3:

$$TRE = 1/E_{HAP} * \left[A + B\left(Q_S\right) + C\left(H_T\right)\right] \qquad [Eq.\ 3]$$

Where:

TRE=TRE index value.

A, B, C=Coefficients presented in table 7 of this subpart.

E_{HAP}=Emission rate of total organic HAP, kilograms per hour, as calculated according to paragraph (h) or (k) of this section.

Q_S=Continuous process vent volumetric flow rate, standard cubic meters per minute, at a standard temperature of 20 °C, as calculated according to paragraph (f) or (k) of this section.

H_T=Continuous process vent net heating value, megaJoules per standard cubic meter, as calculated according to paragraph (g) or (k) of this section.

(2) *TRE index calculation.* The owner or operator of a continuous process vent shall calculate the TRE index value by using the equation and appropriate coefficients in Table 6 of this subpart. The owner or operator shall calculate the TRE index value for each control device scenario (*i.e.,* flare, thermal incinerator with 0 percent recovery, thermal incinerator with 70 percent recovery). The lowest TRE index value is to be compared to the applicability criteria specified in § 63.1405(a).

(k) *Engineering assessment.* For purposes of TRE index value determinations, engineering assessments may be used to determine continuous process vent flow rate, net heating value, and total organic HAP emission rate for the representative operating condition expected to yield the lowest TRE index value. Engineering assessments shall meet the requirements of paragraphs (k)(1) through (4) of this section.

(1) If the TRE index value calculated using engineering assessment is greater than 4.0, the owner or operator is not required to perform the measurements specified in paragraphs (e) through (h) of this section.

(2) If the TRE index value calculated using engineering assessment is less than or equal to 4.0, the owner or operator is required either to perform the measurements specified in paragraphs (e) through (h) of this section for control applicability assessment or comply with the control requirements specified in § 63.1405.

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

(i) Previous test results, provided the tests are representative of current operating practices.

(ii) Bench-scale or pilot-scale test data representative of the process under representative operating conditions.

(iii) Maximum volumetric flow rate, organic HAP emission rate, organic HAP concentration, or net heating value limit specified or implied within a permit limit applicable to the continuous process vent.

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

(A) Use of material balances based on process stoichiometry to estimate maximum organic HAP concentrations;

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

(C) Estimation of organic HAP concentrations based on saturation conditions; and

(D) Estimation of maximum expected net heating value based on the stream concentration of each organic compound.

§ 63.1413 Compliance demonstration procedures.

(a) *General.* For each emission point, the owner or operator shall meet three stages of compliance, with exceptions specified in this subpart. First, the owner or operator shall conduct a performance test or design evaluation to demonstrate the performance of the control device or control technology being used. Second, the owner or operator shall meet the requirements for demonstrating initial compliance (*e.g.,* a demonstration that the required percent reduction is achieved). Third, the owner or operator shall meet the requirements for demonstrating continuous compliance through some form of monitoring (*e.g.,* continuous monitoring of operating parameters).

(1) *Large control devices and small control devices.* A large control device is a control device that controls emission points with total emissions of 10 tons of organic HAP per year or more before control. A small control device is a control device that controls emission points with total emissions less than 10 tons of organic HAP per year before control.

(i) *Large control devices.* Owners or operators are required to conduct a performance test for a large control device. The establishment of parameter monitoring levels shall be based on data obtained during the required performance test.

(ii) *Small control devices.* Owners or operators are required to conduct a design evaluation for a small control device. An owner or operator may choose to conduct a performance test for a small control device and such a performance test shall follow the procedures specified in this section, as appropriate. Whenever a small control device becomes a large control device, the owner or operator shall conduct a performance test following the procedures specified in this section, as appropriate. Notification that such a

performance test is required, the site-specific test plan, and the results of the performance test shall be provided to the Administrator as specified in § 63.1417. Except as provided in § 63.1415(a)(2), the parameter monitoring levels for small control devices shall be set based on the design evaluation required by paragraph (a)(3) of this section. Further, when setting the parameter monitoring level(s) based on the design evaluation, the owner or operator shall submit the information specified in § 63.1417(d)(7) for review and approval as part of the Precompliance Report.

(2) *Performance tests.* Performance testing shall be conducted in accordance with the General Provisions at § 63.7(a)(1), (a)(3), (d), (e)(1), (e)(2), (e)(4), (g), and (h), with the exceptions specified in paragraph (a)(1) of this section. Data shall be reduced in accordance with the EPA approved methods specified in this 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.

(i) *Additional control devices not requiring performance tests.* An owner or operator is not required to conduct a performance test when using one of the following control devices:

(A) A boiler or process heater with a design heat input capacity of 44 megawatts or greater.

(B) A boiler or process heater into which the vent stream is introduced with the primary fuel or is used as the primary fuel.

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

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

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

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

(E) A control device for which a performance test was already conducted for determining compliance with another regulation promulgated by the EPA, provided the test was conducted using the same Methods specified in this section, and either no deliberate process changes have been made since the test, or the owner or operator can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes. Parameter monitoring levels established based on such a performance test may be used for purposes of demonstrating continuous compliance with this subpart.

(ii) *Exceptions to performance test requirements in the General Provisions.* (A) Performance tests shall be conducted at maximum representative operating conditions achievable during either the 6-month period ending 2 months before the Notification of Compliance Status required by § 63.1417(e) is due, or during the 6-month period surrounding the date of the performance test (*i.e.,* the period beginning 3 months prior to the performance test and ending 3 months after the performance test). In achieving maximum representative operating conditions, an owner or operator is not required to cause damage to equipment, make a product that does not meet an existing specification for sale to a customer, or make a product in excess of demand.

(B) When § 63.7(g) references the Notification of Compliance Status requirements in § 63.9(h), the requirements in § 63.1417(e) shall apply for purposes of this subpart.

(C) Performance tests shall be performed no later than 150 days after the compliance dates specified in this subpart (*i.e.,* in time for the results to be included in the Notification of Compliance Status), rather than according to the time periods in § 63.7(a)(2).

(3) *Design evaluations.* To demonstrate the organic HAP removal efficiency for a control device or control technology, a design evaluation shall address the composition and organic HAP concentration of the vent stream(s) entering the control device or control technology, the operating parameters of the control device or control technology, and other conditions or parameters that reflect the performance of the control device or control technology. A design evaluation also shall address other vent stream characteristics and control device operating parameters as specified in any one of paragraphs (a)(3)(i) through (vi) of this section, depending on the type of control device that is used. If the vent stream(s) is not the only inlet to the control device, the efficiency demonstration also shall consider all other vapors, gases, and liquids, other than fuels, received by the control device.

(i) For a scrubber, the design evaluation shall consider the vent stream composition, constituent concentrations, liquid-to-vapor ratio, scrubbing liquid flow rate and concentration, temperature, and the reaction kinetics of the constituents with the scrubbing liquid. The design evaluation shall establish the design exhaust vent stream organic compound concentration level and include the additional information in paragraphs (a)(3)(i)(A) and (B) of this section for trays and a packed column scrubber:

(A) Type and total number of theoretical and actual trays; and

(B) Type and total surface area of packing for entire column, and for individual packed sections if column contains more than one packed section.

(ii) For a condenser, the design evaluation shall consider the vent stream flow rate, relative humidity, and temperature and shall establish the design outlet organic HAP compound concentration level, design average temperature of the condenser exhaust vent stream, and the design average temperatures of the coolant fluid at the condenser inlet and outlet. The temperature of the gas stream exiting the condenser shall be measured and used to establish the outlet organic HAP concentration.

(iii) For a carbon adsorption system that regenerates the carbon bed directly onsite in the control device, such as a fixed-bed adsorber, the design evaluation shall consider the vent stream flow rate, relative humidity, and temperature and shall establish the design exhaust vent stream organic compound concentration level, adsorption cycle time, number and capacity of carbon beds, type and working capacity of activated carbon used for carbon beds, design total regeneration stream mass or volumetric flow over the period of each complete carbon bed regeneration cycle, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of carbon. For vacuum desorption, the pressure drop shall be included.

(iv) For a carbon adsorption system that does not regenerate the carbon bed directly onsite in the control device, such as a carbon canister, the design evaluation shall consider the vent stream mass or volumetric flow rate, relative humidity, and temperature and shall establish the design exhaust vent stream organic compound concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule.

(v) For an enclosed combustion device with a minimum residence time

of 0.5 seconds and a minimum temperature of 760 C, the design evaluation shall document that these conditions exist.

(vi) For a combustion control device that does not satisfy the criteria in paragraph (a)(3)(v) of this section, the design evaluation shall address the following characteristics, depending on the type of control device:

(A) For a thermal vapor incinerator, the design evaluation shall consider the autoignition temperature of the organic HAP, shall consider the vent stream flow rate, and shall establish the design minimum and average temperature in the combustion zone and the combustion zone residence time.

(B) For a catalytic vapor incinerator, the design evaluation shall consider the vent stream flow rate and shall establish the design minimum and average temperatures across the catalyst bed inlet and outlet.

(C) For a boiler or process heater, the design evaluation shall consider the vent stream flow rate, shall establish the design minimum and average flame zone temperatures and combustion zone residence time, and shall describe the method and location where the vent stream is introduced into the flame zone.

(4) *Establishment of parameter monitoring levels.* The owner or operator of a control device that has one or more parameter monitoring level requirements specified under this subpart, or specified under subparts referenced by this subpart, shall establish a maximum or minimum level, as denoted on Table 4 of this subpart, for each measured parameter using the procedures specified in paragraph (a)(4)(i) or (ii) of this section. Except as otherwise provided in this subpart, the owner or operator shall operate control devices such that the daily average, batch cycle daily average, or block average of monitored parameters, established as specified in this paragraph, remains above the minimum level or below the maximum level, as appropriate.

(i) *Establishment of parameter monitoring levels based on performance tests.* (A) *Emission points other than batch process vents.* During initial compliance testing, the appropriate parameter shall be continuously monitored during the required 1-hour test runs. The monitoring level(s) shall then be established as the average of the maximum (or minimum) point values from the three test runs. The average of the maximum values shall be used when establishing a maximum level, and the average of the minimum values shall be used when establishing a minimum level.

(B) *Aggregate batch vent streams.* For aggregate batch vent streams the monitoring level shall be established in accordance with paragraph (a)(4)(i)(A) of this section.

(C) *Batch process vents.* The monitoring level(s) shall be established using the procedures specified in paragraphs (a)(4)(i)(C)(*1*) or (*2*) of this section. For batch process vents complying with the percent reduction standards specified in § 63.1406 or § 63.1407, parameter monitoring levels shall be established by the design evaluation, or during the performance test so that the specified percent reduction from § 63.1406 or § 63.1407, as appropriate, is met.

(*1*) If more than one batch emission episode or more than one portion of a batch emission episode has been selected to be controlled, a single level for the batch cycle shall be calculated as follows:

(*i*) During initial compliance testing, the appropriate parameter shall be monitored continuously and recorded once every 15 minutes at all times when batch emission episodes, or portions thereof, selected to be controlled are vented to the control device. A minimum of three recorded values shall be obtained for each batch emission episode, or portion thereof, regardless of the length of time emissions are occurring.

(*ii*) The average monitored parameter value shall be calculated for each batch emission episode, or portion thereof, in the batch cycle selected to be controlled. The average shall be based on all values measured during the required performance test.

(*iii*) If the level to be established is a maximum operating parameter, the level shall be defined as the minimum of the average parameter values from each batch emission episode, or portion thereof, in the batch cycle selected to be controlled (*i.e.,* identify the batch emission episode, or portion thereof, which requires the lowest parameter value in order to assure compliance; the average parameter value that is necessary to assure compliance for that batch emission episode, or portion thereof, shall be the level for all batch emission episodes, or portions thereof, in the batch cycle that are selected to be controlled).

(*iv*) If the level to be established is a minimum operating parameter, the level shall be defined as the maximum of the average parameter values from each batch emission episode, or portion thereof, in the batch cycle selected to be controlled (*i.e.,* identify the batch emission episode, or portion thereof, which requires the highest parameter value in order to assure compliance; the average parameter value that is necessary to assure compliance for that batch emission episode, or portion thereof, shall be the level for all batch emission episodes, or portions thereof, in the batch cycle that are selected to be controlled).

(*v*) Alternatively, an average monitored parameter value shall be calculated for the entire batch cycle based on all values recorded during each batch emission episode, or portion thereof, selected to be controlled.

(*2*) Instead of establishing a single level for the batch cycle, as described in paragraph (a)(4)(i)(C)(*1*) of this section, an owner or operator may establish separate levels for each batch emission episode, or portion thereof, selected to be controlled. Each level shall be determined as specified in paragraphs (a)(4)(i)(C)(*1*)(*i*) through (*v*) of this section.

(*3*) The batch cycle shall be defined in the Notification of Compliance Status, as specified in § 63.1417(e)(2). Said definition shall include an identification of each batch emission episode. The definition of batch cycle shall also include the information required to determine parameter monitoring compliance for partial batch cycles (*i.e.,* when part of a batch cycle is accomplished during 2 different operating days) for those parameters averaged on a batch cycle daily average basis.

(ii) *Establishment of parameter monitoring levels based on performance tests, engineering assessments, and/or manufacturer's recommendations.* Parameter monitoring levels may be established based on the parameter values measured during the performance test supplemented by engineering assessments and/or manufacturer's recommendations. Performance testing is not required to be conducted over the entire range of expected parameter values. When setting the parameter monitoring level(s) using the procedures specified in this paragraph, the owner or operator shall submit the information specified in § 63.1417(d)(7) for review and approval as part of the Precompliance Report.

(b) *Initial and continuous compliance for storage vessels.* (1) Initial compliance with the percent reduction standard specified in § 63.1404(a)(1) shall be demonstrated following the procedures in 40 CFR part 63, subpart SS.

(2) Initial compliance with the work practice standard specified in § 63.1404(a)(2) shall be demonstrated

following the procedures in 40 CFR part 63, subpart WW.

(3) Continuous compliance with the percent reduction standard specified in § 63.1404(a)(1) shall be demonstrated following the procedures in 40 CFR part 63, subpart SS.

(4) Continuous compliance with the work practice standard specified in § 63.1404(a)(2) shall be demonstrated following the procedures in 40 CFR part 63, subpart WW.

(5) Initial and continuous compliance with the alternative standard specified in § 63.1404(b) shall be demonstrated following the procedures in paragraph (f) of this section.

(c) *Initial and continuous compliance for continuous process vents.* (1) Initial compliance with the percent reduction standard specified in § 63.1405(a)(2) shall be demonstrated following the procedures in 40 CFR part 63, subpart SS.

(2) Initial compliance with § 63.1405(a)(1) (venting of emissions to a flare) shall be demonstrated following the procedures specified in paragraph (g) of this section.

(3) Continuous compliance with the percent reduction standard specified in § 63.1405(a)(2) shall be demonstrated following the procedures in 40 CFR part 63, subpart SS.

(4) Continuous compliance with § 63.1405(a)(1) (venting of emissions to a flare) shall be demonstrated following the continuous monitoring procedures specified in § 63.1415.

(5) Initial and continuous compliance with the alternative standard specified in § 63.1405(b) shall be demonstrated following the procedures in paragraph (f) of this section.

(d) *Initial and continuous compliance for aggregate batch vent streams.* (1) Initial compliance with the percent reduction standard specified in § 63.1408(a)(1)(ii) and (2)(ii) shall be demonstrated following the procedures for continuous process vents specified in paragraph (c)(1) of this section.

(2) Initial compliance with § 63.1408(a)(1)(i) and (2)(i) (venting of emissions to a flare) shall be demonstrated following the procedures specified in paragraph (g) of this section.

(3) Continuous compliance with the percent reduction standard specified in § 63.1408(a)(1)(ii) and (2)(ii) shall be demonstrated following the procedures for continuous process vents specified in paragraph (c)(3) of this section.

(4) Continuous compliance with § 63.1408(a)(1)(i) and (a)(2)(i) (venting of emissions to a flare) shall be demonstrated following the continuous monitoring procedures specified in § 63.1415.

(5) Initial and continuous compliance with the alternative standard specified in § 63.1408(b)(1) shall be demonstrated following the procedures in paragraph (f) of this section.

(6) Initial and continuous compliance with the mass emission limit specified in § 63.1408(b)(2) shall be demonstrated following the procedures in paragraph (e)(2) of this section.

