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Part II

**Environmental
Protection Agency**

40 CFR Parts 9 and 63
National Emission Standards for
Hazardous Air Pollutants for Flexible
Polyurethane Foam Production; Final
Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 9 and 63

[FRL-6163-9]

RIN 2060-AE86

National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action promulgates national emission standards for hazardous air pollutants (NESHAP) for new and existing plantsites that manufacture flexible polyurethane foam. These standards are estimated to reduce HAP emissions from all existing sources of flexible polyurethane foam manufacturing by over 12,500 Mg/yr. This represents a 70 percent reduction from baseline. This action also promulgates amendments to 40 CFR part 9. 40 CFR part 9 is amended by revising the tables to reflect OMB approvals under the Paperwork Reduction Act.

DATES: *Effective date:* October 7, 1998.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Office of the Federal Register as of October 7, 1998.

Compliance dates: Existing sources—October 8, 2001. New sources—at initial start-up.

ADDRESSES: *Docket.* Docket No. A-95-48, containing information considered by the EPA in development of the promulgated standards, is available for public inspection between 8:00 a.m. to 5:30 p.m., Monday through Friday, at the following address in room M-1500, Waterside Mall (ground floor): U.S. Environmental Protection Agency, 401 M Street S.W., Washington, DC 20460, telephone number (202) 260-7548. A reasonable fee may be charged for copying docket materials.

FOR FURTHER INFORMATION CONTACT: For further information concerning applicability and rule determinations, contact the appropriate State or local agency representative. If no State or local representative is available, contact the EPA Regional Office staff listed in the Supplementary Information section of this preamble. For information concerning the analyses performed in developing this rule, contact Mr. David Svendsgaard, Organic Chemicals Group, Emission Standards Division (MD-13), Office of Air Quality Planning and

Standards, U.S. EPA, Research Triangle Park, North Carolina 27711, telephone number (919) 541-2380, facsimile number (919) 541-3470, electronic mail address "svendsgaard.dave@epa.gov".

SUPPLEMENTARY INFORMATION: The initial notification contains general facility information and a brief process description.

Initial notification: Provide to EPA by February 4, 1999.

Notification of compliance status: Existing sources must provide EPA a notification of compliance status by April 6, 2002. New sources must provide EPA a notification of compliance status within the 180 days after initial start-up.

For further information concerning applicability and rule determinations, contact the appropriate State or local agency representative. If no State or local representative is available, contact the following EPA Regional Office staff.

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Regulated Entities

Entities regulated by this action are flexible polyurethane foam production facilities. Typically, these entities are designated as SIC 3086. Regulated categories and entities include:

| Category | Examples of regulated entities |
|----------------|--|
| Industry | Producers of slabstock, molded, and rebond flexible polyurethane foam. |

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that the EPA is now aware could potentially be regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether a facility is regulated by this promulgated action, examine the applicability criteria in section 63.1290 of the rule. For questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

Judicial Review

National emission standards for polyurethane foam production were proposed in the **Federal Register** on December 27, 1996 (61 FR 68406). Today's **Federal Register** action announces the EPA's final decision on the rule. Under section 307(b)(1) of the Act, judicial review of the final rule is available by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit within 60 days of today's publication of this final rule. Under section 307(b)(2) of the Act, the requirements that are the subject of today's notice may not be challenged later in civil or criminal proceedings brought by the EPA to enforce these requirements.

The following outline is provided to aid in reading the preamble to the final rule.

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I. Summary of Considerations Made in Developing This Standard

A. Background and Purpose of the Regulation

The Clean Air Act was created in part "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population." [Clean Air Act, section 101(b)(1)] Section 112(b), as revised in 61 FR 30816 (June 18, 1996), lists 188 hazardous air pollutants (HAP) believed to cause adverse health or environmental effects. Section 112(d) requires that emission standards be promulgated for all categories and subcategories of "major" sources of these HAP and for many smaller "area" sources listed for regulation, pursuant to section 112(c). Major sources are defined as those that emit or have the potential to emit at least 10 tons per year of any single HAP or 25 tons per year of any combination of HAP.

On July 16, 1992 (57 FR 31576), the EPA published a list of categories of sources slated for regulation. This list included the flexible polyurethane foam production source category regulated by the standards being promulgated today. The statute requires emissions standards for the listed source categories to be promulgated between November 1992 and November 2000. On December 3, 1993, the EPA published a schedule for promulgating these standards (58 FR 63941). Standards for the flexible polyurethane foam production source category covered by this rule were

proposed on December 27, 1996 (61 FR 68406).

For the purpose of this rule, the EPA has separated the flexible polyurethane foam production source category into three subcategories. These subcategories are slabstock, molded, and rebond flexible polyurethane foam production.

In the 1990 Amendments to the Clean Air Act, Congress specified that each standard for major sources must require the maximum reduction in emissions of HAP that the EPA determines is achievable, considering cost, non-air quality health and environmental impacts, and energy requirements. In essence, these Maximum Achievable Control Technology (MACT) standards would ensure that all major sources of toxic air pollutants achieve the level of control already being achieved by the better controlled and lower emitting sources in each category. This approach provides assurance to citizens that each major source of toxic air pollution will be required to employ good control measures to limit its emissions.

Available emission data, collected during the development of this rule, shows that pollutants that are listed in section 112(b)(1) and are emitted by flexible polyurethane foam production sources include methylene chloride, 2,4-toluene diisocyanate, methyl chloroform, methylene diphenyl diisocyanate, propylene oxide, diethanolamine, methyl ethyl ketone, methanol, and toluene. Methylene chloride comprises over 98 percent of the total HAP emissions from this industry. Following is a summary of the potential health effects associated with exposure to methylene chloride that will be reduced by the standard.

The acute (short-term) effects of methylene chloride inhalation in humans consist mainly of nervous system symptoms such as decreased visual and auditory functions. These effects appear to be reversible once exposure ceases. Short-term exposure to high concentrations of methylene chloride also irritates the nose and throat. The effects of chronic (long-term) exposure to methylene chloride in humans involve the central nervous system, and include headaches, dizziness, nausea, and memory loss. Animal studies indicate that inhalation of methylene chloride affects the liver, kidney, and cardiovascular system. Developmental or reproductive effects of methylene chloride have not been reported in humans, but limited animal studies have reported lowered fetal body weights in rats exposed to inhalation.

Human data are considered inadequate to prove cancer caused by

exposure to methylene chloride; animal studies have shown increases in liver and lung cancer and benign mammary gland tumors following the inhalation of methylene chloride. Methylene chloride is classified as Group B2, probable human carcinogen of relatively low carcinogenic potency.

As noted earlier, there are other HAP emitted by flexible polyurethane foam production facilities. While the magnitude of emissions of these pollutants is dwarfed by those of methylene chloride, it is important to note that the EPA has not undertaken a risk assessment of these facilities. Therefore, it is possible that other HAP, such as diisocyanates, may also pose risks of concern. The seriousness of risks remaining after imposition of the final MACT standards will be examined at a later date, as provided for under Section 112(f) of the Clean Air Act.

The Clean Air Act strategy avoids dependence on a detailed and comprehensive risk assessment as a prerequisite for controlling air toxics. In addition, this is not a "significant" rule as defined by Executive Order 12866, and a specific benefits analysis is not required. Because of these issues, a detailed and intensive risk assessment of potential effects from HAP emitted from flexible foam production plants is not included in this rulemaking.

The effects of HAP vary in severity based on the level and length of exposure and are influenced by source-specific characteristics such as emission rates and local meteorological conditions. The extent and degree to which the health effects may be experienced is dependent upon: (1) the ambient concentrations observed in the area (e.g., as influenced by emission rates, meteorological conditions, and terrain); (2) the frequency and duration of exposures; (3) characteristics of the exposed individuals (e.g., genetics, age, pre-existing health conditions, and lifestyle), which vary significantly with the population; and (4) pollutant specific characteristics (e.g., toxicity, half-life in the environment, bioaccumulation, and persistence).

Due to the volatility and relatively low potential for bioaccumulation of these pollutants, air emissions are not expected to deposit on land or water and cause subsequent adverse health or ecosystem effects.

The final standards give existing sources 3 years from the date of promulgation to comply. Subject to certain limited exceptions, this is the maximum amount of time allowed under the Clean Air Act. New sources are required to comply with the standard upon initial startup. The EPA

believes these standards to be achievable for affected sources within the time provided.

Included in the final rule are methods for determining initial compliance, as well as monitoring, recordkeeping, and reporting requirements. All of these components are necessary to ensure that sources will comply with the standards both initially and over time. However, the EPA has made every effort to simplify the requirements in the rule.

Two of the HAP used and emitted by the flexible polyurethane foam industry (2,4-toluene diisocyanate and propylene oxide) are subject to the risk management program rule requirements under section 112(r) of the 1990 Clean Air Act Amendments. The risk management program rule was published in the **Federal Register** on June 20, 1996 (61 FR 31668). Facilities handling a listed substance in quantities greater than a threshold amount must comply with the risk management requirements by June 21, 1999. The list of substances and threshold quantities were published in the **Federal Register** on January 31, 1994 (59 FR 4478).

B. Source of Authority

The amended Clean Air Act requires the EPA to promulgate national emission standards for sources of HAP. Section 112(d) provides that these standards must reflect “* * * the maximum degree of reduction in emissions of the HAP * * * that the Administrator, taking into consideration the cost of achieving such emission reduction, and any nonair quality health and environmental impacts and energy requirements, determines is achievable for new or existing sources in the category or subcategory to which such emission standard applies. * * *” [42 U.S.C. 7412(d)(2)]. This level of control is referred to as the maximum achievable control technology (MACT). The Clean Air Act goes on to establish the least stringent level of control for MACT; this level is termed the “MACT floor.”

For new sources, the standards for a source category or subcategory “shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source, as determined by the Administrator” [section 112(d)(3)]. Existing source standards shall be no less stringent than the average emission limitation achieved by the best performing 12 percent of the existing sources for source categories and subcategories with 30 or more sources, or the average emission limitation achieved by the best performing 5 sources for sources or subcategories with fewer than 30

sources [section 112(d)(3)]. These two minimum levels of control define the MACT floor for new and existing sources.

C. Stakeholder and Public Participation

Numerous representatives of the flexible polyurethane foam production industry were consulted in the development of this standard. Industry representatives have included trade associations and flexible foam producers responding to Information Collection Requests. The EPA also received input from representatives from State and Regional environmental agencies. Representatives from other interested EPA offices and programs participated in the regulatory development process as members of the Work Group. The Work Group was involved in the regulatory development process, and was given opportunities to review and comment on the standards before proposal and promulgation. Therefore, the EPA believes that the impact on other EPA offices and programs has been adequately considered during the development of these standards. Finally, industry representatives, regulatory authorities, environmental groups, and the public as a whole had the opportunity to comment on the proposed standards and to provide additional information during the public comment period that followed proposal.

The standards were proposed in the **Federal Register** on December 27, 1996 (61 FR 68406). The preamble and Basis and Purpose Document for the proposed standards described the rationale for the proposed standards. Public comments were solicited at the time of proposal. To provide interested individuals the opportunity for oral presentation of data, views, or arguments concerning the proposed standards, a public hearing was offered at proposal. However, the public did not request a hearing and, therefore, one was not held. The public comment period was from December 27, 1996 to February 25, 1997. A total of 12 comment letters were received. Commenters included industry representatives and State agencies. The comments were carefully considered, and changes were made in the proposed standards when determined by the EPA to be appropriate. A detailed discussion of these comments and responses can be found in the Basis and Purpose Document for Final Standards, which is referenced in Section V.A. of this preamble. The summary of comments and responses in the Basis and Purpose Document for the Final Standards serves as the basis for the revisions that have

been made to the standards between proposal and promulgation. Section IV of this preamble discusses some of the major changes made to the standards.

II. Summary of Promulgated Standards

HAP emissions from the following types of emission points (i.e., emission source types) are being covered by the final standard: storage vessels, equipment leaks, production line, mixhead flush, mold release agents, and auxiliary blowing agent (ABA) use. The HAP emitted and emission points required to be controlled by these standards vary according to whether the facility produces slabstock, molded, or rebond flexible polyurethane foam.

The affected source is defined as each process that produces flexible polyurethane or rebond foam, emits a HAP, and is located at a major source plant site. A process consists of raw material storage; production equipment and piping, ductwork, and other associated equipment; and curing and storage areas. The regulations do not apply to processes dedicated exclusively to the fabrication (i.e., gluing or otherwise bonding foam pieces together) of flexible polyurethane foam or to research and development.

Existing sources subject to the regulation are required to comply within three years of the effective date of the regulation, and new sources would be required to comply at initial startup. Following is a description of the requirements of the standards.

A. Standards for Molded and Rebond Flexible Polyurethane Foam Production

At new and existing molded and rebond flexible polyurethane foam facilities subject to the rule, the use of HAP or HAP-based products as equipment cleaners or mold release agents is prohibited. The one exception to this prohibition is that diisocyanates may be used at molded foam facilities to flush the mixhead and associated piping during periods of startup or maintenance, as long as such solvents are contained in closed loop systems and are re-used in production. Molded and rebond foam producers are required to submit an initial notification and maintain records to demonstrate that the equipment cleaners and mold release agents used are not HAP-based.