(e) *Initial and continuous compliance for batch process vents.* (1) *Compliance with percent reduction standards.* Owners or operators opting to comply with the percent reduction standards specified in § 63.1406(a)(1)(ii) and (a)(2)(ii) or § 63.1407(a)(2)(ii) and (a)(3)(ii) shall select portions of the batch process vent emissions (*i.e.*, select batch emission episodes or portions of batch emission episodes) to be controlled such that the specified percent reduction is achieved for the batch cycle. Paragraphs (e)(1)(i) and (ii) of this section specify how the performance of a control device or control technology is to be determined. Paragraph (e)(1)(iii) of this section specifies how to demonstrate that the required percent emission reduction is achieved for the batch cycle.

(i) *Design evaluation.* The design evaluation shall comply with the provisions in paragraph (a)(3) of this section. The design evaluation shall include the value(s) and basis for the parameter monitoring level(s) required by § 63.1415. The design evaluation shall determine either of the following:

(A) *Each batch emission episode.* The control device efficiency for each batch emission episode that the owner or operator selects to control.

(B) *One or more representative batch emission episodes.* The control device efficiency for one or more batch emission episodes provided that the owner or operator demonstrates that the control device achieves the same or higher efficiency for all other batch emission episodes that the owner or operator selects to control.

(ii) *Performance test.* An owner or operator shall conduct performance tests following the procedures in paragraph (e)(1)(ii)(A) of this section, the procedures in paragraph (e)(1)(ii)(B) of this section, or a combination of the two procedures. Under paragraph (e)(1)(ii)(A) of this section, a performance test is conducted for each batch emission episode selected for control. Under paragraph (e)(1)(ii)(B) of this section, an owner or operator groups together several batch emission episodes and conducts a single performance test for the batch emission episode that is the most challenging, in terms of achieving emission reductions, for the control device or control technology; thereby demonstrating that the achieved emission reduction for the tested batch emission episode is the minimum control device or control technology performance expected for each batch emission episode in the group. An owner or operator may use the concept provided by paragraph (e)(1)(ii)(B) of this section for several different groups of batch emission episodes.

(A) *Testing each batch emission episode.* A performance test shall be performed for each batch emission episode, or portion thereof, that the owner or operator selects to control. Performance tests shall be conducted using the testing procedures specified in § 63.1414(a) and (b) and the following procedures:

(*1*) Only one test (*i.e.*, only one run) is required for each batch emission episode selected by the owner or operator for control.

(*2*) Except as specified in paragraph (e)(1)(ii)(A)(3) of this section, the performance test shall be conducted over the entire period of emissions selected by the owner or operator for control.

(*3*) An owner or operator may choose to test only those periods of the batch emission episode during which the emission rate for the entire batch emission episode can be determined or during which the organic HAP emissions are greater than the average emission rate of the batch emission episode. The owner or operator choosing either of these options shall develop an emission profile illustrating the emission rate (kilogram per unit time) over the entire batch emission episode, based on either process knowledge or test data, to demonstrate that test periods are representative. Examples of information that could constitute process knowledge include calculations based on material balances and process stoichiometry. Previous test results may be used to develop the emission profile provided the results are still relevant to the current batch process vent conditions. The emission profile shall be included in the site-specific test plan required by § 63.1417(h)(2).

(*4*) When choosing sampling sites using the methods specified in § 63.1414(a)(1), inlet sampling sites shall be located as specified in paragraphs (e)(1)(ii)(A)(*4*)(*i*) and (*ii*) of this section. Outlet sampling sites shall be located at the outlet of the control device prior to release to the atmosphere.

(*i*) The control device inlet sampling site shall be located at the exit from the batch unit operation after any condensers operating as process condensers and before any control device.

(*ii*) If a batch process vent is introduced with the combustion air or as a secondary fuel into a boiler or process heater with a design capacity less than 44 megawatts, selection of the location of the inlet sampling sites shall ensure the measurement of total organic HAP concentrations in all batch process vents and primary and secondary fuels introduced into the boiler or process heater.

(B) *Testing only the most challenging batch emission episode.* Under this paragraph, an owner or operator groups together several batch emission episodes and conducts a single performance test for the batch emission episode that is the most challenging, in terms of achieving emission reductions, for the control device or control technology; thereby demonstrating that the achieved emission reduction for the tested batch emission episode is the minimum control device or control technology performance expected for each batch emission episode in the group. The owner or operator shall use the control device efficiency determined from the performance test for all the other batch emission episodes in that group for purposes of paragraph (e)(2)(iii) of this section. Performance tests shall be conducted using the testing procedures specified in § 63.1414(a) and (b) and the following procedures:

(*1*) The procedures specified in paragraphs (e)(2)(ii)(A)(*2*) through (*4*) of this section.

(*2*) Develop an emission profile illustrating the emission rate (kilogram/unit time) for each period of emissions to be addressed by the performance test. The emission profile shall be based on either process knowledge or test data. Examples of information that could constitute process knowledge include calculations based on material balances and process stoichiometry. Previous test results may be used to develop the emission profile provided the results are still relevant to the current batch process vent conditions. The emission profile shall be included in the site-specific test plan required by § 63.1417(h)(2).

(*3*) Provide rationale for why the control device efficiency for all the other batch emission episodes in the group will be greater than or equal to the control device efficiency achieved during the tested period of the most challenging batch emission episode in the group, as specified in the Notification of Compliance Status Report required by § 63.1417(e).

(iii) *Batch cycle percent reduction.* The percent reduction for the batch cycle for an individual reactor batch process vent and the overall percent reduction for the collection of non-reactor batch process vents within the affected source shall be determined using Equation 1 of this section and the control device efficiencies specified in paragraphs (e)(1)(iii)(A) through (C) of this section. All information used to calculate the batch cycle percent reduction for an individual reactor batch process vent, including a definition of the batch cycle identifying all batch emission episodes, shall be recorded as specified in § 63.1416 (d)(1)(ii). All information used to calculate the overall percent reduction for the collection of non-reactor batch process vents within the affected source, including a list of all batch emission episodes from the collection of non-reactor batch process vents within the affected source, shall be recorded as specified in § 63.1416 (d)(1)(ii). This information shall include identification of those batch emission episodes, or portions thereof, selected for control. This information shall include estimates of uncontrolled organic HAP emissions for those batch emission episodes, or portions thereof, that are not selected for control, determined as specified in paragraph (e)(2)(iii)(D) or (E) of this section.

$$PR = \frac{\sum_{i=1}^{n} E_{unc} + \sum_{i=1}^{n} E_{inlet,con} - \sum_{i=1}^{n} (1-R) E_{inlet,con}}{\sum_{i=1}^{n} E_{unc} + \sum_{i=1}^{n} E_{inlet,con}} (100) \qquad [Eq.\ 1]$$

Where:

PR = Percent reduction.

E_{unc} = Mass rate of total organic HAP for uncontrolled batch emission episode i, kg/hr.

$E_{inlet,con}$ = Mass rate of total organic HAP for controlled batch emission episode i at the inlet to the control device, kg/hr.

R = Control efficiency of control device as specified in paragraphs (e)(1)(iii)(A) through (e)(1)(iii)(C) of this section. The value of R may vary between batch emission episodes.

n=Number of uncontrolled batch emission episodes, controlled batch emission episodes, and control devices. The value of n is not necessarily the same for these three items.

(A) When conducting a performance test, the control efficiency of the control device shall be determined following the procedures in § 63.1414(b)(4).

(B) For combustion control devices listed in paragraphs (a)(2)(i)(A) and (B) of this section and for flares, the control efficiency in Equation 1 of this section shall be 98 percent.

(C) If a performance test is not required, the control efficiency shall be based on the design evaluation specified in paragraph (e)(1)(i) of this section.

(D) For batch process vents estimated through engineering assessment, as described in § 63.1414(f)(6), to emit less than 10 tons per year of uncontrolled organic HAP emissions, the owner or operator may use in Equation 1 of this section the emissions determined using engineering assessment or may determine organic HAP emissions using any of the procedures specified in § 63.1414(d).

(E) For batch process vents estimated through engineering assessment, as described in § 63.1414(d)(6), to emit 10 tons per year or greater of uncontrolled organic HAP emissions, organic HAP emissions shall be estimated following the procedures specified in § 63.1414(d).

(F) Owners or operators designating a condenser, sometimes operated as a process condenser, as a control device shall conduct inprocess recycling and follow the recordkeeping requirements specified in § 63.1416(d)(1)(vi).

(iv) *Initial compliance with percent reduction standards.* Initial compliance with the percent reduction standards specified in § 63.1406(a)(1)(ii) and (2)(ii) and § 63.1407(a)(2)(ii) and (3)(ii) is achieved when the owner or operator demonstrates, following the procedures in paragraphs (e)(1)(i) through (iii) of this section, that the required percent reduction is achieved.

(v) *Continuous compliance with percent reduction standards.* Continuous compliance with the percent reduction standards specified in § 63.1406(a)(1)(ii) and (2)(ii) and

§ 63.1407(a)(2)(ii) and (3)(ii) shall be demonstrated following the continuous monitoring procedures specified in § 63.1415.

(2) *Compliance with mass emission limit standards.* Each owner or operator shall determine initial and continuous compliance with the mass emission limits specified in § 63.1406 (a)(1)(iii) and (a)(2)(iii), according to the following procedures, as appropriate:

(i) If production at an affected source is exclusively non-solvent-based amino/phenolic resin or is exclusively solvent-based amino/phenolic resin, or an owner or operator chooses to meet the non-solvent-based emission limit, the owner or operator shall demonstrate initial and continuous compliance as follows:

(A) *Initial compliance.* Initial compliance shall be based on the average of the first 6 monthly average emission rate data points. The 6-month average shall be compared to the mass emission limit specified in § 63.1406 (a)(1)(iii) and (a)(2)(iii), as appropriate.

(B) *Continuous compliance.* For the first year of compliance, continuous compliance shall be based on a cumulative average monthly emission rate calculated each month based on the available monthly emission rate data points (*e.g.*, 7 data points after 7 months of operation, 8 data points after 8 months of operation) beginning the first month after initial compliance is demonstrated. The first continuous compliance cumulative average monthly emission rate shall be calculated using the first 7 monthly average emission rate data points. After the first year of compliance, a 12-month rolling average monthly emission rate shall be calculated each month based on the previous 12 monthly emission rate data points. Continuous compliance shall be determined by comparing the cumulative average monthly emission rate or the 12-month rolling average monthly emission rate to the mass emission limit specified in § 63.1406 (a)(1)(iii) and (a)(2)(iii), as appropriate.

(C) *Procedures to determine the monthly emission rate.* The monthly emission rate, kilograms of organic HAP per megagram of product, shall be determined at the end of each month using Equation 2 of this section:

Where:

ER=Emission rate of organic HAP from reactor batch process vents, kg of HAP/Mg product.

E_i=Emission rate of organic HAP from reactor batch process vent i as determined using the procedures specified in paragraph (e)(2)(i)(C)(1) of this section, kg/month.

RP_m=Amount of resin produced in one month as determined using the procedures specified in paragraph (e)(2)(i)(C)(*4*) of this section, Mg/month.

n=Number of batch process vents.

(*1*) The monthly emission rate of organic HAP, in kilograms per month, from an individual batch process vent (E_i) shall be determined using Equation 3 of this section. Once organic HAP emissions for a batch cycle (E_{cyclei}) have been estimated, as specified in either paragraph (e)(2)(i)(C)(*2*) or (*3*) of this section, the owner or operator may use the estimated organic HAP emissions (E_{cyclei}) to determine E_i using Equation 3 of this section until the estimated organic HAP emissions (E_{cyclei}) are no longer representative due to a process change or other reasons known to the owner or operator. If organic HAP emissions for a batch cycle (E_{cyclei}) are determined to no longer be representative, the owner or operator shall redetermine organic HAP emissions for the batch cycle (E_{cyclei}) following the procedures in paragraph (e)(2)(i)(C)(*2*) or (*3*) of this section, as appropriate.

$$Ei = \sum_{i=1}^{n} \left(N_i\right)\left(E_{cycle_i}\right) \qquad [Eq.\ 3]$$

Where:

E_i=Monthly emissions from a batch process vent, kg/month.

N_i=Number of type i batch cycles performed monthly, cycles/month.

E_{cyclei}=Emissions from the batch process vent associated with a single type i batch cycle, as determined using the procedures specified in either paragraph (e)(2)(i)(C)(*2*) or (*3*) of this section, kg/batch cycle.

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

(*2*) For reactor batch process vents estimated through engineering assessment, as described in § 63.1414(d)(6), to emit less than 10 tons per year of uncontrolled organic HAP emissions, the owner or operator may use the emissions determined using engineering assessment in Equation 3 of this section or may determine organic HAP emissions using any of the procedures specified in § 63.1414(d). For reactor batch process vents estimated through engineering assessment, as described in § 63.1414(d)(6), to emit 10 tons per year or greater of uncontrolled organic HAP emissions, uncontrolled organic HAP emissions from the batch emission episodes making up the batch cycle shall be estimated following the procedures specified in § 63.1414(d).

(*3*) For reactor batch process vents vented to a control device or control technology, controlled organic HAP emissions shall be determined as follows:

(*i*) Uncontrolled organic HAP emissions shall be determined following the procedures in paragraph (e)(2)(i)(C)(2) of this section.

(*ii*) Control device or control technology efficiency shall be determined using the procedures in paragraph (e)(1)(i) of this section for small control devices or the procedures in paragraph (e)(1)(ii) of this section for large control devices.

(*iii*) Controlled organic HAP emissions shall be determined by applying the control device or control technology efficiency, determined in paragraph (e)(2)(i)(C)(*3*)(*ii*) of this section, to the uncontrolled organic HAP emissions, determined in paragraph (e)(2)(i)(C)(*3*)(*i*) of this section.

(*4*) The rate of resin produced, RP_M (Mg/month), shall be determined based on production records certified by the owner or operator to represent actual production for the month. A sample of the records selected by the owner or operator for this purpose shall be provided to the Administrator in the Precompliance Report as required by § 63.1417(d).

(ii) If production at an affected source reflects a mix of solvent-based and non-solvent-based resin and the owner or operator does not choose to meet the non-solvent-based emission limit specified in § 63.1406 (a)(1)(iii) or (a)(2)(iii), as applicable, the owner or operator shall demonstrate initial and continuous compliance as follows:

(A) *Procedures for determining a site-specific emission limit.* A site-specific emission limit shall be determined using Equation 4 of this section.

$$SSEL = \frac{\left(MGs * ELs\right) + \left(MGns * ELns\right)}{MGs + MGns} \qquad [Eq.\ 4]$$

Where:

SSEL=Site specific emission limit, kg of organic HAP/Mg of product.

MGs=Megagrams of solvent-based resin product produced, megagrams.

MGns=Megagrams of non-solvent-based resin product produced, megagrams.

ELs=Emission limit for solvent-based resin product, kg organic HAP/Mg solvent-based resin product.

ELns=Emission limit for non-solvent-based resin product, kg organic HAP/Mg non-solvent-based resin product.

(B) *Initial compliance.* For purposes of determining initial compliance, the site-specific emission limit shall be based on production for the first 6 months beginning January 20, 2000 or the first 6 months after initial start-up, whichever is later. Using the site-specific emission limit, initial compliance shall be demonstrated using the procedures in paragraph (e)(2)(i)(A) of this section, as appropriate.

(C) *Continuous compliance.* For purposes of determining continuous compliance for the period of operation starting at the beginning of the 7th month and ending after the 12th month, the site-specific emission limit shall be determined each month based on production for the cumulative period. For purposes of determining continuous compliance after the first year of production, the site-specific emission limit shall be determined each month based on production for a 12-month rolling period. Using the site-specific emission limit, continuous compliance shall be demonstrated using the procedures in paragraph (e)(2)(i)(B) of this section, as appropriate.

(3) *Compliance by venting to a flare.* Initial compliance with the standards specified in § 63.1406(a)(1)(i) and (a)(2)(i) and § 63.1407(a)(2)(i) and (a)(3)(i) shall be demonstrated following the procedures specified in paragraph (g) of this section. Continuous compliance with these standards shall be demonstrated following the continuous monitoring procedures specified in § 63.1415.

(4) *Compliance with alternative standard.* Initial and continuous compliance with the alternative standard specified in §§ 63.1406(b) and 63.1407(b)(1) shall be demonstrated following the procedures in paragraph (f) of this section.