B. Standards for Slabstock Flexible Polyurethane Foam Production

The requirements for slabstock foam facilities are separated into two basic categories: (1) diisocyanates used as a reactant in the foam process; and (2) HAP used as an auxiliary blowing agent (ABA) and for equipment cleaning. The

diisocyanate HAP used in the production of slabstock foam is almost always 2,4-toluene diisocyanate (TDI), and the HAP used as an ABA and equipment cleaner is almost always methylene chloride. The rule covers emissions from two types of TDI emission points— storage vessels and equipment leaks. HAP ABA emissions from the following process points are covered: storage vessels, equipment leaks, the foam tunnel, and equipment cleaning.

C. Standards for Diisocyanate Emissions From Slabstock Flexible Polyurethane Foam Production

The standards cover emissions of diisocyanate from storage vessels and equipment leaks. For new and existing sources, there are two compliance options for storage vessels. The vessel can be equipped with a vapor return line that returns vapors displaced during storage vessel filling to the tank truck or rail car. During each unloading event, the vapor return line must be inspected for leaks. If a leak is detected, it must be repaired before the next unloading event. The second option is to equip the storage vessel with a system in which displaced vapors are routed through a carbon adsorption system prior to being discharged to the atmosphere. Storage vessels equipped with carbon adsorption systems must monitor the outlet of the carbon system to detect breakthrough. If breakthrough is detected, the carbon must be replaced before the next unloading event.

Transfer pumps in diisocyanate service must be either sealless pumps, or submerged pump systems that are visually monitored weekly to detect leaks. Any transfer pump leaks detected must be repaired within 15 calendar days. Diisocyanate leaks for other components in diisocyanate service (valves, connectors, and pressure-relief valves) detected by visual, audible, or any other detection method must be repaired within 15 calendar days, as well.

D. Standards for HAP ABA Emissions From Slabstock Flexible Polyurethane Foam Production

This regulation requires that owners or operators comply with requirements

for each of four types of emission points (HAP ABA emissions from storage vessels, equipment leaks, and the production line, and HAP emissions from equipment cleaning). These limitations are described below.

However, since the same HAP, methylene chloride, is frequently used as both an ABA and as an equipment cleaner, this rule allows owners and operators flexibility in complying with the HAP ABA and equipment cleaning provisions. As an alternative to the emission point specific limitations, the owner or operator can elect to comply with a source-wide emission limitation. Owners or operators selecting the source-wide emission limitation must maintain the combined emissions from all of these sources below the required level. While this option is slightly more stringent than the emission point specific limitations, the EPA believes the flexibility it provides will prove to be beneficial for sources selecting this alternative.

1. HAP ABA Storage Vessel Requirements

The requirements for HAP ABA storage vessels are similar to the diisocyanate storage vessel requirements discussed above. Storage vessels can be equipped with either a vapor return line to the tank truck or railcar, or a carbon adsorption system. The requirements for new and existing sources are identical.

2. HAP ABA Equipment Leaks

These standards contain requirements for pumps, valves, connectors, pressure-relief devices, and open-ended valves or lines in HAP ABA service at new and existing sources.

Pumps and valves must be monitored quarterly for leaks using Method 21, 40 CFR part 60, appendix A, where a leak is defined as an instrument reading of 10,000 parts per million or greater. Leaks must be repaired within 15 calendar days after their detection. Alternatively, leakless pumps can be used. Valves that are designated as unsafe-to-monitor must be monitored as frequently as possible, and difficult-to-monitor valves must be monitored once per year.

Connectors must be monitored annually using Method 21, unless the

connector has been opened or the seal broken. In these cases, the connector must be monitored within 3 months after being returned to HAP ABA service. As with the other components, a leak is defined as an instrument reading of 10,000 parts per million or greater, and a leak must be repaired within 15 calendar days. Connectors can also be designated as unsafe-to-monitor, in which case they must be monitored as frequently as possible.

Pressure-relief devices must be monitored using Method 21 if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method. If a leak is found (10,000 parts per million), it must be repaired within 15 calendar days. Each open-ended valve or line in HAP ABA service must be equipped with a cap, blind flange, plug, or a second valve.

3. HAP ABA Emissions from the Production Line

The rule includes an emission limit for HAP ABA emissions from the production line at affected slabstock facilities. There are two options for complying with the requirements for HAP ABA emissions from the production line— rolling annual compliance or monthly compliance. When using a rolling annual basis, compliance is determined each month, based on the previous 12-month period. Under the monthly compliance alternative, compliance is based on the previous month. Both options require comparing actual HAP ABA emissions to allowable HAP ABA emissions.

Rolling Annual Compliance. This regulation recognizes the variability in HAP ABA emissions for different grades of foam, where a grade of foam is determined by its density and indentation force deflection (IFD). Therefore, the allowable emission level is dependent on the mix of foam grades produced during the 12-month compliance period. The nucleus of the HAP ABA emission limitation provisions is the HAP ABA formulation limitation equation, which determines an allowable amount of HAP ABA for each grade of foam. For existing sources, this equation is:

$$ABA_{\text{limit}} = -0.25 (\text{IFD}) - 19.1 \left(\frac{1}{\text{IFD}} \right) - 16.2 (\text{DEN}) - 7.56 \left(\frac{1}{\text{DEN}} \right) + 36.5$$

Where:

ABA_{limit} = HAP ABA formulation limitation, parts HAP ABA allowed per hundred parts polyol (pph)

IFD = Indentation force deflection (25 percent), pounds

DEN = Density, pounds per cubic foot

Therefore, for each foam grade produced during the 12-month period, the owner or operator must determine the HAP ABA formulation limitation. This equation was developed using actual formulation data from the best performing foam production facilities.

Negative values are not intended to be used in calculating allowable emissions. That is, zero is the formulation limitation if the results of the formulation limitation equation are negative. For new sources, the equation is used to determine the HAP ABA formulation

limitation for a limited number of grades. However, the formulation limitation for many higher-density, higher-IFD foams is automatically set to zero. The following table describes how the HAP ABA formulation limitation for new sources is determined.

| | | | | | | |
|--|-------|--|-----------|-----------|-----------|-------|
| Values in parts ABA per hundred parts polyol | | Density ranges (pounds per cubic foot) | | | | |
| | | 0-0.95 | 0.96-1.05 | 1.06-1.15 | 1.16-1.40 | 1.41+ |
| IFD | 0-10 | Use Equation | | | | |
| | 11-15 | | | | | |
| | 16-20 | | | | | |
| | 21-25 | | | | | |
| | 26-30 | | | | | |
| | 31+ | 0 | | | | |

For any foam grade, the owner or operator has the option to designate the HAP ABA formulation limitation as zero. The benefit to such a designation is that the IFD and density testing requirements, as well as the polyol

usage monitoring and recordkeeping requirements, are not required for foam grades for which the owner has designated the HAP ABA formulation limitation as zero. The allowable HAP ABA emissions for a consecutive 12-month period are

calculated as the sum of allowable monthly HAP ABA emissions for each of the individual 12 months in the period. Allowable HAP ABA emissions for each individual month are calculated using the following equation.

$$emiss_{allow, month} = \sum_{j=1}^m \left(\sum_{i=1}^n \frac{(limit_i) (polyol_i)}{100} \right)_j$$

Where:

- $emiss_{allow, month}$ = Allowable HAP ABA emissions from the slabstock affected source for the month, pounds
- m = number of slabstock foam production lines at the affected source
- n = Number of foam grades produced in the month on foam production line j
- $limit_i$ = HAP ABA formulation limit for foam grade i , parts HAP ABA per 100 parts polyol
- $polyol_i$ = Amount of polyol used in the month in the production of foam grade i on foam production line j , pounds

The amount of polyol used is a key component of this analysis, and it must be determined by monitoring the amount of polyol added to the slabstock foam production line at the mixhead when foam is being poured. (See section II. F. 2. below for more information.) Actual HAP ABA emissions are determined by monitoring the HAP ABA added to the slabstock foam production line at the mixhead when foam is being poured. This regulation also contains provisions to allow for the use of HAP ABA recovery devices. If a recovery device is used, the actual HAP emissions are the difference between the uncontrolled HAP ABA emissions and

the HAP ABA recovered. The uncontrolled HAP ABA emissions are determined by monitoring the HAP ABA added to the slabstock foam production line at the mixhead, as discussed above. The amount of HAP ABA recovered is required to be monitored. *Monthly Compliance.* As an alternative to the rolling annual compliance approach, owners or operators can elect to comply each month. If this approach is selected, actual and allowable emissions are determined as discussed above. However, compliance is determined by comparing allowable and actual emissions for each month, rather than

for the 12 previous months. An advantage of the monthly compliance approach is that a violation of the allowable monthly HAP limitation constitutes up to 30 days of violation for that compliance period, whereas a violation of the allowable annual total of HAP calculated in any given month constitutes up to 365 days of violation for that compliance period. This alternative is allowed because it is more stringent than the rolling annual compliance approach. In addition, as with the rolling average compliance approach, the use of HAP ABA recovery devices is permitted with the monthly compliance approach.

4. Equipment Cleaning HAP Emissions

Affected sources complying with the emission point specific limitations are prohibited from using a HAP, or a HAP-based product, as an equipment cleaner.

5. Source-wide Emission Limitation Alternative

This alternative allows the owner or operator to choose which of the HAP ABA emission sources to control, but is only available for sources using no more than one HAP as an ABA and equipment cleaner in the process. In other words, an owner or operator could choose not to control HAP ABA storage vessels and equipment leaks, and instead achieve a higher HAP ABA emission reduction from the production line. Alternatively, an owner or operator could choose to control emissions from equipment leaks and storage to "save" as much HAP ABA as possible for use in the production line. In addition, under the source-wide alternative, a facility could utilize a HAP equipment cleaner, as long as the HAP used as the equipment cleaner is the same chemical as the HAP ABA. However, the equipment cleaning HAP emissions must be offset by emission reductions from one of the HAP ABA emission sources.

An owner or operator electing to comply with the source-wide emission limitation for HAP ABA and equipment cleaning determines compliance by comparing actual emissions from the three HAP ABA emission sources and from equipment cleaning with an allowable emissions level. Compliance is determined each month for the previous 12-month period.

The allowable emissions level is determined using the same procedures discussed above for HAP ABA emissions from the production line. Therefore, the total HAP ABA and equipment cleaning HAP emissions allowed under this alternative are equivalent to the allowed HAP ABA emissions from the production line if the emission point specific alternative is selected.

The actual HAP ABA and equipment cleaning emissions are determined by performing a material balance at the HAP ABA storage vessel, using the following equation:

$$PWE_{\text{actual}} = \sum_i^n (ST_{i, \text{begin}} - ST_{i, \text{end}} + ADD_i)$$

Where:

PWE_{actual} = Actual source-wide HAP ABA and equipment cleaning HAP emissions for a month, pounds/month

$ST_{i, \text{begin}}$ = Amount of HAP ABA in storage tank i at the beginning of the month, pounds

$ST_{i, \text{end}}$ = Amount of HAP ABA in storage tank i at the end of the month, pounds,

ADD_i = Amount of HAP ABA added to storage tank i during the month, pounds

n = Number of HAP ABA storage vessels

Weekly monitoring of the level of HAP ABA in the storage vessels is required, thus providing the amounts for the beginning and end of month to be used in the above equation. In addition, the amount of each HAP ABA delivery must be determined. The requirements for the monitoring of HAP ABA storage vessel levels and the amount of HAP ABA added during each delivery are discussed later in this section. Emission reductions achieved by recovery devices can be accounted for by monitoring the amount of HAP ABA recovered.

As with the emission point specific limitation for HAP ABA from the production line, the source-wide emission limitation includes a monthly compliance alternative.

E. Monitoring Requirements

This regulation contains monitoring requirements for five situations: (1) storage vessels complying using carbon adsorption systems; (2) polyol and HAP ABA added to the production line at the mixhead; (3) recovered HAP ABA when a recovery device is used; (4) the amount of HAP ABA in a storage vessel; and (5) the amount of HAP ABA added to a storage vessel.

1. Storage Vessel Complying Using Carbon Adsorption Systems

Storage vessels equipped with carbon adsorption systems must monitor either the concentration of HAP or the concentration of organic compounds at the exit of the adsorption system. Measurements of HAP concentration must be made using Method 18 Appendix A of 40 CFR 60 and measurements of organic compound concentrations must be made using Method 25A. Outlet concentration measurements must be made monthly (or each time the vessel is filled, if filling occurs less frequently than monthly). Alternatively, the owner or operator can implement an alternative monitoring program where monitoring of HAP or organic compound concentrations during vessel filling must be conducted at an interval no

greater than 20 percent of the carbon replacement interval, which is established using a design analysis.

2. Polyol and HAP ABA Monitoring at the Mixhead

All slabstock facilities must continuously monitor the amount of polyol added to the slabstock foam production line at the mixhead when foam is being poured to allow the calculation of allowable emissions. The regulation contains two options for continuously monitoring the polyol added: (1) a device installed and operated to monitor and record pump revolutions per minute, or (2) a flow rate monitoring device installed and operated to measure the amount of polyol added at the mixhead. Either of these devices must be calibrated at least once each 6 months, and must have an accuracy to within ± 2 percent. The owner or operator can develop an alternative monitoring program to monitor the amount of polyol added at the mixhead. The components of an alternative monitoring plan must include, at a minimum: (1) description of the parameter to be monitored to measure the amount of HAP ABA or polyol added at the mixhead; (2) a description of how the monitoring results will be recorded, and how the results will be converted into amount of

HAP ABA or polyol delivered to the mixhead; (3) data demonstrating that the monitoring device is accurate to within ± 2.0 percent; and (4) procedures to ensure that the accuracy of the parameter monitoring results is maintained. These procedures shall, at a minimum, consist of periodic calibration of all monitoring devices. An alternative plan must be submitted to the Administrator for approval.