(f) *Compliance with alternative standard.* Initial and continuous compliance with the alternative standards in §§ 63.1404(b), 63.1405(b), 63.1406(b), 63.1407(b)(1), and 63.1408(b)(1) are demonstrated when the daily average outlet organic HAP concentration is 20 ppmv or less when using a combustion control device or 50 ppmv or less when using a non-combustion control device. To demonstrate initial and continuous compliance, the owner or operator shall follow the test method specified in § 63.1414(a)(6) and shall be in compliance with the monitoring provisions in § 63.1415(e) no later than the initial compliance date and on each day thereafter.

(g) *Flare compliance demonstrations.* Notwithstanding any other provision of this subpart, if an owner or operator of an affected source uses a flare to comply with any of the requirements of this subpart, the owner or operator shall comply with paragraphs (g)(1) through (3) of this section. When using a flare to comply, the owner or operator is not required to conduct a performance test to determine percent emission reduction or outlet organic HAP concentration. If a compliance demonstration has been conducted previously for a flare, using the techniques specified in paragraphs (g)(1) through (3) of this section, that compliance demonstration may be used to satisfy the requirements of this paragraph if either no deliberate process changes have been made since the compliance demonstration, or the results of the compliance demonstration reliably demonstrate compliance despite process changes.

(1) Conduct a visible emission test using the techniques specified in § 63.11(b)(4).

(2) Determine the net heating value of the gas being combusted using the techniques specified in § 63.11(b)(6).

(3) Determine the exit velocity using the techniques specified in either § 63.11(b)(7)(i) (and § 63.11(b)(7)(iii), where applicable) or § 63.11(b)(8), as appropriate.

(h) *Deviations.* Paragraphs (h)(1) through (4) of this section describe deviations from the emission limits, the operating limits, the work practice standards, and the emission standard, respectively. Paragraph (h)(5) of this section describes situations that are not deviations. Paragraph (h)(6) of this section describes periods that are excluded from compliance determinations.

(1) *Deviations from the emission limit.* The following are deviations from the emission limit:

(i) Exceedance of the condenser outlet gas temperature limit (*i.e.*, having an average value higher than the established maximum level) monitored according to the provisions of § 63.1415(b)(3);

(ii) Exceedance of the outlet concentration (*i.e.*, having an average value higher than the established maximum level) monitored according to the provisions of § 63.1415(b)(8);

(iii) Exceedance of the mass emission limit (*i.e.*, having an average value higher than the specified limit) monitored according to the provisions of paragraph (e)(2) of this section; and

(iv) Exceedance of the organic HAP outlet concentration limit (*i.e.*, having an average value higher than the specified limit) monitored according to the provisions of § 63.1415(e).

(2) *Deviations from the operating limit.* Exceedance of the parameters monitored according to § 63.1415(b)(1), (b)(2), and (b)(4) through (7) are considered deviations from the operating limit. An exceedance of the monitored parameter has occurred if:

(i) The parameter, averaged over the operating day or block, is below a minimum value established during the initial compliance demonstration; or (ii) The parameter, averaged over the operating day or block, is above the maximum value established during the initial compliance demonstration.

(3) *Deviations from the work practice standard.* If all flames at the pilot light of a flare are absent, there has been a deviation from the work practice standard.

(4) *Deviation from the emission standard.* If an affected source is not operated during periods of start-up, shutdown, or malfunction in accordance with the affected source's Start-up, Shutdown, and Malfunction Plan, there has been a deviation from the emission standard. If monitoring data are insufficient, as described in paragraphs (h)(4)(i) through (iii) of this section, there has been a deviation from the emission standard.

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

(ii) The period of control device or control technology operation is less than 4 hours in an operating day, and more than one of the hours during the period of operation does not constitute a valid hour of data due to insufficient monitoring data; and

(iii) Monitoring data are insufficient to constitute a valid hour of data, as used in paragraphs (h)(4)(i) and (ii) of this section, if measured values are unavailable for any of the 15-minute periods within the hour. For data compression systems approved under § 63.1417(k)(3), monitoring data are insufficient to calculate a valid hour of

data if there are less than four data measurements made during the hour.

(5) *Situations that are not deviations.* If an affected source is operated during periods of start-up, shutdown, or malfunction in accordance with the affected source's Start-up, Shutdown, and Malfunction Plan, and any of the situations listed in paragraphs (h)(5)(i) through (iv) of this section occur, such situations shall not be considered to be deviations.

(i) The daily average value of a monitored parameter is above the maximum level or below the minimum level established;

(ii) Monitoring data cannot be collected during monitoring device calibration check or monitoring device malfunction;

(iii) Monitoring data are not collected during periods of start-up, shutdown, or malfunction; and

(iv) Monitoring data are not collected during periods of nonoperation of the affected source or portion thereof (resulting in cessation of the emissions to which the monitoring applies).

(6) *Periods not considered to be part of the period of control or recovery device operation.* The periods listed in paragraphs (h)(6)(i) through (v) of this section are not considered to be part of the period of control or recovery device operation for purposes of determining averages or periods of control device or control technology operation.

(i) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments;

(ii) Start-ups;

(iii) Shutdowns;

(iv) Malfunctions; or

(v) Periods of nonoperation of the affected source (or portion thereof), resulting in cessation of the emissions to which the monitoring applies.

§ 63.1414 Test methods and emission estimation equations.

(a) *Test methods.* When required to conduct a performance test, the owner or operator shall use the test methods specified in paragraphs (a)(1) through (6) of this section, except where another section of this subpart requires either the use of a specific test method or the use of requirements in another subpart containing specific test method requirements.

(1) Method 1 or 1A, 40 CFR part 60, appendix A, shall be used for selection of the sampling sites if the flow measuring device is a pitot tube, except that references to particulate matter in Method 1A do not apply for the purposes of this subpart. No traverse is necessary when Method 2A or 2D, 40 CFR part 60, appendix A is used to determine gas stream volumetric flow rate.

(2) Method 2, 2A, 2C, or 2D, 40 CFR part 60, appendix A, is used for velocity and volumetric flow rates.

(3) Method 3, 40 CFR part 60, appendix A, is used for gas analysis.

(4) Method 4, 40 CFR part 60, appendix A, is used for stack gas moisture.

(5) The following methods shall be used to determine the organic HAP concentration.

(i) Method 316 or Method 320, 40 CFR part 60, appendix A, shall be used to determine the concentration of formaldehyde.

(ii) Method 18, 40 CFR part 60, appendix A, shall be used to determine the concentration of all organic HAP other than formaldehyde.

(iii) Method 308, 40 CFR part 60, appendix A, may be used as an alternative to Method 18 to determine the concentration of methanol.

(6) When complying with the alternative standard, as specified in § 63.1413(f), the owner or operator shall use a Fourier Transform Infrared Spectroscopy (FTIR) instrument following Method PS–15, 40 CFR part 60, appendix B.

(b) *Batch process vent performance testing procedures.*

(1) *Average batch vent flow rate determination.* The average batch vent flow rate for a batch emission episode shall be calculated using Equation 1 of this section:

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

Where:

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

FR_i=Volumetric flow rate for individual measurement i, taken every 15 minutes using the procedures in paragraph (a)(2) of this section, scmm.

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

(2) *Average batch vent concentration determination using an integrated sample.* If an integrated sample is taken over the entire batch emission episode to determine the average batch vent concentration of total organic HAP, organic HAP emissions shall be calculated using Equation 2 of this section:

$$E_{episode} = K\left[\sum_{j=1}^{n}\left(C_j\right)\left(M_j\right)\right]AFR\left(T_h\right) \qquad [Eq.\ 2]$$

Where:

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

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

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

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

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

T_h=Hours/episode.

n=Number of organic HAP in stream.

(3) *Average batch vent concentration determination using grab samples.* If grab samples are taken to determine the average batch vent concentration of total organic HAP, organic HAP emissions shall be calculated as follows:

(i) For each measurement point, the emission rate shall be calculated using Equation 3 of this section:

$$Epoint = K\left[\sum_{j=1}^{n} C_j M_j\right]FR \qquad [Eq.\ 3]$$

Where:

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

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

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

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

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

n=Number of organic HAP in stream.

(ii) The organic HAP emissions per batch emission episode shall be calculated using Equation 4 of this section:

$$E_{episode} = (DUR)\left[\sum_{i=1}^{n}\frac{E_i}{n}\right] \qquad [Eq.\ 4]$$

Where:

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

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

E_i=Emissions for measurement point i, kg/hr.

n=Number of measurements.

(4) *Control device efficiency determination for a batch emission episode.* The control efficiency for the control device shall be calculated using Equation 5 of this section:

$$R = \frac{\sum_{i=1}^{n} E_{inlet,i} - \sum_{i=1}^{n} E_{outlet,i}}{\sum_{i=1}^{n} E_{inlet,i}}(100) \qquad [Eq.\ 5]$$

Where:

R=Control efficiency of control device, percent.

E_{inlet}=Mass rate of total organic HAP for batch emission episode i at the inlet to the control device as calculated under paragraph (b)(2) or (b)(3) of this section, kg/episode.

E_{outlet}=Mass rate of total organic HAP for batch emission episode i at the outlet of the control device, as calculated under paragraph (b)(2) or (b)(3) of this section, kg/episode.

n=Number of batch emission episodes in the batch cycle selected to be controlled.

(c) *Percent oxygen correction for combustion control devices.* If the control device is a combustion device, total organic HAP concentrations shall be corrected to 3 percent oxygen when supplemental combustion air is used to combust the emissions. The integrated sampling and analysis procedures of Method 3B, 40 CFR part 60, appendix A, shall be used to determine the actual oxygen concentration ($\%0_{20}$). The samples shall be taken during the same time that the total organic HAP samples are taken. The concentration corrected to 3 percent oxygen (C_c) shall be computed using Equation 6 of this section:

$$C_c = C_m\left(\frac{17.9}{20.9 - \%O_{2d}}\right) \qquad \text{[Eq. 6]}$$

Where:

C_c=Concentration of total organic HAP corrected to 3 percent oxygen, dry basis, ppmv.

C_m=Total concentration of TOC in vented gas stream, average of samples, dry basis, ppmv.

$\%0_{2d}$=Concentration of oxygen measured in vented gas stream, dry basis, percent by volume.

(d) *Uncontrolled organic HAP emissions.* Uncontrolled organic HAP emissions for individual reactor batch process vents or individual non-reactor batch process vents shall be determined using the procedures specified in paragraphs (d)(1) through (8) of this section. To estimate organic HAP emissions from a batch emissions episode, owners or operators may use either the emissions estimation equations in paragraphs (d)(1) through (4) of this section, or direct measurement as specified in paragraph (d)(5) of this section. Engineering assessment may be used to estimate organic HAP emissions from a batch emission episode only under the conditions described in paragraph (d)(6) of this section. In using the emissions estimation equations in paragraphs (d)(1) through (4) of this section, individual component vapor pressure and molecular weight may be obtained from standard references. Methods to determine individual HAP partial pressures in multicomponent systems are described in paragraph (d)(9) of this section. Other variables in the emissions estimation equations may be obtained through direct measurement, as defined in paragraph (d)(5) of this section; through engineering assessment, as defined in paragraph (d)(6)(ii) of this section; by process knowledge; or by any other appropriate means. Assumptions used in determining these variables shall be documented as specified in § 63.1417. Once organic HAP emissions for the batch emission episode have been determined using either the emissions estimation equations, direct measurement, or engineering assessment, organic HAP emissions from a single batch cycle shall be calculated in accordance with paragraph (d)(7) of this section, and annual organic HAP emissions from the batch process vent shall be calculated in accordance with paragraph (d)(8) of this section.

(1) *Emissions from purging of empty vessels.* Organic HAP emissions from the purging of an empty vessel shall be calculated using Equation 7 of this section. Equation 7 of this section does not take into account evaporation of any residual liquid in the vessel:

$$E_{episode} = \frac{(V_{ves})(P)(MW_{wavg})}{RT}(1 - 0.37^m) \qquad \text{[Eq. 7]}$$

Where:

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

V_{ves}=Volume of vessel, m^3.

P=Total organic HAP partial pressure, kPa.

MW_{wavg}=Weighted average molecular weight of organic HAP in vapor, determined in accordance with paragraph (d)(4)(i)(D) of this section, kg/kmol.

R=Ideal gas constant, 8.314 m^3·kPa/kmol·K.

T=Temperature of vessel vapor space, K.

m=Number of volumes of purge gas used.

(2) *Emissions from purging of filled vessels.* Organic HAP emissions from the purging of a filled vessel shall be calculated using Equation 8 of this section:

$$E_{episode} = \frac{(y)(V_{dr})(P^2)(MW_{wavg})}{RT\left(P - \sum_{i=1}^{n} P_i x_i\right)}(T_m) \qquad \text{[Eq. 8]}$$

Where:

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

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

V_{dr}=Volumetric gas displacement rate, m^3/min.

P=Pressure in vessel vapor space, kPa.

MW_{wavg}=Weighted average molecular weight of organic HAP in vapor, determined in accordance with paragraph (d)(4)(i)(D) of this section, kg/kmol.

R=Ideal gas constant, 8.314 m^3·kPa/kmol·K.

T=Temperature of vessel vapor space, K.

P_i=Vapor pressure of individual organic HAP i, kPa.

x_i=Mole fraction of organic HAP i in the liquid.

n=Number of organic HAP in stream.

T_m=Minutes/episode.

(3) *Emissions from vapor displacement.* Organic HAP emissions from vapor displacement due to transfer of material into or out of a vessel shall be calculated using Equation 9 of this section:

$$E_{episode} = \frac{(y)(V)(P)(MW_{wavg})}{RT} \qquad \text{[Eq. 9]}$$

Where:

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

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

V=Volume of gas displaced from the vessel, m^3.

P=Pressure in vessel vapor space, kPa.

MW_{wavg}=Weighted average molecular weight of organic HAP in vapor, determined in accordance with paragraph (d)(4)(i)(D) of this section, kg/kmol.

R=Ideal gas constant, 8.314 m^3·kPa/kmol·K.

T=Temperature of vessel vapor space, K.

(4) *Emissions from heating of vessels.* Organic HAP emissions caused by the heating of a vessel shall be calculated using the procedures in either paragraph (d)(4)(i),(ii), or (iii) of this section, as appropriate.

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

(A) Organic HAP emissions caused by heating of a vessel shall be calculated using Equation 10 of this section. The assumptions made for this calculation are atmospheric pressure of 760 millimeters of mercury (mm Hg) and the displaced gas is always saturated with volatile organic compounds (VOC) vapor in equilibrium with the liquid mixture:

$$E_{episode} = \left[\frac{\sum_{i=1}^{n} (P_i)_{T1}}{101.325 - \sum_{i=1}^{n} (P_i)_{T1}} + \frac{\sum_{i=1}^{n} (P_i)_{T2}}{101.325 - \sum_{i=1}^{n} (P_i)_{T2}} \right] * (\Delta\eta) \left[\frac{\left(MW_{wavg,T1} + MW_{wavg,T2} \right)}{2} \right] \quad \text{[Eq. 10]}$$

Where:
$E_{episode}$=Emissions, kg/episode.
$(P_i)_{T1}$, $(P_i)_{T2}$=Partial pressure (kPa) of each organic HAP i in the vessel headspace at initial (T1) and final (T2) temperature.
n=Number of organic HAP in stream.
$\Delta\eta$=Number of kilogram-moles (kg-moles) of gas displaced, determined in accordance with paragraph (d)(4)(i)(B) of this section.
101.325=Constant, kPa.
$(MW_{WAVG,T1})$, $(MW_{WAVG,T2})$=Weighted average molecular weight of total organic HAP in the displaced gas stream, determined in accordance with paragraph (d)(4)(i)(D) of this section, kg/kmol.

(B) The moles of gas displaced, Δ, is calculated using Equation 11 of this section:

$$\Delta\eta = \frac{V_{fs}}{R} \left[\left(\frac{Pa_1}{T_1} \right) - \left(\frac{Pa_2}{T_2} \right) \right] \quad \text{[Eq. 11]}$$

Where:
$\Delta\eta$=Number of kg-moles of gas displaced.
V_{fs}=Volume of free space in the vessel, m^3.
R=Ideal gas constant, 8.314 m^3·kPa/kmol·K.
Pa_1=Initial noncondensible gas partial pressure in the vessel, kPa.
Pa_2=Final noncondensible gas partial pressure in the vessel, kPa.
T_1=Initial temperature of vessel, K.
T_2=Final temperature of vessel, K.

(C) The initial and final pressure of the noncondensible gas in the vessel shall be calculated using Equation 12 of this section:

$$Pa = 101.325 - \sum_{i=1}^{n} (P_i)_T \quad \text{[Eq. 12]}$$

Where:
Pa=Initial or final partial pressure of noncondensible gas in the vessel headspace, kPa.
101.325=Constant, kPa.
$(P_i)_T$=Partial pressure of each organic HAP i in the vessel headspace, kPa, at the initial or final temperature (T1 or T2).
n=Number of organic HAP in stream.

(D) The weighted average molecular weight of organic HAP in the displaced gas, MW_{wavg}, shall be calculated using Equation 13 of this section:

$$MW_{wavg} = \frac{\sum_{i=1}^{n} (\text{mass of C})_i (\text{molecular weight of C})_i}{\sum_{i=1}^{n} (\text{mass of C})_i} \quad \text{[Eq. 13]}$$

Where:
C=Organic HAP component
n=Number of organic HAP components in stream.

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

(A) For the interval from the initial temperature to the temperature 50 K below the boiling point, organic HAP emissions shall be calculated using Equation 10 of this section, where T_2 is the temperature 50 K below the boiling point.

(B) For the interval from the temperature 50 K below the boiling point to the final temperature, organic HAP emissions shall be calculated as the summation of emissions for each 5 K increment, where the emissions for each increment shall be calculated using Equation 10 of this section.

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

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

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

(iii) If the vessel is operating with a condenser, and the vessel contents are heated to the boiling point, the process condenser, as defined in § 63.1402, is considered part of the process. Organic HAP emissions shall be calculated as the sum of emissions calculated using Equation 10 of this section, which calculates organic HAP emissions due to heating the vessel contents to the temperature of the gas exiting the condenser, and emissions calculated using Equation 9 of this section, which calculates emissions due to the displacement of the remaining saturated noncondensible gas in the vessel. The final temperature in Equation 10 of this section shall be set equal to the exit gas temperature of the condenser. Equation 9 of this section shall be used as written below in Equation 14 of this section, using free space volume, and T is set equal to the condenser exit gas temperature:

$$E_{episode} = \frac{(y)(V_{fs})(P)(MW_{wavg})}{RT} \quad [Eq. 14]$$

Where:
$E_{episode}$=Emissions, kg/episode.
y=Saturated mole fraction of all organic HAP in vapor phase.
V_{fs}=Volume of the free space in the vessel, m^3.
P=Pressure in vessel vapor space, kPa.
MW_{wavg}=Weighted average molecular weight of organic HAP in vapor, determined in accordance with paragraph (d)(4)(i)(D) of this section, kg/kmol.
R=Ideal gas constant, 8.314 m^3·kPa/kmol·K.
T=Temperature of condenser exit stream, K.

(5) *Emissions determined by direct measurement.* The owner or operator may estimate annual organic HAP emissions for a batch emission episode by direct measurement. The test methods and procedures specified in paragraphs (a) and (b) of this section shall be used for direct measurement. If direct measurement is used, the owner or operator shall perform a test for the duration of a representative batch emission episode. Alternatively, the owner or operator may perform a test during only those periods of the batch emission episode for which the emission rate for the entire episode can be determined or for which the emissions are greater than the average emission rate of the batch emission episode. The owner or operator choosing either of these options shall develop an emission profile illustrating the emission rate (kilogram per unit time) over the entire batch emission episode, based on either process knowledge or test data, to demonstrate that test periods are representative. Examples of information that could constitute process knowledge include calculations based on material balances and process stoichiometry. Previous test results may be used to develop the emission profile provided the results are still relevant to the current batch process vent conditions. The emission profile shall be included in the site-specific test plan required by § 63.1417(h)(2).

(6) *Emissions determined by engineering assessment.* To use engineering assessment to estimate organic HAP emissions from a batch emission episode, owners or operators shall comply with paragraphs (d)(6)(i) through (iii) of this section.

(i) If the criteria specified in paragraphs (d)(6)(i)(A), (B), and (C) of this section are met for a specific batch emission episode, the owner or operator may use engineering assessment to estimate organic HAP emissions from that batch emission episode.

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

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

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

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

(C) The owner or operator has requested and been granted approval to use engineering assessment to estimate organic HAP emissions from a batch emissions episode. The request to use engineering assessment to estimate organic HAP emissions from a batch emissions episode shall contain sufficient information and data to demonstrate to the Administrator that engineering assessment is an accurate means of estimating organic HAP emissions for that particular batch emissions episode. The request to use engineering assessment to estimate organic HAP emissions for a batch emissions episode shall be submitted in the Precompliance Report, as required by § 63.1417(d).

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

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

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

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

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

(*1*) Use of material balances;

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

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

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

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

(A) Data or other information used to demonstrate that the criteria in paragraphs (d)(6)(i)(A) and (B) of this section have been met shall be reported in the Notification of Compliance Status, as required by § 63.1417(e)(9).

(B) The request for approval to use engineering assessment to estimate organic HAP emissions from a batch emissions episode as allowed under paragraph (d)(6)(i)(C) of this section, and sufficient data or other information for demonstrating to the Administrator that engineering assessment is an accurate means of estimating organic HAP emissions for that particular batch emissions episode shall be submitted with the Precompliance Report, as required by § 63.1417(d).

(7) *Emissions for a single batch cycle.* For each batch process vent, the organic HAP emissions associated with a single batch cycle shall be calculated using Equation 15 of this section:

Where:

$$E_{cycle} = \sum_{i=1}^{n} E_{episode_i} \qquad [Eq.\ 15]$$

E_{cycle}=Emissions for an individual batch cycle, kg/batch cycle.
$E_{episodei}$=Emissions from batch emission episode i, kg/episode.
n=Number of batch emission episodes for the batch cycle.

(8) *Annual emissions from a batch process vent.* Annual organic HAP emissions from a batch process vent shall be calculated using Equation 16 of this section:

$$AE = \sum_{i=1}^{n} (N_i)(E_{cycle_i}) \qquad [Eq.\ 16]$$

Where:
AE=Annual emissions from a batch process vent, kg/yr.
N_i=Number of type i batch cycles performed annually, cycles/year.
E_{cyclei}=Emissions from the batch process vent associated with a single type i batch cycle, as determined in paragraph (d)(7) of this section, kg/batch cycle.
n=Number of different types of batch cycles that cause the emission of organic HAP from the batch process vent.

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

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

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

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

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

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

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

§ 63.1415 Monitoring requirements.

(a) *General requirements.* Each owner or operator of an emission point located at an affected source that uses a control device to comply with the requirements of this subpart and has one or more parameter monitoring level requirement specified under this subpart, shall install the monitoring equipment specified in paragraph (b) of this section in order to demonstrate continued compliance with the provisions of this subpart. All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(1) This monitoring equipment shall be in operation at all times when organic HAP emissions that are required to be controlled as part of complying with the emission limits specified in §§ 63.1404, 63.1405, 63.1406, 63.1407, and 63.1408 are vented to the control device.

(2) For control devices controlling less than 1 ton per year of uncontrolled organic HAP emissions, monitoring shall consist of a daily verification that the control device is operating properly. If the control device is used to control batch process vents alone or in combination with other emission points, the verification may be on a per batch cycle basis. This verification shall include, but not be limited to, a daily or per batch demonstration that the control device is working as designed. The procedure for this demonstration shall be submitted for review and approval as part of the Precompliance Report, as required by § 63.1417(d)(10).

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

(b) *Monitoring equipment.* The monitoring equipment specified in paragraphs (b)(1) through (8) of this section shall be installed as specified in paragraph (a) of this section. The parameters to be monitored are specified in Table 3 of this subpart.

(1) Where a scrubber is used, the following monitoring equipment is required.

(i) A pH monitoring device equipped with a continuous recorder to monitor the pH of the scrubber effluent.

(ii) A flow measurement device equipped with a continuous recorder shall be located at the scrubber influent for liquid flow. Gas stream flow shall be determined using one of the following procedures:

(A) The owner or operator may determine gas stream flow using the design blower capacity with appropriate adjustments for pressure drop.

(B) If the scrubber is subject to regulations in 40 CFR parts 264 through 266 that required a determination of the liquid to gas (L/G) ratio prior to the applicable compliance date for this subpart, the owner or operator may determine gas stream flow by the method that had been utilized to comply with those regulations. A determination that was conducted prior to the compliance date for this subpart may be utilized to comply with this subpart if it is still representative.

(C) The owner or operator may prepare and implement a gas stream flow determination plan that documents an appropriate method which will be used to determine the gas stream flow. The plan shall require determination of gas stream flow by a method which will at least provide a value for either a representative or the highest gas stream flow anticipated in the scrubber during representative operating conditions other than start-ups, shutdowns, or malfunctions. The plan shall include a description of the methodology to be followed and an explanation of how the selected methodology will reliably determine the gas stream flow, and a description of the records that will be maintained to document the determination of gas stream flow. The owner or operator shall maintain the plan as specified in § 63.1416(a).

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

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

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

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

(i) Where an incinerator other than a catalytic incinerator is used, the temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

(ii) Where a catalytic incinerator is used, temperature monitoring devices

shall be installed in the gas stream immediately before and after the catalyst bed.

(6) Where a flare is used, a device (including but not limited to a thermocouple, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting the presence of a pilot flame is required.

(7) Where a boiler or process heater of less than 44 megawatts design heat input capacity is used, a temperature monitoring device in the firebox equipped with a continuous recorder is required. Any boiler or process heater in which all vent streams are introduced with the primary fuel or are used as the primary fuel is exempt from this requirement.

(8) As an alternate to paragraphs (b)(1) through (7) of this section, the owner or operator may install an organic monitoring device equipped with a continuous recorder. Said organic monitoring device shall meet the requirements of Performance Specification 8 or 9 of 40 CFR part 60, appendix B, and shall be installed, calibrated, and maintained according to § 63.6.

(c) *Alternative monitoring parameters.* An owner or operator may request approval to monitor parameters other than those specified in Table 3 of this subpart. The request shall be submitted according to the procedures specified in § 63.1417(j). Approval shall be requested if the owner or operator:

(1) Uses a control device or control technology other than those included in paragraph (b) of this section; or

(2) Uses one of the control devices included in paragraph (b) of this section, but seeks to monitor a parameter other than those specified in Table 3 of this subpart.

(d) *Monitoring of bypass lines.* Owners or operators using a vent system that contains bypass lines that could divert emissions away from a control device or control technology used to comply with the provisions of this subpart shall comply with either paragraph (d)(1) or (2) of this section. Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to this paragraph.

(1) Properly install, maintain, and operate a flow indicator that takes a reading at least once every 15 minutes. Records shall be generated as specified in § 63.1416(d)(3). The flow indicator shall be installed at the entrance to any bypass line that could divert emissions away from the control device or control technology and to the atmosphere; or

(2) Secure the bypass line damper or valve in the non-diverting position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the damper or valve is maintained in the non-diverting position and emissions are not diverted through the bypass line. Records shall be generated as specified in § 63.1416(d)(3).

(e) *Monitoring for the alternative standards.* For control devices that are used to comply with the provisions of §§ 63.1404(b), 63.1405(b), 63.1406(b), 63.1407(b), or 63.1408(b) the owner or operator shall conduct continuous monitoring of the outlet organic HAP concentration whenever emissions are vented to the control device. Continuous monitoring of outlet organic HAP concentration shall be accomplished using an FTIR instrument following Method PS–15 of 40 CFR part 60, appendix B. The owner or operator shall calculate a daily average outlet organic HAP concentration.

§ 63.1416 Recordkeeping requirements.

(a) *Data retention.* Unless otherwise specified in this subpart, each owner or operator of an affected source shall keep copies of all applicable records and reports required by this subpart for at least 5 years, as specified in paragraph (a)(1) of this section, with the exception listed in paragraph (a)(2) of this section.

(1) All applicable records shall be maintained in such a manner that they can be readily accessed. The most recent 6 months of records shall be retained on site or shall be accessible from a central location by computer or other means that provides access within 2 hours after a request. The remaining 4 and one-half years of records may be retained offsite. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, CD–ROM, optical disc, magnetic tape, or microfiche.

(2) If an owner or operator submits copies of reports to the appropriate EPA Regional Office, the owner or operator is not required to maintain copies of reports. If the EPA Regional Office has waived the requirement of § 63.10(a)(4)(ii) for submittal of copies of reports, the owner or operator is not required to maintain copies of those reports.

(b) *Start-up, shutdown, and malfunction plan and records.* The owner or operator of an affected source shall develop and implement a start-up, shutdown, and malfunction plan as specified in § 63.6(e)(3) and shall keep the plan on-site. Records shall be kept as specified in paragraphs (b)(1) and (2) of this section. Records are not required for emission points that do not require control under this subpart.

(1) Records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment, or control devices, or recovery devices, or continuous monitoring systems, or control technologies used to comply with this subpart during which excess emissions (as defined in § 63.1400(k)(4)) occur.

(2) For each start-up, shutdown, or malfunction during which excess emissions (as defined in § 63.1400(k)(4)) occur, records reflecting whether the procedures specified in the affected source's start-up, shutdown, and malfunction plan were followed and documentation of actions taken that are not consistent with the plan. For example, if a start-up, shutdown, and malfunction plan includes procedures for routing a control device to a backup control device (e.g., a halogenated stream could be routed to a flare during periods when the primary control device is out of service), records shall be kept of whether the plan was followed. These records may take the form of a ''checklist'' or other form of recordkeeping that confirms conformance with the start-up, shutdown, and malfunction plan for the event.

(c) *Monitoring records.* Owners or operators required to comply with § 63.1415 and, therefore, required to keep continuous records shall keep records as specified in paragraphs (c)(1) through (6) of this section.

(1) The owner or operator shall record either each measured data value or average values for 1 hour or shorter periods calculated from all measured data values during each period. If values are measured more frequently than once per minute, a single value for each minute may be used to calculate the hourly (or shorter period) average instead of all measured values. Owners or operators of batch process vents shall record each measured data value; if values are measured more frequently than once per minute, a single value for each minute may be recorded instead of all measured values.

(2) Daily average, batch cycle daily average, or block average values of each continuously monitored parameter shall be calculated for each operating day as specified in paragraphs (c)(2)(i) and (ii) of this section, except as specified in paragraphs (c)(3) and (4) of this section. The option of conducting parameter monitoring for batch process vents on a batch cycle daily average basis or a

block average basis is described in paragraph (d)(2) of this section.

(i) The daily average value, batch cycle daily average, or block average shall be calculated as the average of all parameter values recorded during the operating day, or batch cycle, as appropriate, except as specified in paragraph (c)(4) of this section. For batch process vents, only parameter values recorded during those batch emission episodes, or portions thereof, in the batch cycle that the owner or operator has selected to control in order to comply shall be used to calculate the average. The calculated average shall cover a 24-hour period if operation is continuous, or the number of hours of operation per operating day if operation is not continuous for daily average values or batch cycle daily average values. The calculated average shall cover the entire period of the batch cycle for block average values. As specified in § 63.1413(a)(4)(i)(C)(*3*), the owner or operator shall provide the information needed to calculate batch cycle daily averages for operating days that include partial batch cycles.

(ii) The operating day shall be the period the owner or operator specifies in the operating permit or the Notification of Compliance Status for purposes of determining daily average values or batch cycle daily average values of monitored parameters. The block shall be the entire period of the batch cycle, as specified by the owner or operator in the operating permit or the Notification of Compliance Status for purposes of determining block average values of monitored parameters.

(3) If all recorded values for a monitored parameter during an operating day or block are above the minimum level or below the maximum level established in the Notification of Compliance Status or operating permit, the owner or operator may record that all values were above the minimum level or below the maximum level rather than calculating and recording a daily average, or block average, for that operating day. For these operating days or blocks, the records required in paragraph (c)(1) of this section shall also be retained for 5 years.

(4) Monitoring data recorded during periods identified in paragraphs (c)(4)(i) through (v) of this section shall not be included in any average computed under this subpart. Records shall be kept of the times and durations of all such periods and any other periods during process or control device or recovery device or control technology operation when monitors are not operating:

(i) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments;

(ii) Start-ups;

(iii) Shutdowns;

(iv) Malfunctions; and

(v) Periods of non-operation of the affected source (or portion thereof) resulting in cessation of the emissions to which the monitoring applies.