In addition, if an owner or operator elects to comply with the emission point specific limitations, the amount of HAP ABA added to the slabstock foam production line at the mixhead must be continuously monitored when foam that contains HAP ABA in the formulation is being poured. The requirements for monitoring the amount of HAP ABA added are the same as discussed above for polyol, except that the device must be calibrated at least once per month.

3. Recovered HAP ABA Monitoring

The rule also includes monitoring requirements for slabstock facilities using a recovery device to reduce HAP ABA emissions. The amount of HAP ABA recovered is determined by using a device that monitors the cumulative amount of HAP ABA recovered by the recovery device. This device must be installed, calibrated, maintained, and operated according to the manufacturer's specifications, and must be certified by the manufacturer to be accurate to within ± 2.0 percent. The rule requires the owner or operator to develop a recovered HAP ABA monitoring and recordkeeping plan and submit it to the EPA for approval.

4. Monitoring to Determine Amount of HAP ABA in a Storage Vessel

For slabstock sources complying with the source-wide alternative, the amount of HAP ABA in a storage vessel must be monitored weekly using a level measurement device. The level measurement device must be calibrated initially and at least once per year thereafter. If the level measurement device produces an output signal, it must have either a digital or printed output. If the level measurement device is a visually-read device (i.e., gauge glass), it must have permanent graduated markings to indicate HAP ABA level in the storage tank.

5. Monitoring to Determine the Amount of HAP ABA Added to a Storage Vessel

The amount of HAP ABA added to a storage vessel during a delivery must be determined using any one of four options. The first option requires that the amount of HAP ABA in the storage vessel be measured before and after the

loading, provided that the level measurement device meets the requirements discussed above in section "I.E.4". The second option requires that the volume of HAP ABA added to the storage vessel be determined by monitoring the flow rate using a device with an accuracy of 98 percent or greater, and which is calibrated at least once every six months. The third option allows the owner or operator to calculate the weight of HAP ABA added by determining the difference between the full weight of the transfer vehicle prior to unloading into the storage vessel and the empty weight of the transfer vehicle after unloading has been completed. This weight must be determined using a scale approved by the State or local agencies using the procedures contained in the National Institute of Standards and Technology Handbook 44, or a scale determined to be in compliance with the requirements of the National Institute of Standards and Technology Handbook 44 at least once per year by a registered scale technician. The final option for determining the amount of HAP ABA added to a storage vessel allows the owner or operator to develop an alternative monitoring program. The alternative monitoring program must include, at a minimum, a description of the parameter to be monitored to determine the amount of the addition, a description of how the results of the monitoring will be recorded and converted into the amount of HAP ABA added, data demonstrating the accuracy of the monitoring measurements, and procedures for ensuring that the accuracy of the monitoring measurements is maintained. Alternative monitoring programs must be submitted to the EPA for approval.

F. Testing Requirements

There are two instances where the use of test methods is required. First, for slabstock owners or operators complying with the emission point specific requirements for HAP ABA equipment leaks, testing must be conducted using Method 21 of 40 CFR part 60, subpart A.

Second, all slabstock affected sources must test each grade of foam produced during a single production "run" to verify the IFD and density, as these are integral inputs into the equation to determine the HAP ABA formulation limitation. This rule requires these parameters to be determined using American Society for Testing and Materials (ASTM) D3574 using a sample of foam cut from the center of the foam bun. The maximum sample size for which the IFD and density is

determined shall not be larger than 24 inches by 24 inches by 4 inches. IFD and density testing is not required for foam grades for which the owner or operator has designated the HAP ABA formulation limitation as zero. The IFD and density testing results must be conducted and recorded within 10 working days of the date the foam was produced.

G. Alternative Means of Emission Limitation

This regulation also contains provisions to allow an owner or operator to request approval to use an alternative means of emission limitation. Examples of alternative means of emission limitation could be the reduction of HAP ABA by a combustion device, use of a storage tank control not mentioned in the regulation, or an alternative program to reduce HAP ABA equipment leak emissions. The request, which may be submitted in the precompliance report for existing sources, the application for construction or reconstruction for new sources, or at any other time after the initial compliance, must include a complete description of the alternative means of emission limitation and documentation demonstrating equivalency with the requirements in the regulation. The owner or operator can begin using the alternative means of emission limitation upon approval of the request by the Administrator.

H. Applicability of General Provisions

The General Provisions for Part 63 (40 CFR part 63, subpart A) create the technical and administrative framework for implementing national emission standards established under section 112 of the Clean Air Act. The General Provisions establish baseline applicable requirements for activities such as performance testing, monitoring, notifications, recordkeeping, and reporting. They also implement statutory provisions such as compliance dates for new and existing sources and preconstruction review requirements. The General Provisions apply to all sources that are affected by Part 63 standards, including the standard for flexible polyurethane foam production. However, individual standards may override certain requirements in the General Provisions. This regulation contains a table outlining the sections of the General Provisions that are applicable to the standard for flexible polyurethane foam production. It also outlines sections of the General Provisions that are being overridden or not incorporated. The performance test requirements; monitoring requirements;

and startup, shutdown, and malfunction plan requirements of the General Provisions do not apply to this standard. Most of the other requirements in the General Provisions do apply.

I. Reporting Requirements

This regulation requires the submittal of seven types of reports: (1) initial notification, (2) application for approval of construction or reconstruction, (3) precompliance report, (4) notification of compliance status, (5) semi-annual compliance reports, (6) other reports, and (7) annual compliance certifications. These reports are briefly described below.

1. Initial Notification

Each owner or operator of an affected source must submit an initial notification to the Administrator within 120 days after promulgation of the rule. This initial notification must contain an identification of the facility that is subject to the regulation, the name and address of the owner or operator of the subject facility, and a brief description of the production process.

2. Application for Approval of Construction or Reconstruction

Owners or operators constructing a new affected source, or reconstructing an existing affected source, must submit an application for approval of construction or reconstruction. This application must contain identification information such as location, owner/operator, and the anticipated completion and start-up dates. The application must also contain a description of the planned process and how compliance will be achieved. The application must be submitted as soon as practicable before the construction or reconstruction is planned to commence. A permit application can take the place of this report.

3. Precompliance Report

One year before the compliance date, each existing owner or operator of an existing slabstock facility must submit a precompliance report. This report must contain notification of whether compliance will be achieved using the emission point specific HAP ABA and equipment cleaning emission limitation or the source-wide emission limitation. The report must also indicate if either of the following compliance options are going to be utilized:

- If compliance will be achieved on a monthly basis for either the emission point specific limitation for HAP ABA emissions from the production line or the source-wide emission limitation.

- If a recovery device will be used to reduce HAP ABA emissions.