(5) The owner or operator who has received approval to monitor different parameters, under § 63.1417(j) as allowed under § 63.1415(e), than those specified for storage vessels, continuous process vents, or batch process vents shall retain for a period of 5 years each record specified in their approved Alternative Monitoring Parameters request.

(6) The owner or operator who has received approval to use alternative continuous monitoring and recordkeeping provisions as specified in § 63.1417(k) shall retain for a period of 5 years each record specified in their approved Alternative Continuous Monitoring request.

(d) *Batch process vent records.* (1) *Compliance demonstration records.* Each owner or operator of a batch process vent complying with § 63.1406 or § 63.1407 shall keep the following records, as applicable, readily accessible.

(i) If a batch process vent is seeking to demonstrate compliance with the alternative standard specified in § 63.1406(b) or § 63.1407(b), results of the initial compliance demonstration specified in § 63.1413(f).

(ii) If a batch process vent is seeking to demonstrate compliance with the percent reduction requirements of § 63.1406(a)(1)(ii) or § 63.1407(a)(2)(ii), records documenting the batch cycle percent reduction or overall percent reduction, as appropriate, as specified in § 63.1413(e)(1)(iii).

(iii) When using a flare to comply with § 63.1406(a)(1)(i) or § 63.1407(a)(2)(i):

(A) The flare design (i.e., steam-assisted, air-assisted or non-assisted);

(B) All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the compliance determination required by § 63.1413(g); and

(C) Periods when all pilot flames were absent during the compliance determination required by § 63.1413(g).

(iv) The following information when using a control device or control technology, other than a flare, to achieve compliance with the percent reduction requirement of § 63.1406(a)(1)(ii) or § 63.1407(a)(2)(ii):

(A) For an incinerator, non-combustion control device, or other control technology, the percent reduction of organic HAP achieved for emissions vented to the control device or control technology, as determined using the procedures specified in § 63.1413(e)(1);

(B) For a boiler or process heater, a description of the location at which the vent stream is introduced into the boiler or process heater; and

(C) For a boiler or process heater with a design heat input capacity of less than 44 megawatts and where the vent stream is not introduced with the primary fuel or used as the primary fuel, the percent reduction of organic HAP achieved for emissions vented to the control device, as determined using the procedures specified in § 63.1413(e)(1).

(v) If a batch process vent is seeking to demonstrate compliance with the mass emission limits specified in § 63.1406(a)(1)(iii) or (a)(2)(iii) or specified in § 63.1407(b)(2), the following information:

(A) Results of the initial compliance demonstration specified in § 63.1413(e)(2).

(B) The organic HAP emissions from the batch process vent associated with each single type of batch cycle ($E_{cycle\ i}$) determined as specified in § 63.1413(e)(2).

(C) The site-specific emission limit required by § 63.1413(e)(2), as appropriate.

(vi) If an owner or operator designates a condenser sometimes operated as a process condenser as a control device, comply with either paragraph (d)(1)(vi)(A) or (B) of this section.

(A) Retain information, data, analyses to document inprocess recycling of the material recovered when the condenser is operating as a control device.

(B) When requested by the Administrator, demonstrate that material recovered by the condenser operating as a control device is reused in a manner meeting the definition of inprocess recycling.

(2) *Establishment of parameter monitoring level records.* For each parameter monitored according to § 63.1415(b) and Table 3 of this subpart, or for alternate parameters and/or parameters for alternate control devices or control technologies monitored according to § 63.1417(j) as allowed under § 63.1415(e), maintain documentation showing the establishment of the level that indicates proper operation of the control device or control technology as required by § 63.1415(c) for parameters specified in § 63.1415(b) and as required by § 63.1417(j) for alternate parameters. An

owner or operator may choose to monitor operating parameters for batch process vents on a batch cycle daily average basis or on a block average basis. The batch cycle daily average is based on parameter monitoring accomplished during the operating day (i.e., a 24-hour basis). The block average is based on the parameter monitoring accomplished during a single batch cycle. As defined in § 63.1402, the block shall be the period of time equal to a single batch cycle. Monitored parameter documentation shall include the following:

(i) Parameter monitoring data used to establish the level.

(ii) Identification that the parameter monitoring level is associated with a batch cycle daily average or a block average.

(iii) A definition of the batch cycle or block, as appropriate.

(3) *Controlled batch process vent continuous compliance records.* Continuous compliance records shall be kept as follows:

(i) Each owner or operator of a batch process vent that uses a control device or control technology to comply with the percent reduction requirements of § 63.1406(a)(1)(ii) or § 63.1407(a)(2)(ii) shall keep the following records, as applicable, readily accessible:

(A) Continuous records of the equipment operating parameters specified to be monitored under § 63.1415(b) as applicable, and listed in Table 3 of this subpart, or specified by the Administrator in accordance with § 63.1417(f) as allowed under § 63.1415(e). Said records shall be kept as specified under paragraph (c) of this section, except as follows:

(*1*) For carbon adsorbers, the records specified in Table 3 of this subpart shall be maintained in place of continuous records.

(*2*) For flares, the records specified in Table 4 of this subpart shall be maintained in place of continuous records.

(B) Records of the batch cycle daily average value or block average value of each continuously monitored parameter, as specified in paragraph (c) of this section.

(ii) Each owner or operator of a batch process vent that uses a control device or control technology to comply with § 63.1406 or § 63.1407 shall keep the following records, as applicable, readily accessible:

(A) Hourly records of whether the flow indicator for bypass lines specified in § 63.1415(d) was operating and whether a diversion was detected at any time during the hour. Also, records of the time and duration periods when the vent is diverted from the control device or control technology or the flow indicator specified in § 63.1415(d) is not operating.

(B) Where a seal or closure mechanism is used to comply with § 63.1415(d), hourly records of whether a diversion was detected at any time are not required. The owner or operator shall record whether the monthly visual inspection of the seals or closure mechanisms has been done and shall record the occurrence of all periods when the seal mechanism is broken, the bypass line damper or valve position has changed, or the key for a lock-and-key type configuration has been checked out, and records of any car-seal that has broken.

(C) Records specifying the times and duration of periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments. In addition, records specifying any other periods of process or control device operation or control technology operation when monitors are not operating.

(iii) Each owner or operator of a batch process vent seeking to demonstrate compliance with the alternative standard, as specified in § 63.1406(b) or § 63.1407(b), shall keep the records of continuous emissions monitoring described in § 63.1416(c).

(iv) Each owner or operator of a batch process vent seeking to demonstrate compliance with the mass emission limits, specified in § 63.1406(a)(1)(iii) or (a)(2)(iii), shall keep the following records, as applicable, readily accessible.

(A) The cumulative average monthly emission rate or the 12-month rolling average monthly emission rate, as appropriate.

(B) If there is a deviation from the mass emission limit, as specified in § 63.1413(h), the individual monthly emission rate data points making up the cumulative average monthly emission rate or the 12-month rolling average monthly emission rate, as appropriate.

(C) If it becomes necessary to redetermine ($E_{cycle\ i}$) for a reactor batch process vent, as specified in § 63.1413(e)(2), the new value(s) for ($E_{cycle\ i}$).

(D) If an owner or operator is demonstrating compliance using the procedures in § 63.1413(e)(2), the monthly value of the site-specific emission limit developed under § 63.1413(e)(2).

(e) *Aggregate batch vent stream records.* (1) *Compliance demonstration records.* Each owner or operator of an aggregate batch vent stream complying with § 63.1408(a)(1) or (2) shall keep the following records, as applicable, readily accessible:

(i) If an aggregate batch vent stream is in compliance with the percent reduction requirements of § 63.1408(a)(1)(ii) or (a)(2)(ii), owners or operators shall comply with the recordkeeping requirements for continuous process vents specified in 40 CFR part 63, subpart SS.

(ii) If an aggregate batch vent stream is in compliance with the alternative standard specified in § 63.1408(b), results of the initial compliance demonstration specified in § 63.1413(f).

(iii) When using a flare to comply with § 63.1408(a)(1)(i) or (a)(2)(i):

(A) The flare design (i.e., steam-assisted, air-assisted or non-assisted).

(B) All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the compliance determination required by § 63.1413(g).

(C) Periods when all pilot flames were absent during the compliance determination required by § 63.1413(g).

(iv) If an aggregate batch vent stream is seeking to comply with the mass emission limits specified in § 63.1408(b)(2), results of the initial compliance demonstration specified in § 63.1413(e)(2). In addition, for each batch process vent, the emissions associated with each single type of batch cycle ($E_{cycle\ i}$), determined as specified in § 63.1413(e)(2), shall be recorded.

(2) *Establishment of parameter monitoring level records.* For each parameter monitored according to § 63.1415(b) and Table 3 of this subpart, or for alternate parameters and/or parameters for alternate control devices monitored according to § 63.1417(j) as allowed under § 63.1415(e), maintain documentation showing the establishment of the level that indicates proper operation of the control device as required by § 63.1415(c) for parameters specified in § 63.1415(b) and as required by § 63.1417(j) for alternate parameters. Monitored parameter documentation shall include the parameter monitoring data used to establish the level.

(3) *Controlled aggregate batch vent streams continuous compliance records.* The following continuous compliance records shall be kept, as applicable:

(i) Each owner or operator of an aggregate batch vent stream that uses a control device to comply with the percent reduction requirement of § 63.1408(a)(1)(ii) or (a)(2)(ii) shall keep the following records, as applicable, readily accessible:

(A) Continuous records of the equipment operating parameters

specified to be monitored under § 63.1415(b) as applicable, and listed in Table 3 of this subpart, or specified by the Administrator in accordance with § 63.1417(j) as allowed under § 63.1415(e). Records shall be kept as specified under paragraph (c) of this section, except as follows:

(*1*) For carbon adsorbers, the records specified in Table 3 of this subpart shall be maintained in place of continuous records.

(*2*) For flares, the records specified in Table 3 of this subpart shall be maintained in place of continuous records.

(B) Records of the daily average value of each continuously monitored parameter, as specified in paragraph (c) of this section.

(ii) Each owner or operator of an aggregate batch vent stream that uses a control device to comply with paragraph § 63.1408(a)(1) or (2) of this section shall keep the following records, as applicable, readily accessible:

(A) Hourly records of whether the flow indicator for bypass lines specified in § 63.1415(d) was operating and whether a diversion was detected at any time during the hour. Also, records of the times and durations of periods when the vent is diverted from the control device or the flow indicator specified in § 63.1415(d) is not operating.

(B) Where a seal or closure mechanism is used to comply with § 63.1415(d), hourly records of whether a diversion was detected at any time are not required. The owner or operator shall record whether the monthly visual inspection of the seals or closure mechanisms has been done, and shall record the occurrence of all periods when the seal mechanism is broken, the bypass line damper or valve position has changed, or the key for a lock-and-key type configuration has been checked out, and records of any car-seal that has broken.

(C) Records specifying the times and duration of periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments. In addition, records specifying any other periods of process or control device operation when monitors are not operating.

(iii) Each owner or operator of an aggregate batch vent stream seeking to demonstrate compliance with the alternative standard, as specified in § 63.1408(b), shall keep the records of continuous emissions monitoring described in § 63.1416(c).

(iv) Each owner or operator of an aggregate batch vent stream seeking to demonstrate compliance with the mass emission limits, specified in § 63.1408(b)(2), shall keep the following records, as applicable, readily accessible:

(A) The rolling average monthly emission rate or the 12-month rolling average monthly emission rate, as appropriate.

(B) If there is a deviation from the emission limit, as specified in § 63.1413(h)(1), the individual monthly emission rate data points making up the rolling average monthly emission rate or the 12-month rolling average monthly emission rate, as appropriate.

(C) If it becomes necessary to redetermine (E_{cyclei}) for a reactor batch process vent, as specified in § 63.1413(e)(2), the new value(s) for (E_{cyclei}).

(f) *Continuous process vent records.* (1) *TRE index value records.* Each owner or operator of a continuous process vent shall maintain records of measurements, engineering assessments, and calculations performed according to the procedures of § 63.1412(j) to determine the TRE index value. Documentation of engineering assessments, described in § 63.1412(k), shall include all data, assumptions, and procedures used for the engineering assessments.

(2) *Volumetric flow rate records.* Each owner or operator of a continuous process vent shall record the volumetric flow rate as measured using the sampling site and volumetric flow rate determination procedures (if applicable) specified in § 63.1412(b) and (f) or determined through engineering assessment as specified in § 63.1412(k).

(3) *Organic HAP concentration records.* Each owner or operator shall record the organic HAP concentration as measured using the sampling site and organic HAP concentration determination procedures specified in § 63.1412(b)and (e), or determined through engineering assessment as specified in § 63.1412(k).

(4) *Process change records.* Each owner or operator of a continuous process vent shall keep up-to-date, readily accessible records of any process changes that change the control applicability for a continuous process vent. Records are to include any recalculation or measurement of the flow rate, organic HAP concentration, and TRE index value.

(g) *Other records or documentation.* (1) For continuous monitoring systems used to comply with this subpart, owners or operators shall keep records documenting the completion of calibration checks and records documenting the maintenance of continuous monitoring systems that are specified in the manufacturer's instructions or that are specified in other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

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

(3) Owners or operators using the exemption from the equipment leak provisions provided by § 63.1400(f) shall comply with either paragraph (g)(3)(i) or (ii) of this section.

(i) The owner or operator shall retain information, data, and analysis used to document the basis for using the exemption provided by § 63.1400(f). Such information, data, and analysis shall be retained for the 12-month period preceding December 14, 1998 and for each 12-month period the affected source is in operation and using the exemption provided by § 63.1400(f). The beginning of each 12-month period shall be the anniversary of December 14, 1998.

(ii) When requested by the Administrator, the owner or operator shall demonstrate that actual annual production is equal to or less than 800 megagrams per year of amino/phenolic resin for the 12-month period preceding December 14, 1998, and for each 12-month period the affected source has been in operation and using the exemption provided by § 63.1400(f). The beginning of each 12-month period shall be the anniversary of December 14, 1998.

(4) The owner or operator of a heat exchange system located at an affected source shall retain the following records:

(i) Monitoring data required by § 63.1409 indicating a leak and the date when the leak was detected, and if demonstrated not to be a leak, the basis for that determination.

(ii) Records of any leaks detected by procedures subject to § 63.1409(c)(2) and the date the leak was detected.

(iii) The dates of efforts to repair leaks.

(iv) The method or procedure used to confirm repair of a leak and the date repair was confirmed.

(h) *Reduced recordkeeping program.* For any parameter with respect to any item of equipment, the owner or operator may implement the recordkeeping requirements specified in paragraph (h)(1) or (2) of this section as alternatives to the provisions specified in this subpart for storage vessels,

continuous process vents, batch process vents, or aggregate batch vent streams. The owner or operator shall retain for a period of 5 years each record required by paragraph (h)(1) or (2) of this section.

(1) The owner or operator may retain only the daily average, batch cycle daily average, or block average value, and is not required to retain more frequent values, for a parameter with respect to an item of equipment, if the requirements of paragraphs (h)(1)(i) through (vi) of this section are met. An owner or operator electing to comply with the requirements of paragraph (h)(1) of this section shall notify the Administrator in the Notification of Compliance Status Report required under § 63.1417(e) or, if the Notification of Compliance Status has already been submitted, in the Periodic Report immediately preceding implementation of the requirements of this paragraph as specified in § 63.1417(f)(10).

(i) The monitoring system is capable of detecting unrealistic or impossible data during periods of operation other than start-ups, shutdowns, or malfunctions (e.g., a temperature reading of −200 °C on a boiler) and will alert the operator by alarm or other means. The owner or operator shall record the occurrence. All instances of the alarm or other alert in an operating day or block constitute a single occurrence.

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

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

(B) The running average is based on at least six 1-hour average values; and

(C) The running average reflects a period of operation other than a start-up, shutdown, or malfunction.

(iii) The monitoring system is capable of detecting unchanging data during periods of operation other than start-ups, shutdowns, or malfunctions, except in circumstances where the presence of unchanging data is the expected operating condition based on past experience (e.g., pH in some scrubbers) and will alert the operator by alarm or other means. The owner or operator shall record the occurrence. All instances of the alarm or other alert in an operating day or block constitute a single occurrence.

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

(v) The owner or operator shall verify the proper functioning of the monitoring system, including its ability to comply with the requirements of paragraphs (h)(1)(i) through (iv) of this section, at the times specified in paragraphs (h)(1)(v)(A) through (C). The owner or operator shall document that the required verifications occurred.