This report must also contain a description of how the amount of polyol and HAP ABA (if required) added at the mixhead will be monitored. If the owner or operator is developing an alternative monitoring plan, the plan must be submitted with the precompliance report. In addition, owners or operators of slabstock flexible polyurethane production facilities using a recovery device to reduce HAP ABA emissions must include a description of the HAP ABA monitoring and recordkeeping program to determine the amount of HAP ABA recovered in the precompliance report.

Each owner or operator of an affected source complying with the source-wide emission limitation must submit a description of how the amount of HAP ABA in a storage vessel will be determined, and a description of how the amount of HAP ABA added to a storage vessel during a delivery will be monitored. If the owner or operator is developing an alternative monitoring program for the determination of HAP ABA added to a storage vessel, this program must be submitted with the precompliance report.

The rule specifies that if the Administrator does not notify the owner or operator of objections to an alternative monitoring program or a recovered HAP ABA monitoring and recordkeeping program within 45 days after its receipt, the program is automatically assumed to be approved.

4. Notification of Compliance Status

Each owner or operator of a new or existing slabstock affected source must submit a notification of compliance status report 180 days after the compliance date. This report must contain notification of the compliance status of diisocyanate storage vessels and diisocyanate transfer pumps. In addition, this report must contain compliance information for HAP ABA storage vessels and equipment in HAP ABA service.

5. Semi-annual Reports

Each slabstock owner or operator must submit semi-annual reports. For affected sources complying with the rolling annual compliance provisions (for either the emission point specific HAP ABA limitations or the source-wide emission limitation), the report must contain the allowable and actual HAP ABA emissions (or allowable and actual HAP ABA and equipment cleaning HAP emissions) for each of the 12-month periods ending on each of the six months in the reporting period. For

affected sources complying with the monthly compliance alternative, the report must contain the allowable and actual HAP ABA emissions (or allowable and actual HAP ABA and equipment cleaning HAP emissions) for each of the six months in the reporting period. Affected sources complying with the storage vessel provisions of § 63.1294(a) or § 63.1295 using a carbon adsorption system must include unloading events that occur after breakthrough is detected where the carbon in the system is not replaced. Any equipment leaks that were not repaired in accordance with the rule requirements must also be included in the semi-annual compliance report.

6. Other Reports

A slabstock owner or operator must provide a report to the Administrator indicating the intent to change the selected compliance alternative (emission point specific limitations or source-wide emission limitation). This report must be submitted at least 180 days prior to the change.

Similarly, the intent to switch the compliance method (rolling annual or monthly) must be reported. This report must be submitted at least 180 days prior to the change.

7. Annual Compliance Certifications

Each affected source is required to submit a compliance certification annually. Each compliance certification must be signed by a responsible official of the company that owns or operates the affected source.

J. Recordkeeping Requirements

Records must be completed in a form suitable and readily available for expeditious inspection and review, and must be kept for a period of 5 years. At a minimum, the most recent 2 years of data must be retained on-site.

Records are required for storage vessels, equipment leaks, and HAP ABA. If the owner or operator complies with the source-wide emission limitation, no records are required for HAP ABA storage vessel controls (see section "I.J.1" below) or controls for equipment in HAP ABA service (see section "I.J.2" below).

1. Storage Vessel Records

All slabstock affected sources must maintain records listing all diisocyanate storage vessels and the type of control utilized to comply with the regulation. For the storage vessels complying through the use of a carbon adsorption system, the records must include the design parameters of the system and the monitoring records.

2. Equipment Leak Records

All slabstock affected sources must maintain a list of components in diisocyanate service, and a description of the control utilized for each transfer pump. If the affected source is complying with the emission point specific limitations, records listing each component in HAP ABA service must also be maintained.

When a leak, as defined in the rule, is detected for any component, the component must be marked with a readily visible identification until the leak is repaired. For valves, the identification must remain until 2 successive quarters have passed where no leak is detected. Records must be kept specifying when the leak was detected, when it was repaired, and when the identification was removed.

3. HAP ABA records

All slabstock affected sources must keep records integral to the calculation of allowable emissions. These include a daily log of foam runs and daily records of the amount of polyol added at the mixhead for each grade of foam. The results of the density and IFD testing for each grade must be recorded within 10 working days of the production of the foam. Polyol usage and density/IFD testing records are not required for those foam grades for which the owner or operator has designated the HAP ABA formulation limitation as zero. Monthly, a cumulative record must be maintained listing the foam grades containing HAP ABA produced during the month, along with the total amount of polyol used for each foam grade, and the corresponding allowable HAP ABA (or HAP ABA and equipment cleaning) emissions level. If complying on an annual rolling basis, the allowable HAP ABA (or HAP ABA and equipment cleaning) emissions level for the previous 12 consecutive months must also be recorded each month.

For affected sources complying with the emission point specific limitation for HAP ABA emissions from the production line, records must be kept regarding the amount of HAP ABA added at the mixhead each day. In addition, there must also be a cumulative HAP ABA usage record for each month, and a cumulative record for the previous 12 consecutive months (if complying on an annual rolling basis).

For affected sources complying with the source-wide emission limitation, monthly records must be kept regarding the actual HAP ABA and equipment cleaning emissions, as measured at the storage vessel. Also required are weekly records of the HAP ABA storage vessel

levels and records of the amount of HAP ABA added to the storage vessel during each delivery. If complying on an annual rolling basis, monthly records must be kept of the actual cumulative HAP ABA and equipment cleaning emissions for the previous 12 months.

If an affected source uses a recovery device to reduce HAP ABA emissions, records must be kept regarding the amount of HAP ABA recovered. In addition, records of all required calibrations must be maintained.

III. Summary of Impacts

This section identifies the facilities affected by these NESHAP. It also presents the air, non-air environmental (waste and solid waste), energy, cost, and economic impacts resulting from the control of HAP emissions under this rule.

A. Facilities Affected by These NESHAP

It is estimated that 176 sources will be subject to the regulation. This number includes 57 slabstock foam facilities, 21 facilities with slabstock and rebond processes, and 98 molded foam facilities. It is estimated that 130 molded foam facilities are area sources, and will not be subject to this rule. It is also estimated that all rebond facilities not collocated with a slabstock foam process are area sources.

B. Air Impacts

These standards are estimated to reduce HAP emissions from all existing sources of flexible polyurethane foam manufacturing by over 12,500 Mg/yr. This represents a 70 percent reduction from baseline. This includes over 10,400 Mg/yr from slabstock foam production (69 percent reduction from baseline) and over 2,100 Mg/yr from molded foam production (73 percent reduction from baseline). No reduction is expected from rebond foam production, since it is believed that the entire industry has already stopped using HAP cleaners and mold release agents.