(A) Upon initial installation.

(B) Annually after initial installation.

(C) After any change to the programming or equipment constituting the monitoring system which might reasonably be expected to alter the monitoring system's ability to comply with the requirements of this section.

(vi) The owner or operator shall retain the records identified in paragraphs (h)(1)(vi)(A) through (D) of this section.

(A) Identification of each parameter for each item of equipment for which the owner or operator has elected to comply with the requirements of paragraph (h)(1) of this section.

(B) A description of the applicable monitoring system(s) and how compliance will be achieved with each requirement of paragraphs (h)(1)(i) through (v) of this section. The description shall identify the location and format (e.g., on-line storage, log entries) for each required record. If the description changes, the owner or operator shall retain, as provided in paragraph (a) of this section, except as provided in paragraph (h)(1)(vi)(D) of this section, both the current and the most recent superseded description.

(C) A description and the date of any change to the monitoring system that would reasonably be expected to impair its ability to comply with the requirements of paragraph (h) of this section.

(D) Owners and operators subject to paragraph (h)(1)(vi)(B) of this section shall retain the current description of the monitoring system as long as the description is current. The current description shall, at all times, be retained on-site or be accessible from a central location by computer or other means that provides access within 2 hours after a request. The owner or operator shall retain all superseded descriptions for at least 5 years after the date of their creation. Superseded descriptions shall be retained on-site (or accessible from a central location by computer or other means that provides access within 2 hours after a request) for at least 6 months after their creation. Thereafter, superseded descriptions may be stored off-site.

(2) If an owner or operator has elected to implement the requirements of paragraph (h)(1) of this section for a parameter with respect to an item of equipment and a period of 6 consecutive months has passed without any deviation as defined in paragraph (h)(2)(iv) of this section, the owner or operator is no longer required to record the daily average, batch cycle daily average, or block average value for any operating day when the daily average, batch cycle daily average, or block average value is less than the maximum or greater than the minimum established limit. With approval by the Administrator, monitoring data generated prior to the compliance date of this subpart shall be credited toward the period of 6 consecutive months if the parameter limit and the monitoring accomplished during the period prior to the compliance date were required and/or approved by the Administrator.

(i) If the owner or operator elects not to retain the daily average, batch cycle daily average, or block average values, the owner or operator shall notify the Administrator in the next Periodic Report as specified in § 63.1417(f)(11). The notification shall identify the parameter and unit of equipment.

(ii) If, on any operating day or during any block after the owner or operator has ceased recording the daily average, batch cycle daily average, or block average values as provided in paragraph (h)(2) of this section, there is a deviation as defined in paragraph (h)(2)(iv) of this section, the owner or operator shall immediately resume retaining the daily average, batch cycle daily average, or block average value for each operating day and shall notify the Administrator in the next Periodic Report. The owner or operator shall continue to retain each daily average, batch cycle daily average, or block average value until another period of 6 consecutive months has passed without a deviation as defined in paragraph (h)(2)(iv) of this section.

(iii) The owner or operator shall retain the records specified in paragraphs (h)(1)(i) through (iv) of this section for the duration specified in paragraph (h) of this section. For any calendar week, if compliance with paragraphs (h)(1)(i) through (iv) of this section does not result in retention of a record of at least one occurrence or measured parameter value, the owner or operator shall

record and retain at least one value during a period of operation other than a start-up, shutdown, or malfunction.

(iv) For purposes of paragraph (h)(2) of this section, a deviation means that the daily average, batch cycle daily average, or block average value of monitoring data for a parameter is greater than the maximum, or less than the minimum established value, except that the daily average, batch cycle daily average, or block average value during any start-up, shutdown, or malfunction shall not be considered a deviation for purposes of paragraph (h)(2) of this section, if the owner or operator follows the applicable provisions of the start-up, shutdown, and malfunction plan required by § 63.6(e)(3).

§ 63.1417 Reporting requirements.

(a) *Reporting and notification.* In addition to the reports and notifications required by subpart A of this part as specified in Table 1 of this subpart, the owner or operator of an affected source shall prepare and submit the reports listed in paragraphs (d) through (i) of this section as applicable. All reports required by this subpart and the schedule for their submittal are listed in Table 5 of this subpart.

(b) *General.* Owners and operators are required to meet the reporting requirements of this subpart unless they can demonstrate that failure to submit information required to be included in a specified report was due to the circumstances described in paragraphs (b)(1) through (3) of this section. Examples of circumstances where this paragraph may apply include information related to newly-added equipment or emission points, changes in the process, changes in equipment required or utilized for compliance with the requirements of this subpart, or changes in methods or equipment for monitoring, recordkeeping, or reporting.

(1) The information was not known in time for inclusion in the report specified by this subpart.

(2) The owner or operator has been diligent in obtaining the information.

(3) The owner or operator submits a report according to the provisions of paragraphs (b)(3)(i) through (iii) of this section, as appropriate.

(i) If this subpart expressly provides for supplements to the report in which the information is required, the owner or operator shall submit the information as a supplement to that report. The information shall be submitted no later than 60 days after it is obtained, unless otherwise specified in this subpart.

(ii) If this subpart does not expressly provide for supplements, but the owner or operator must submit a request for revision of an operating permit pursuant to 40 CFR part 70 or part 71 due to circumstances to which the information pertains, the owner or operator shall submit the information with the request for revision to the operating permit.

(iii) In any case not addressed by paragraph (b)(3)(i) or paragraph (b)(3)(ii) of this section, the owner or operator shall submit the information with the first Periodic Report, as required by this subpart, which has a submission deadline at least 60 days after the information is obtained.

(c) *Submittals.* All reports required under this subpart shall be sent to the Administrator at the appropriate address listed in § 63.13. If acceptable to both the Administrator and the owner or operator of an affected source, reports may be submitted on electronic media.

(d) *Precompliance Report.* Owners or operators of affected sources requesting an extension for compliance; requesting approval to use alternative monitoring parameters, alternative continuous monitoring and recordkeeping, or alternative controls; requesting approval to use engineering assessment to estimate organic HAP emissions from a batch emissions episode as described in § 63.1414(d)(6)(i)(C); wishing to establish parameter monitoring levels according to the procedures contained in § 63.1413(a)(4)(ii); establishing parameter monitoring levels based on a design evaluation as specified in § 63.1413(a)(3); following the procedures in § 63.1413(e)(2); or requesting approval to incorporate a provision for ceasing to collect monitoring data during a start-up, shutdown, or malfunction into the startup, shutdown, and malfunction plan when that monitoring equipment would be damaged if it did not cease to collect monitoring data, as permitted under § 63.1417(d)(9), shall submit a Precompliance Report according to the schedule described in paragraph (d)(1) of this section. The Precompliance Report shall contain the information specified in paragraphs (d)(2) through (11) of this section, as appropriate.

(1) The Precompliance Report shall be submitted to the Administrator no later than 12 months prior to the compliance date. Unless the Administrator objects to a request submitted in the Precompliance Report within 45 days after its receipt, the request shall be deemed approved. For new affected sources, the Precompliance Report shall be submitted to the Administrator with the application for approval of construction or reconstruction required by § 63.5(d), as specified on Table 1 of this subpart. Supplements to the Precompliance Report may be submitted as specified in paragraph (d)(11) of this section.

(2) A request for an extension for compliance, as specified in § 63.1401(d), may be submitted in the Precompliance Report. The request for a compliance extension will include the data outlined in § 63.6(i)(6)(i)(A), (B), and (D), as required in § 63.1401(d)(1).

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

(4) If the affected source seeks to comply using alternative continuous monitoring and recordkeeping as specified in paragraph (k) of this section, the owner or operator shall submit the information requested in paragraph (d)(4)(i) or (ii) of this section in the Precompliance Report:

(i) The owner or operator shall submit notification of the intent to use the provisions specified in paragraph (k) of this section; or

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

(5) The owner or operator shall report the intent to use alternative controls to comply with the provisions of this subpart in the Precompliance Report. The Administrator may deem the alternative controls to be equivalent to the controls required by the standard under the procedures outlined in § 63.6(g).

(6) If a request for approval to use engineering assessment to estimate organic HAP emissions from a batch emissions episode, as specified in § 63.1414(d)(6)(i)(C), is being made, the information required by § 63.1414(d)(6)(iii)(B) shall be submitted in the Precompliance Report.

(7) If an owner or operator elects to establish parameter monitoring levels according to the procedures contained in § 63.1413(a)(4)(ii), or will be establishing parameter monitoring levels based on a design evaluation as specified in § 63.1413(a)(3), the following information shall be submitted in the Precompliance Report:

(i) Identification of which procedures (*i.e.,* § 63.1413(a)(1)(i) or (ii)) are to be used; and

(ii) A description of how the parameter monitoring level is to be

established. If the procedures in § 63.1413(a)(4)(ii) are to be used, a description of how performance test data will be used shall be included.

(8) If an owner or operator is complying with the mass emission limit specified in § 63.1406(a)(1)(iii) or (a)(2)(iii), § 63.1407(b)(2), or § 63.1408(b)(2), the sample of production records specified in § 63.1413(e)(2) shall be submitted in the Precompliance Report.

(9) If the owner or operator is requesting approval to incorporate a provision for ceasing to collect monitoring data during a start-up, shutdown, or malfunction into the start-up, shutdown, and malfunction plan when that monitoring equipment would be damaged if it did not cease to collect monitoring data, the information specified in paragraphs (d)(9)(i) and (ii) of this section shall be supplied in the Precompliance Report or in a supplement to the Precompliance Report. The Administrator shall evaluate the supporting documentation and shall approve the request only if, in the Administrator's judgment, the specific monitoring equipment would be damaged by the contemporaneous start-up, shutdown, or malfunction.

(i) Documentation supporting a claim that the monitoring equipment would be damaged by the contemporaneous start-up, shutdown, or malfunction.

(ii) A request to incorporate such a provision for ceasing to collect monitoring data during a start-up, shutdown, or malfunction into the start-up, shutdown, and malfunction plan.

(10) The procedure for a control device controlling less than 1 ton per year of uncontrolled organic HAP emissions shall be submitted, as specified in § 63.1415(a)(2). Such a procedure shall meet the requirements specified in § 63.1415(a)(2).

(11) Supplements to the Precompliance Report may be submitted as specified in paragraph (d)(11)(i) or (ii) of this section. Unless the Administrator objects to a request submitted in a supplement to the Precompliance Report within 45 days after its receipt, the request shall be deemed approved.

(i) Supplements to the Precompliance Report may be submitted to clarify or modify information previously submitted.

(ii) Supplements to the Precompliance Report may be submitted to request approval to use alternative monitoring parameters, as specified in paragraph (j) of this section; to use alternative continuous monitoring and recordkeeping, as specified in paragraph (k) of this section; to use alternative controls, as specified in paragraph (d)(5) of this section; to use engineering assessment to estimate organic HAP emissions from a batch emissions episode, as specified in paragraph (d)(6) of this section; to establish parameter monitoring levels according to the procedures contained in § 63.1413(a)(4)(ii) or (a)(3), as specified in paragraph (d)(7) of this section; or to include a provision for ceasing to collect monitoring data during a start-up, shutdown, or malfunction in the start-up, shutdown, and malfunction plan when that monitoring equipment would be damaged if it did not cease to collect monitoring data, as specified in paragraph (d)(9) of this section.

(e) *Notification of Compliance Status.* For existing and new affected sources, a Notification of Compliance Status shall be submitted within 150 days after the compliance dates specified in § 63.1401. For equipment leaks, the Notification of Compliance Status shall contain the information specified in 40 CFR part 63, subpart UU. For storage vessels, continuous process vents, batch process vents, and aggregate batch vent streams, the Notification of Compliance Status shall contain the information listed in paragraphs (e)(1) through (6) of this section.

(1) The results of any emission point applicability determinations, performance tests, design evaluations, inspections, continuous monitoring system performance evaluations, any other information used to demonstrate compliance, and any other information, as appropriate, required to be included in the Notification of Compliance Status under 40 CFR part 63, subpart WW and subpart SS, as referred to in § 63.1404 for storage vessels; under 40 CFR part 63, subpart SS, as referred to in § 63.1405 for continuous process vents; under § 63.1416(f)(1) through (3) for continuous process vents; under § 63.1416(d)(1) for batch process vents; and under § 63.1416(e)(1) for aggregate batch vent streams. In addition, each owner or operator shall comply with paragraphs (e)(1)(i) and (ii) of this section.

(i) For performance tests, applicability determinations, and estimates of organic HAP emissions that are based on measurements, the Notification of Compliance Status shall include one complete test report, as described in paragraph (e)(1)(ii) of this section, for each test method used for a particular kind of emission point. For additional tests performed for the same kind of emission point using the same method, the results and any other required information shall be submitted, but a complete test report is not required.

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

(2) For each monitored parameter for which a maximum or minimum level is required to be established, the Notification of Compliance Status shall contain the information specified in paragraphs (e)(2)(i) through (iv) of this section, unless this information has been established and provided in the operating permit.

(i) The required information shall include the specific maximum or minimum level of the monitored parameter(s) for each emission point.

(ii) The required information shall include the rationale for the specific maximum or minimum level for each parameter for each emission point, including any data and calculations used to develop the level and a description of why the level indicates proper operation of the control device or control technology.

(iii) The required information shall include a definition of the affected source's operating day, as specified in § 63.1416(c)(2)(ii), for purposes of determining daily average values or batch cycle daily average values of monitored parameters. The required information shall include a definition of the affected source's block(s), as specified in § 63.1416(c)(2)(ii), for purposes of determining block average values of monitored parameters.

(iv) For batch process vents, the required information shall include a definition of each batch cycle that requires the control of one or more batch emission episodes during the cycle, as specified in §§ 63.1413(e)(1)(iii) and 63.1416(c)(2)(ii).

(3) When the determination of applicability for process units, as made following the procedures in § 63.1400(g), indicates that a process unit is an APPU, an identification of the APPU and a statement indicating that the APPU is an APPU that produces more than one intended product at the same time, as specified in § 63.1400(g)(1), or is a flexible operations process unit as specified in § 63.1400(g)(2) through (4).

(4) [Reserved]

(5) The results for each predominant use determination for storage vessels belonging to an affected source subject to this subpart that is made under § 63.1400(h)(6).

(6) Notification that the owner or operator has elected to comply with § 63.1416(h), Reduced Recordkeeping Program.

(7) Notification that an affected source is exempt from the equipment leak provisions of § 63.1410 according to the provisions of § 63.1400(f), and the affected source's actual annual production of amino/phenolic resins for the 12-month period preceding December 14, 1998.

(8) An owner or operator with a combustion device, recovery device, or recapture device affected by the situation described in § 63.1400(i)(5) shall identify which rule shall be complied with for monitoring, recordkeeping, and reporting requirements, as allowed under § 63.1400(i)(5).

(9) Data or other information used to demonstrate that an owner or operator may use engineering assessment to estimate emissions for a batch emission episode, as specified in § 63.1413(d)(6)(iii)(A).

(f) *Periodic Reports.* For existing and new affected sources, each owner or operator shall submit Periodic Reports as specified in paragraph (f)(1) of this section. In addition, for equipment leaks subject to § 63.1410, the owner or operator shall submit the information specified in 40 CFR part 63, subpart UU, and for heat exchange systems subject to § 63.1409, the owner or operator shall submit the information specified in § 63.1409. Section 63.1415 shall govern the use of monitoring data to determine compliance for emissions points required to apply controls by the provisions of this subpart.

(1) Except as specified in paragraph (f)(12) of this section, a report containing the information in paragraph (f)(2) of this section or containing the information in paragraphs (f)(3) through (11) of this section, as appropriate, shall be submitted semiannually no later than 60 days after the end of each 180 day period. The first report shall be submitted no later than 240 days after the date the Notification of Compliance Status is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status is due. Subsequent reports shall cover each preceding 6-month period.

(2) If none of the compliance exceptions specified in paragraphs (f)(3) through (11) of this section occurred during the 6-month period, the Periodic Report required by paragraph (f)(1) of this section shall be a statement that the affected source was in compliance for the preceding 6-month period and no activities specified in paragraphs (f)(3) through (11) of this section occurred during the preceding 6-month period.

(3) For an owner or operator of an affected source complying with the provisions of §§ 63.1404 through 63.1409 for any emission point, Periodic Reports shall include:

(i) All information specified in 40 CFR part 63, subpart WW and subpart SS for storage vessels; 40 CFR part 63, subpart SS for continuous process vents; § 63.1416(d)(3)(ii) for batch process vents; and § 63.1416(e) for aggregate batch vent stream.