C. Other Environmental Impacts

The Agency estimates that there will be minimal secondary environmental impacts from this regulation. There could be a slight increase in volatile organic compound (VOC) air emissions if facilities switch from a HAP-based product to a non-HAP VOC based product for equipment cleaning, mold release agents, and mixhead flushes. Wastewater could contain minor amounts of HAP if carbon adsorption systems are used to comply with the HAP ABA limitations, but the Agency believes the use of such systems will be rare. The only potential hazardous

waste impact would be due to the disposal of spent carbon adsorption canisters used to control storage vessels. The Agency does not believe these impacts to be significant.

D. Energy Impacts

Due to the use of several control technologies in both slabstock and molded foam, there will be some increase in the amount of energy used by this source category. The impact will vary depending on which control technology is chosen by each facility, but is not expected to be significant.

E. Cost Impacts

Cost impacts include the capital costs of new equipment that reduces HAP emissions, the cost of energy required to operate the equipment, operation and maintenance costs, as well as cost savings. Also, cost impacts include the costs of monitoring, recordkeeping, and reporting associated with the promulgated standards. Average cost effectiveness (\$/Mg of pollutant removed) is also presented as part of cost impacts and is determined by dividing the annual cost by the annual emission reduction.

For the molded subcategory, the estimated total capital investment is \$5.9 million, and the total estimated annual cost is around \$715,000 per year. The total annual HAP emission reduction is 2,100 Mg/year, resulting in a cost effectiveness of \$350/Mg per year.

For the rebond subcategory, it is anticipated that there will be no cost or environmental impacts, since it is believed that every facility already complies with these provisions. The regulation will prohibit the future use of HAP-based cleaners and mold release agents in this industry.

For the slabstock subcategory, the total estimated capital investment is around \$68 million, and the total estimated annual cost is \$7.3 million per year. The total annual HAP emission reduction is over 10,400 Mg/yr, resulting in a cost-effectiveness of around \$700/Mg per year.

Therefore, the total capital investment for this regulation is estimated at \$74 million. The total estimated annual cost is \$8.1 million per year. The total emission reduction is over 12,500 Mg/yr, resulting in an overall cost effectiveness of around \$650/Mg per year.

F. Economic Impacts

An economic impact analysis of these standards was prepared to evaluate primary and secondary impacts on: (1) the slabstock and molded foam sectors of the flexible polyurethane foam

production industry; (2) consumers; and (3) society.

For the slabstock foam sector of the industry, the total annualized social cost (in 1994 dollars) of this promulgated regulation is \$7.18 million. Market price is estimated to increase by 2.20 percent, and the corresponding decrease in market output is estimated to be 1.08 percent. Employment loss is estimated to be 1.09 percent (i.e., 96 jobs).

For the molded foam sector, impacts on price and output are estimated to be smaller than those predicted for the slabstock market. The total annualized social cost (in 1994 dollars) of the promulgated standards for the molded foam subcategory is \$0.71 million. Price is estimated to increase by 1.14 percent, and the corresponding decrease in market output is estimated to be 0.56 percent. Employment loss in the molded sector is estimated to be 0.67 percent (37 jobs).

However, given the predicted changes in market price and output, the industry will experience increases in the value of shipments (i.e., industry profits), because estimated price increases more than offset the lower production volumes. Since no significant export or import markets exist for the industry (due to prohibitive transportation costs), no impacts on foreign trade are expected.

The analysis also predicts the number of plant closures that may result from the imposition of compliance costs on a facility. For the analysis, a worst-case assumption is adopted that the facilities with the highest emission control costs are the least efficient producers in the market. Actual plant closures will be less than that predicted if plants with the highest emission control costs are not the least efficient producers in the industry. In addition, the outcome of predicted closures is sensitive to the wide variety of emission control technologies assigned to the model plants. If the control technology assigned to the representative model plant is different than that which would be chosen by an actual facility, the analysis could overestimate the number of predicted plant closures. Therefore, a sensitivity analysis was performed to test the outcome of closures based on the assignment of control technology to model plants. For the slabstock sector, plant closures are estimated to range from 1 to 3 facilities for this standard. For the molded foam sector, closures are estimated to be zero for this promulgated standard (a sensitivity analysis was not performed for the molded foam production subcategory). Given the significant amount of restructuring currently occurring in the

industry (mergers, buy-outs, and shut-downs), the number of facility closures that will result from the regulation is likely to be minimal.

IV. Significant Comments and Changes to the Proposed Standards

In response to comments received on the proposed standards, changes have been made to the final standards. While several of these changes are clarifications designed to make the EPA's intent clearer, a number of them are changes to the requirements of the proposed standards. Public comment was received on several issues that the EPA raised in the proposal preamble. The public also commented on other issues. In addition, some changes were made to ensure that the regulations are "permit friendly." A summary of the substantive comments and changes made since the proposal are described in the following sections. The rationale for these changes and detailed responses to all public comments are included in the Basis and Purpose Document for the final standards. Additional information is contained in the docket for these final standards. (See ADDRESSES section of this preamble.)

A. Public Response to EPA Request for Comment

In the proposal preamble, the EPA specifically requested comment on the following issues: (1) the need for a federally enforceable mechanism for limiting potential to emit (PTE) at flexible polyurethane foam production sources; (2) controlling TDI emissions from slabstock flexible foam production lines; (3) the burdens of the monthly averaging time option for compliance with the emission limitation for slabstock flexible foam production lines; (4) monitoring in HAP ABA storage vessels; (5) the prohibition on the use of HAP-based adhesives; and (6) the number of affected facilities. No public comments were received on the number of affected facilities in the flexible polyurethane foam production source category. Public comments on the remaining five issues are summarized below.

1. Federally Enforceable Mechanism

The proposed regulation contained provisions for obtaining a federally enforceable limitation on PTE, which would allow sources to maintain emissions below the major source threshold amount. It also included recordkeeping and reporting requirements for sources obtaining the federally enforceable emission limitation. One commenter urged the EPA to identify the criteria for

establishing area source status, while others objected to the requirements that an area source maintain supporting documentation, stating that facilities should not be required to keep records to prove they are not subject to the regulation.

The EPA agrees that criteria for area source status should be included within the regulation, rather than the general criteria in the proposed rule. Therefore, § 63.1290(c) has been revised to add specific criteria for identifying slabstock sources with potential emissions below the major source threshold levels. Slabstock flexible polyurethane foam producers may elect to use a total of less than 5 tons of total HAP at the entire plant site, including uses as an auxiliary blowing agent, an equipment cleaner, and as an adhesive in foam fabrication operations. The addition of these specific criteria will ease the administrative burden for both State and local agency regulators and sources by reducing the need for case-by-case determination of area or synthetic minor source status. This option is not available to slabstock processes located at plant sites that have HAP-using processes other than slabstock foam production and foam fabrication. Also, due to the large number of potential uses of HAP at molded foam facilities, such criteria are not included for molded foam facilities.