(ii) The daily average values, batch cycle daily average values, or block average values of monitored parameters for deviations, as specified in § 63.1413(h), of operating parameters. In addition, the periods and duration of periods when monitoring data were not collected shall be specified.

(4) Notification if one or more emission point(s) or one or more APPU is added to an affected source. The owner or operator shall submit the following information:

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

(ii) Notification of applicability status (i.e., does the emission point require control) of the additional emission point, if appropriate, or notification of all emission points in the added APPU.

(5) If there is a deviation from the mass emission limit specified in § 63.1406(a)(1)(iii) or (a)(2)(iii), § 63.1407(b)(2), or § 63.1408(b)(2), the following information, as appropriate, shall be included:

(i) The cumulative average monthly emission rate or the 12-month rolling average monthly emission rate, as appropriate.

(ii) The individual monthly emission rate data points making up the cumulative average monthly emission rate or the 12-month rolling average monthly emission rate, as appropriate.

(iii) If an owner or operator is demonstrating compliance using the procedures in § 63.1413(e)(2)(ii), the monthly value of the site-specific emission limit.

(6) If any performance tests are reported in a Periodic Report, the following information shall be included:

(i) One complete test report shall be submitted for each test method used for a particular kind of emission point tested. A complete test report shall contain the information specified in paragraph (e)(1)(ii) of this section.

(ii) For additional tests performed for the same kind of emission point using the same method, results and any other information required shall be submitted, but a complete test report is not required.

(7) The Periodic Report shall include the results for each change made to a primary product determination for amino/phenolic resins made under § 63.1400(g).

(8) The Periodic Report shall include the results for each change made to a predominant use determination for a storage vessel belonging to an affected source subject to this subpart that is made under § 63.1400(h)(6).

(9) If an owner or operator invokes the delay of repair provisions for a heat exchange system, the following information shall be submitted, as appropriate. If the leak remains unrepaired, the information shall also be submitted in each subsequent periodic report until repair of the leak is reported.

(i) The presence of the leak and the date that the leak was detected.

(ii) Whether or not the leak has been repaired. If the leak is repaired, the date the leak was successfully repaired. If the leak remains unrepaired, the expected date of repair.

(iii) The reason(s) for delay of repair. If delay of repair is invoked due to the reasons described in § 63.1409(e)(2), documentation of emissions estimates shall be included.

(10) Notification that the owner or operator has elected to comply with § 63.1416(h), Reduced Recordkeeping Program.

(11) Notification that the owner or operator has elected to not retain the daily average, batch cycle daily average, or block average values, as appropriate, as specified in § 63.1416(h)(2)(i).

(12) The owner or operator of an affected source shall submit quarterly reports for particular emission points as specified in paragraphs (f)(12)(i) through (iv) of this section.

(i) The owner or operator of an affected source shall submit quarterly reports for a period of 1 year for an emission point if the Administrator requests the owner or operator to submit quarterly reports for the emission point.

(ii) The quarterly reports shall include all information specified in paragraphs (f)(3) through (11) of this section applicable to the emission point for which quarterly reporting is required under paragraph (f)(12)(i) of this section. Information applicable to other emission points within the affected source shall be submitted in the semiannual reports required under paragraph (f)(1) of this section.

(iii) Quarterly reports shall be submitted no later than 60 days after the end of each quarter.

(iv) After quarterly reports have been submitted for an emission point for 1 year, the owner or operator may return to semiannual reporting for the emission point unless the Administrator requests the owner or operator to continue to submit quarterly reports.

(g) *Start-up, shutdown, and malfunction reports.* For the purposes of this subpart, the semiannual start-up, shutdown, and malfunction reports shall be submitted on the same schedule as the Periodic Reports required under paragraph (f) of this section instead of being submitted on the schedule specified in § 63.10(d)(5)(i). Said reports shall include the information specified in § 63.1416(b)(1) and (2) and shall contain the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy.

(h) *Other reports.* Other reports shall be submitted as specified in paragraphs (h)(1) through (7) of this section.

(1) For storage vessels, the notifications of inspections required by 40 CFR part 63, subpart WW shall be submitted.

(2) A site-specific test plan shall be submitted no later than 90 days before the planned date for a performance test. Unless the Administrator requests changes to the site-specific test plan within 45 days after its receipt, the site-specific test plan shall be deemed approved. The test plan shall include a description of the planned test and rationale for why the planned performance test will provide adequate and representative results for demonstrating the performance of the control device. If required by § 63.1413(e)(1) or § 63.1414(d)(5), the test plan shall include an emission profile and rationale for why the selected test period is representative.

(3) 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 in order to allow the Administrator the opportunity to have an observer present during the test. If after 30 days notice for an initially scheduled performance test, there is delay (due to operational problems, etc.) in conducting the scheduled performance test, the owner or operator of an affected source shall notify the Administrator as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Administrator by mutual agreement.

(4) When the conditions of § 63.1400(g)(7) or the conditions of § 63.1400(g)(8) are met, notification of changes to the primary product for an APPU or process unit shall be submitted. When a notification is made in response to a change in the primary product under § 63.1400(g)(7), rationale for why it is anticipated that no amino/phenolic resins will be produced in the process unit in the future shall be included.

(5) Owners or operators of APPU or emission points (other than equipment leak components subject to § 63.1410) that are added to the affected source under the provisions of § 63.1400(d)(2) or (3) or under the provisions of § 63.5(b)(6) shall submit reports as specified in paragraphs (h)(5)(i) through (ii) of this section.

(i) Reports shall include:

(A) A description of the process change or addition, as appropriate;

(B) The planned start-up date and the appropriate compliance date; and

(C) Identification of the emission points (except equipment leak components subject to § 63.1410) specified in paragraphs (h)(5)(i)(C)(*1*) through (*3*) of this section, as applicable.

(*1* All the emission points in an added APPU.

(*2*) All the emission points in an affected source that becomes a new affected source.

(*3*) All the added or created emission points resulting from a process change.

(ii) If the owner or operator wishes to request approval to use alternative monitoring parameters, alternative continuous monitoring or recordkeeping, alternative controls, engineering assessment to estimate organic HAP emissions from a batch emissions episode, or wishes to establish parameter monitoring levels according to the procedures contained in § 63.1413(a)(1)(ii) or (ii), a Precompliance Report shall be submitted no later than 180 days prior to the appropriate compliance date.

(6) The information specified in paragraphs (h)(6)(i) and (ii) of this section shall be submitted when a small control device becomes a large control device, as specified in § 63.1413(a)(1)(ii).

(i) Notification that a small control device has become a large control device and the site-specific test plan shall be submitted within 60 days of the date the small control device becomes a large control device. The site-specific test plan shall include the information specified in paragraph (h)(2) of this section. Approval of the site-specific test plan shall follow paragraph (h)(2) of this section.

(ii) Results of the performance test required by § 63.1413(a)(1)(ii) shall be submitted within 150 days of the date the small control device becomes a large control device.

(7) Whenever a continuous process vent becomes subject to control requirements under 40 CFR part 63, subpart SS, as a result of a process change, the owner or operator shall submit a report within 60 days after the performance test or applicability assessment, whichever is sooner. The report may be submitted as part of the next Periodic Report required by paragraph (f) of this section.

(i) The report shall include the following information:

(A) A description of the process change;

(B) The results of the recalculation of the organic HAP concentration, volumetric flow rate, and or TRE index value required under § 63.1412 and recorded under § 63.1416(f).

(C) A statement that the owner or operator will comply with the requirements specified in § 63.1405.

(ii) If a performance test is required as a result of a process change, the owner or operator shall specify that the performance test has become necessary due to a process change. This specification shall be made in the performance test notification to the Administrator, as specified in paragraph (h)(3) of this section.

(iii) If a process change does not result in additional applicable requirements, then the owner or operator shall include a statement documenting this in the next Periodic Report required by paragraph (f) of this section.

(i) *Operating permit application.* An owner or operator who submits an operating permit application instead of a Precompliance Report shall submit the information specified in paragraph (d) of this section, Precompliance Report, as applicable.

(j) *Alternative monitoring parameters.* The owner or operator who has been directed by any section of this subpart or any section of another subpart referenced by this subpart that expressly referenced this paragraph (j) to set unique monitoring parameters, or who requests approval to monitor a different parameter than those specified in § 63.1415(b), shall submit the information specified in paragraphs (j)(1) through (3) of this section in the Precompliance Report, as required by paragraph (d) of this section.

(1) The required information shall include a description of the parameter(s) to be monitored to ensure the recovery

device, control device, or control technology is operated in conformance with its design and achieves the specified emission limit or percent reduction and an explanation of the criteria used to select the parameter(s).

(2) The required information shall include a description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation, the schedule for this demonstration, and a statement that the owner or operator will establish a level for the monitored parameter as part of the Notification of Compliance Status report required in paragraph (e) of this section, unless this information has already been included in the operating permit application.

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

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

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

(k) *Alternative continuous monitoring.* An owner or operator choosing not to implement the monitoring provisions specified in § 63.1415 for storage vessels, continuous process vents, batch process vents, or aggregate batch vent streams may instead request approval to use alternative continuous monitoring provisions according to the procedures specified in paragraphs (k)(1) through (4) of this section. Requests shall be submitted in the Precompliance Report as specified in paragraph (d)(4) of this section if not already included in the operating permit application and shall contain the information specified in paragraphs (k)(2)(i) and (ii) of this section, as applicable.

(1) The provisions in § 63.8(f)(5)(i) shall govern the review and approval of requests.

(2) An owner or operator of an affected source that does not have an automated monitoring and recording system capable of measuring parameter values at least once every 15 minutes and that does not generate continuous records may request approval to use a nonautomated system with less frequent monitoring in accordance with paragraphs (k)(2)(i) and (ii) of this section.

(i) The requested system shall include manual reading and recording of the value of the relevant operating parameter no less frequently than once per hour. Daily average (or batch cycle daily average) values shall be calculated from these hourly values and recorded.

(ii) The request shall contain:

(A) A description of the planned monitoring and recordkeeping system;

(B) Documentation that the affected source does not have an automated monitoring and recording system;

(C) Justification for requesting an alternative monitoring and recordkeeping system; and

(D) Demonstration to the Administrator's satisfaction that the proposed monitoring frequency is sufficient to represent control or recovery device operating conditions, considering typical variability of the specific process and control or recovery device operating parameter being monitored.

(3) An owner or operator may request approval to use an automated data compression recording system that does not record monitored operating parameter values at a set frequency (for example, once every 15 minutes) but records all values that meet set criteria for variation from previously recorded values, in accordance with paragraphs (k)(3)(i) and (ii) of this section.

(i) The requested system shall be designed to:

(A) Measure the operating parameter value at least once every 15 minutes;

(B) Except for the monitoring of batch process vents, calculate hourly average values each hour during periods of operation;

(C) Record the date and time when monitors are turned off or on;

(D) Recognize unchanging data that may indicate the monitor is not functioning properly, alert the operator, and record the incident;

(E) Calculate daily average, batch cycle daily average, or block average values of the monitored operating parameter based on all measured data; and

(F) If the daily average is not a deviation, as defined in § 63.1413(h), from the operating parameter, the data for that operating day may be converted to hourly average values, and the four or more individual records for each hour in the operating day may be discarded.

(ii) The request shall contain:

(A) A description of the monitoring system and data compression recording system, including the criteria used to determine which monitored values are recorded and retained;

(B) The method for calculating daily averages and batch cycle daily averages; and

(C) A demonstration that the system meets all criteria in paragraph (k)(3)(i) of this section.

(4) An owner or operator may request approval to use other alternative monitoring systems according to the procedures specified in § 63.8(f)(4).

§ 63.1418 [Reserved]

§ 63.1419 Delegation of authority.

(a) This regulation can be administered by the US EPA, or a delegated authority such as a State, local, or tribal agency. If the US EPA Administrator has delegated this regulation to a State, local, or tribal agency, then that agency has the authority to administer and enforce this regulation. To find out if this regulation is delegated to a State, local, or tribal agency, contact the appropriate EPA Regional Office.

(b) In delegating implementation and enforcement authority of this regulation to a State, local, or tribal agency under section 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of US EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are as follows.

(1) Approval of alternatives to the non-opacity emission standards in § 63.1403 through § 63.1410; § 63.1022 through § 63.1034, § 63.1062, § 63.1063(a) and (b), and § 63.1064 under § 63.6(h)(9).

(2) Approval of major alternatives to test methods under § 63.997 and § 63.1414 as defined in § 63.90.

(3) Approval of major alternatives to monitoring under § 63.996 and § 63.1415 as defined in § 63.90.

(4) Approval of major alternatives to recordkeeping and reporting under § 63.998, § 63.999, § 63.1038, § 63.1039, § 63.1065, § 63.1066, § 63.1416, and § 63.1417 as defined in § 63.90 of this chapter.

TABLE 1 TO SUBPART OOO OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART OOO AFFECTED SOURCES

Reference	Applies to subpart OOO	Explanation
63.1(a)(1)	Yes	§ 63.1402 specifies definitions in addition to or that supersede definitions in § 63.2.
63.1(a)(2)	Yes.	
63.1(a)(3)	Yes	§ 63.1401(i) identifies those standards which overlap with the requirements of subpart OOO of this part and specify how compliance shall be achieved.
63.1(a)(4)	Yes	Subpart OOO (this table) specifies the applicability of each paragraph in subpart A of this part.
63.1(a)(5)	No	[Reserved].
63.1(a)(6)–63.1(a)(8)	Yes..	
63.1(a)(9)	No	[Reserved].
63.1(a)(10)	Yes.	
63.1(a)(11)	Yes.	
63.1(a)(12)–63.1(a)(14)	Yes.	
63.1(b)(1)	No.	
63.1(b)(2)	Yes.	
63.1(b)(3)	No	§ 63.1400(e) provides documentation requirements for APPUs not considered affected sources.
63.1(c)(1)	Yes	Subpart OOO (this table) specifies the applicability of each paragraph in subpart A of this part.
63.1(c)(2)	No	Area sources are not subject to this subpart.
63.1(c)(3)	No	[Reserved].
63.1(c)(4)	Yes.	
63.1(c)(5)	Yes	Except that affected sources are not required to submit notifications overridden by this table.
63.1(d)	No	[Reserved].
63.1(e)	Yes.	
63.2	Yes	§ 63.1402 specifies the definitions from subpart A of this part that apply to this subpart.
63.3	Yes.	
63.4(a)(1)–63.4(a)(3)	Yes.	
63.4(a)(4)	No	[Reserved].
63.4(a)(5)	Yes.	
63.4(b)	Yes.	
63.4(c)	Yes.	
63.5(a)(1)	Yes	Except the terms ''source'' and ''stationary source'' should be interpreted as having the same meaning as ''affected source.''
63.5(a)(2)	Yes.	
63.5(b)(1)	Yes	Except § 63.1400(d) specifies when construction or reconstruction is subject to new source standards.
63.5(b)(2)	No	[Reserved].
63.5(b)(3)	Yes.	
63.5(b)(4)	Yes	Except that the Initial Notification and § 63.9(b) requirements do not apply.
63.5(b)(5)	Yes.	
63.5(b)(6)	Yes	Except that § 63.1400(d) specifies when construction or reconstruction is subject to new source standards.
63.5(c)	No	[Reserved].
63.5(d)(1)(i)	Yes	Except that the references to the Initial Notification and § 63.9(b)(5) do not apply.
63.5(d)(1)(ii)	Yes	Except that § 63.5(d)(1)(ii)(H) does not apply.
63.5(d)(1)(iii)	No	§ 63.1417(e) specifies Notification of Compliance Status requirements.
63.5(d)(2)	No.	
63.5(d)(3)	Yes	Except § 63.5(d)(3)(ii) does not apply, and equipment leaks subject to § 63.1410 are exempt.
63.5(d)(4)	Yes.	
63.5(e)	Yes.	
63.5(f)(1)	Yes.	
63.5(f)(2)	Yes	Except that where § 63.9(b)(2) is referred to, the owner or operator need not comply.
63.6(a)	Yes.	
63.6(b)(1)	Yes.	
63.6(b)(2)	Yes.	
63.6(b)(3)	Yes.	
63.6(b)(4)	Yes.	
63.6(b)(5)	Yes.	
63.6(b)(6)	No	[Reserved].
63.6(b)(7)	No.	
63.6(c)(1)	Yes	Except that § 63.1401 specifies the compliance date.
63.6(c)(2)	No.	
63.6(c)(3)	No	[Reserved].
63.6(c)(4)	No	[Reserved].

TABLE 1 TO SUBPART OOO OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART OOO AFFECTED SOURCES—Continued

Reference	Applies to subpart OOO	Explanation
63.6(c)(5)	Yes.	
63.6(d)	No	[Reserved].
63.6(e)	Yes	Except as otherwise specified in this table, § 63.6(e) does not apply to emission points that do not require control under this subpart.[a]
63.6(e)(1)(i)	No	This is addressed by § 63.1400(k)(4).
63.6(e)(1)(ii)	Yes.	
63.6(e)(1)(iii)	Yes.	
63.6(e)(2)	Yes.	
63.6(e)(3)(i)	Yes	For equipment leaks (subject to § 63.1410), the start-up, shutdown, and malfunction plan requirement of § 63.6(e)(3)(i) is limited to control devices and is optional for other equipment. The start-up, shutdown, malfunction plan may include written procedures that identify conditions that justify a delay of repair.
63.6(e)(3)(i)(A)	No	This is addressed by § 63.1400(k)(4).
63.6(e)(3)(i)(B)	Yes.	
63.6(e)(3)(i)(C)	Yes.	
63.6(e)(3)(ii)	Yes.	
63.6(e)(3)(iii)	No	Recordkeeping and reporting are specified in §§ 63.1416 and 63.1417.
63.6(e)(3)(iv)	No	Recordkeeping and reporting are specified in §§ 63.1416 and 63.1417.
63.6(e)(3)(v)	Yes.	
63.6(e)(3)(vi)	Yes.	
63.6(e)(3)(vii)	Yes.	
63.6(e)(3)(vii) (A)	Yes.	
63.6(e)(3)(vii) (B)	Yes	Except the plan shall provide for operation in compliance with § 63.1400(k)(4).
63.6(e)(3)(vii) (C)	Yes.	
63.6(e)(3)(viii)	Yes.	
63.6(f)(1)	Yes.	
63.6(f)(2)	Yes	Except § 63.7(c), as referred to in § 63.6(f)(2)(iii)(D), does not apply, and except that § 63.6(f)(2)(ii) does not apply to equipment leaks subject to § 63.1410.
63.6(f)(3)	Yes.	
63.6(g)	Yes.	
63.6(h)	No	This subpart OOO does not require opacity and visible emission standards.
63.6(i)(1)	Yes.	
63.6(i)(2)	Yes.	
63.6(i)(3)	Yes.	
63.6(i)(4)(i)(A)	Yes.	
63.6(i)(4)(i)(B)	No	Dates are specified in §§ 63.1401(e) and 63.1417(d)(1).
63.6(i)(4)(ii)	No.	
63.6(i)(5)–(14)	Yes.	
63.6(i)(15)	No	[Reserved].
63.6(i)(16)	Yes.	
63.6(j)	Yes.	
63.7(a)(1)	Yes.	
63.7(a)(2)	No	§ 63.1417(e) specifies the submittal dates of performance test results for all emission points except equipment leaks; for equipment leaks, compliance demonstration results are reported in the Periodic Reports.
63.7(a)(3)	Yes.	
63.7(b)	No	§ 63.1417 specifies notification requirements.
63.7(c)	No.	
63.7(d)	Yes.	
63.7(e)(1)	Yes	Except that all performance tests shall be conducted at maximum representative operating conditions achievable at the time without disruption of operations or damage to equipment.
63.7(e)(2)	Yes.	
63.7(e)(3)	No	Subpart OOO specifies requirements.
63.7(e)(4)	Yes.	
63.7(f)	Yes	Except that if a site specific test plan is not required, the notification deadline in § 63.7(f)(2)(i) shall be 60 days prior to the performance test, and in § 63.7(f)(3), approval or disapproval of the alternative test method shall not be tied to the site specific test plan.
63.7(g)	Yes	Except that the requirements in § 63.1417(e) shall apply instead of the references to the Notification of Compliance Status report in § 63.9(h). In addition, equipment leaks subject to § 63.1410 are not required to conduct performance tests.
63.7(h)	Yes	Except § 63.7(h)(4)(ii) may not be applicable, if the site-specific test plan in § 63.7(c)(2) is not required.
63.8(a)(1)	Yes.	
63.8(a)(2)	No.	

TABLE 1 TO SUBPART OOO OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART OOO AFFECTED SOURCES—Continued

Reference	Applies to subpart OOO	Explanation
63.8(a)(3)	No	[Reserved].
63.8(a)(4)	Yes.	
63.8(b)(1)	Yes.	
63.8(b)(2)	No	Subpart OOO specifies locations to conduct monitoring.
63.8(b)(3)	Yes.	
63.8(c)(1)	Yes.	
63.8(c)(1)(i)	Yes.	
63.8(c)(1)(ii)	No	For all emission points except equipment leaks, comply with § 63.1416(b)(2); for equipment leaks, comply with requirements in 40 CFR part 63, subpart UU.
63.8(c)(1)(iii)	Yes.	
63.8(c)(2)	Yes.	
63.8(c)(3)	Yes.	
63.8(c)(4)	No	§ 63.1415 specifies monitoring frequency; not applicable to equipment leaks because § 63.1410 does not require continuous monitoring systems.
63.8(c)(5)–63.8(c)(8)	No.	
63.8(d)	No.	
63.8(e)	No.	
63.8(f)(1)–63.8(f)(3)	Yes.	
63.8(f)(4)(i)	No	Timeframe for submitting request is specified in § 63.1417 (j) or (k); not applicable to equipment leaks because § 63.1410 (through reference to 40 CFR part 63, subpart UU) specifies acceptable alternative methods.
63.8(f)(4)(ii)	No	Contents of request are specified in § 63.1417(j) or (k).
63.8(f)(4)(iii)	No.	
63.8(f)(5)(i)	Yes.	
63.8(f)(5)(ii)	No.	
63.8(f)(5)(iii)	Yes.	
63.8(f)(6)	No	Subpart OOO does not require continuous emission monitors.
63.8(g)	No	Data reduction procedures specified in § 63.1416(a) and (h); not applicable to equipment leaks.
63.9(a)	Yes.	
63.9(b)	No	Subpart OOO does not require an initial notification.
63.9(c)	Yes.	
63.9(d)	Yes.	
63.9(e)	No	§ 63.1417 specifies notification deadlines.
63.9(f)	No	Subpart OOO does not require opacity and visible emission standards.
63.9(g)	No.	
63.9(h)	No	§ 63.1417(e) specifies Notification of Compliance Status requirements.
63.9(i)	Yes.	
63.9(j)	No.	
63.10(a)	Yes.	
63.10(b)(1)	No	§ 63.1416(a) specifies record retention requirements.
63.10(b)(2)	No	Subpart OOO specifies recordkeeping requirements.
63.10(b)(3)	No	§ 63.1400(e) requires documentation of sources that are not affected sources.
63.10(c)	No	§ 63.1416 specifies recordkeeping requirements.
63.10(d)(1)	Yes.	
63.10(d)(2)	No	§ 63.1417 specifies performance test reporting requirements; not applicable to equipment leaks.
63.10(d)(3)	No	Subpart OOO does not require opacity and visible emission standards.
63.10(d)(4)	Yes.	
63.10(d)(5)	Yes	Except that reports required by § 63.10(d)(5)(i) may be submitted at the same time as Periodic Reports specified in § 63.1417(f). The start-up, shutdown, and malfunction plan, and any records or reports of start-up, shutdown, and malfunction do not apply to emission points that do not require control under this subpart.
63.10(e)	No	§ 63.1417 specifies reporting requirements.
63.10(f)	Yes.	
63.11	Yes	Except that instead of § 63.11(b), § 63.1413(g) shall apply.
63.12	Yes.	
63.13–63.15	Yes.	

[a] The plan and any records or reports of start-up, shutdown, and malfunction do not apply to emission points that do not require control under this subpart.

TABLE 2 TO SUBPART OOO OF PART 63—KNOWN ORGANIC HAZARDOUS AIR POLLUTANTS (HAP) FROM THE MANUFACTURE OF AMINO/PHENOLIC RESINS

Organic HAP	CAS Number	Organic HAP subject to cooling tower monitoring requirements in § 63.1409 (Yes/No)	
		Column A	Column B
Acrylamide	79–06–1	No	No
Aniline	62–53–3	Yes	No
Biphenyl	92–52–4	Yes	Yes
Cresol and cresylic acid (mixed)	1319–77–3	Yes	No
Cresol and cresylic acid (m-)	108–39–4	Yes	No
Cresol and cresylic acid (o-)	95–48–7	Yes	No
Cresol and cresylic acid (p-)	106–44–5	Yes	No
Diethanolamine	111–42–2	No	No
Dimethylformamide	68–12–2	No	No
Ethylbenzene	100–41–4	Yes	Yes
Ethylene glycol	107–21–1	No	No
Formaldehyde	50–00–0	Yes	No
Glycol ethers	0	No	No
Methanol	67–56–1	Yes	Yes
Methyl ethyl ketone	78–93–3	Yes	Yes
Methyl isobutyl ketone	108–10–1	Yes	Yes
Naphthalene	91–20–3	Yes	Yes
Phenol	108–95–2	Yes	No
Styrene	100–42–5	Yes	Yes
Toluene	108–88–3	No	Yes
Xylenes (NOS)	1330–20–7	Yes	Yes
Xylene (m-)	108–38–3	Yes	Yes
Xylene (o-)	95–47–6	Yes	Yes
Xylene (p-)	106–42–3	Yes	Yes

CAS No. = Chemical Abstract Registry Number.

TABLE 3 TO SUBPART OOO OF PART 63—BATCH PROCESS VENT MONITORING REQUIREMENTS

Control device	Parameters to be monitored	Frequency/recordkeeping requirements
Scrubber [a]	pH of scrubber effluent, and	Continuous records as specified in § 63.1416(d).[b]
	Scrubber liquid and gas flow rates	Continuous records as specified in § 63.1416(d).[b]
Absorber [a]	Exit temperature of the absorbing liquid, and	Continuous records as specified in § 63.1416(d).[b]
	Exit specific gravity for the absorbing liquid	Continuous records as specified in § 63.1416(d).[b]
Condenser [a]	Exit (product side) temperature	Continuous records as specified in § 63.1416(d).[a]
Carbon adsorber [a]	Total regeneration steam flow or nitrogen flow, or pressure (gauge or absolute) during carbon bed regeneration cycle(s), and.	Record the total regeneration steam flow or nitrogen flow, or pressure for each carbon bed regeneration cycle.
	Temperature of the carbon bed after regeneration and within 15 minutes of completing any cooling cycle(s).	Record the temperature of the carbon bed after each regeneration and within 15 minutes of completing any cooling cycle(s).
Thermal incinerator	Firebox temperature [c]	Continuous records as specified in § 63.1416(d).[b]
Catalytic incinerator	Temperature upstream and downstream of the catalyst bed.	Continuous records as specified in § 63.1416(d).[b]
Boiler or process heater with a design heat input capacity less than 44 megawatts and where the batch process vents or aggregate batch vent streams are not introduced with or used as the primary fuel.	Firebox temperature [c]	Continuous records as specified in § 63.1416(d).[b]
Flare	Presence of a flame at the pilot light	Hourly records of whether the monitor was continuously operating during batch emission episodes, or portions thereof, selected for control and whether a flame was continuously present at the pilot light during said periods.

TABLE 3 TO SUBPART OOO OF PART 63—BATCH PROCESS VENT MONITORING REQUIREMENTS—Continued

Control device	Parameters to be monitored	Frequency/recordkeeping requirements
All control devices	Diversion to the atmosphere from the control device or.	Hourly records of whether the flow indicator was operating during batch emission episodes, or portions thereof, selected for control and whether a diversion was detected at any time during said periods as specified in § 63.1416(d).
	Monthly inspections of sealed valves	Records that monthly inspections were performed as specified in § 63.1416(d).
Scrubber, absorber, condenser, and carbon adsorber (as an alternative to the requirements previously presented in this table).	Concentration level or reading indicated by an organic monitoring device at the outlet of the control device.	Continuous records as specified in § 63.1416(d).[b]

[a] Alternatively, these devices may comply with the organic monitoring device provisions listed at the end of this table.
[b] "Continuous records" is defined in § 63.111.
[c] Monitor may be installed in the firebox or in the ductwork immediately downstream of the firebox before any substantial heat exchange is encountered.

TABLE 4 TO SUBPART OOO OF PART 63—OPERATING PARAMETER LEVELS

Device	Parameters to be monitored	Established operating parameter(s)
Scrubber	pH of scrubber effluent; and scrubber liquid and gas flow rates.	Minimum pH; and minimum liquid/gas ratio.
Absorber	Exit temperature of the absorbing liquid; and exit specific gravity of the absorbing liquid.	Maximum temperature; and maximum specific gravity.
Condenser	Exit temperature	Maximum temperature.
Carbon absorber	Total regeneration steam or nitrogen flow, or pressure (gauge or absolute)[a] during carbon bed regeneration cycle; and temperature of the carbon bed after regeneration (and within 15 minutes of completing any cooling cycle(s)).	Maximum flow or pressure; and maximum temperature.
Thermal incinerator	Firebox temperature	Minimum temperature.
Catalytic incinerator	Temperature upstream and downstream of the catalyst bed.	Minimum upstream temperature; and minimum temperature difference across the catalyst bed.
Boiler or process heater	Firebox temperature	Minimum temperature.
Other devices (or as an alternate to the requirements previously presented in this table)[b].	Organic HAP concentration level or reading at outlet of device.	Maximum organic HAP concentration or reading.

[a] 25 to 50 mm (absolute) is a common pressure level obtained by pressure swing absorbers.
[b] Concentration is measured instead of an operating parameter.

TABLE 5 TO SUBPART OOO OF PART 63—REPORTS REQUIRED BY THIS SUBPART

Reference	Description of report	Due date
§ 63.1400(j) and Subpart A of this part.	Refer to Table 1 and Subpart A of this part.	Refer to Subpart A of this part.
63.1417(d)	Precompliance Report	Existing affected sources—12 months prior to the compliance date. New affected sources—with application for approval of construction or reconstruction.
63.1417(e)	Notification of Compliance Status	Within 150 days after the compliance date.
63.1417(f)	Periodic Reports	Semiannually, no later than 60 days after the end of each 6-month period. See § 63.1417(f)(1) for the due date for the first report.
63.1417(f)(12)	Quarterly reports upon request of the administrator.	No later than 60 days after the end of each quarter.
63.1417(g)	Start-up, shutdown, and malfunction reports.	Semiannually (same schedule as Periodic reports).
63.1417(h)(1)	Notification of storage vessel inspection.	As specified in 40 CFR part 63, subpart WW.
63.1417(h)(2)	Site-specific test plan	90 days prior to planned date of test.
63.1417(h)(3)	Notification of planned performance test.	30 days prior to planned date of test.
63.1417(h)(4)	Notification of change in primary product.	As specified in § 63.1400 (g)(7) or (g)(8).
63.1417(h)(5)	Notification of added emission points.	180 days prior to the appropriate compliance date.

TABLE 5 TO SUBPART OOO OF PART 63—REPORTS REQUIRED BY THIS SUBPART—Continued

Reference	Description of report	Due date
63.1417(h)(6)	Notification that a small control device has been redesignated as a large control device.	Within 60 days of the redesignation of control device size.
63.1417(h)(7)	Notification of process change	Within 60 days after performance test or applicability assessment, whichever is sooner.

[a] Note that the APPU remains subject to this subpart until the notification under § 63.1400(g)(7) is made.

TABLE 6 to Subpart OOO of Part 63—Coefficients for Total Resource Effectiveness [a]

Control device basis	Values of coefficients		
	A	B	C
Flare	5.276×10^{-1}	9.98×10^{-2}	2.096×10^{-3}
Thermal Incinerator 0 Percent Recovery	4.068×10^{-1}	1.71×10^{-2}	8.664×10^{-3}
Thermal Incinerator 70 Percent Recovery	6.868×10^{-1}	3.21×10^{-3}	3.546×10^{-3}

[a] Use according to procedures outlined in this section.
MJ/scm = MegaJoules per standard cubic meter.
scm/min = Standard cubic meters per minute.

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