The Agency agrees with the commenters that recordkeeping requirements should be sufficiently detailed to ensure that PTE limits are practically enforceable; however, the EPA recognizes that State and local agencies should establish such recordkeeping requirements. In the consideration of these comments, the EPA determined that it is not appropriate for the rule to require specific records at facilities that are not subject to the regulation. Therefore, the rule only requires that records be kept to verify the HAP usage.

2. TDI emissions from Slabstock Production Lines

The proposed rule did not require control of 2,4-toluene diisocyanate (TDI) emissions from the foam production line. At proposal, the EPA requested comment on the feasibility and necessity of additional controls for TDI emissions from the foam line.

Four commenters responded to the EPA's request for comments on this item. Three of the commenters supported the EPA in proposing no control for TDI emissions from the foam production line. All three commenters noted that TDI emissions from foam production are very small. Two of these

commenters also indicated the lack of currently available control technologies to address these emissions and the high costs of utilizing technologies that are common in other applications.

However, one commenter believed additional controls for TDI were needed. This commenter urged the EPA to assess applicable work practices or equipment standards that would reduce TDI and other emissions from the production line and other emission points not covered under the current rule.

The EPA agrees with the three commenters who believe that the regulation should not control TDI emissions from the production line. The primary reasons for this opinion are the low level of emissions and the high costs of control. The EPA recognizes the concerns related to the health effects of TDI, even at relatively low concentrations. However, nationwide TDI emissions from the foam tunnel at slabstock polyurethane foam production facilities are estimated to be less than 10 tons per year. A typical plant emits around 1/10 of a ton per year. In addition, TDI is present in exhaust streams in very low concentrations, typically less than 1 part per million (ppm). Currently available control technologies common to other applications are not suited to the cost-effective removal of low concentrations of TDI from a high velocity exhaust stream.

Prior to proposal, the EPA determined that the floor for the control of TDI was no control. Further, no controls techniques were identified in practice to allow the consideration of levels more stringent than the floor. After proposal, the EPA re-investigated technologies for the control of TDI emissions from the foam production line by contacting vendors of control equipment, as well as air pollution regulatory agencies in other countries. Based on that additional analysis, the EPA concludes that the MACT floor is no control. Despite indications of the existence of cost-effective TDI control technologies, none of these efforts identified any technology for TDI that the Agency believed could be cost-effectively applied to the foam tunnel in a slabstock foam production facility.

In the future, the EPA will conduct a section 112(f) residual risk assessment of the flexible polyurethane foam industry. In a section 112(f) residual risk assessment, a regulated industry is evaluated based on the risks it still poses to people and the environment. If the assessment determines that unacceptable health risks are still related to the industry, the EPA will

impose additional requirements on the industry.

The EPA does not feel it is appropriate to require additional recordkeeping or reporting in this rule to support a future risk assessment, as suggested by the commenter. The EPA will obtain the necessary information at the time of the risk assessment.

3. Monthly Averaging Time

The proposed rule allowed for two averaging time formats for compliance with the requirements for HAP ABA emissions from the production line and source-wide HAP ABA and equipment cleaning emissions: (1) rolling annual compliance [§ 63.1297(a)(1)]; and (2) compliance determined for each individual month. [§ 63.1297(a)(2)] At proposal, the EPA requested comments on any burdens caused by inclusion of the monthly compliance alternative in the proposed regulation.

Two commenters responded to the EPA's request for comments on this item. Neither commenter reported any burdens associated with inclusion of the monthly compliance alternative. However, both commenters were concerned about the potential for being assessed penalties based on 365 days of violations when using the rolling annual compliance alternative, even if the actual number of non-compliance days was much less.

In response to the seasonal variation of the production of slabstock foam, the EPA based the proposed HAP ABA emission requirements on a 12-month period, where compliance would be determined each month for the previous 12 months. While industry recognized the flexibility of this 12-month averaging period, they were concerned regarding the enforcement of such provisions. The concerns expressed at that time were analogous to those made by these commenters.

In response to these concerns, the EPA included the monthly compliance alternative in the proposed regulation. This alternative, while reducing flexibility, eliminates the potential for violations for a 365-day period. Since no comments were received indicating that the inclusion of two averaging time options was inappropriate or burdensome to either affected sources or enforcement agencies, both averaging periods were retained in the final rule.

In response to the commenters' concern about penalties associated with the 12-month averaging option, the EPA points out that the rule cannot specify a penalty structure, but can only include the definition of a violation. Clearly, a violation of the HAP ABA (or source-wide) requirements of this rule occurs

when the actual emissions exceed the allowable emissions. In the case of a violation, the State or local enforcement agency (and in some cases the EPA Regional Office) will determine the penalty for a violation.

In conclusion, the commenters continue to be concerned with the potential penalties associated with the 12-month averaging time. The EPA continues to believe that the monthly averaging time is a viable alternative available to all affected sources, and that each owner or operator will have to weigh the added flexibility of the 12-month averaging period with the potential for higher penalties associated with this option.

4. Monitoring in HAP ABA Storage Vessels

If a facility is complying with the source-wide alternative for HAP ABA and HAP equipment cleaners, actual emissions are measured by conducting a monthly material balance at the HAP ABA storage vessel. An input to this determination is the amount of HAP ABA in the storage tank. The proposed rule at § 63.1303(d) contained criteria for the devices that could be used to measure the level of HAP ABA in the vessel. Gauge glasses and simple floats would not have fit these criteria. At proposal, the EPA requested comment on the monitoring requirements and whether the use of gauge glasses, float systems, and other visually-read systems should be allowed.

All the commenters that provided input on this issue felt that visually-read level measurement systems, which are "standard" in the industry, should be allowed. They believed that visually-read measurement systems were sufficiently accurate, and that the competitive nature of the industry dictated that facilities eliminate raw material loss. Due to the need to manage chemical use, visually-read level measurement systems in conjunction with existing inventory controls provide necessary compliance records.

Upon reviewing these comments and collecting additional information on this issue by conducting a survey of storage tank level measurement device vendors, contacting foam trade organizations and foam producers, and visiting a foam plant and observing first hand the use of visually-read level measurement devices to determine the storage tank level, the EPA agreed that these visually-read devices should be allowed. The EPA now believes that the use of gauge glasses and float systems will not result in significantly greater errors in level measurement than devices that meet the proposed

requirements. For example, an error analysis based on typical 10,000 gallon storage vessels and an error in measurement of 0.5 inches indicates that the error is approximately 3.27 cubic feet or 24.5 gallons (0.5 percent) for a vertical tank at half capacity. For horizontal tanks at half capacity, the error is approximately 8.8 cubic feet or 65.8 gallons (1.3 percent). In order to minimize the potential for human error, the final rule requires that all visually-read measurement devices have permanent graduated markings from which the level will be read. This practice should eliminate any error associated with the use of non-fixed measuring tools, such as tapes or rulers. Therefore, in the final rule, paragraph 63.1303(d) requires that devices that are used to measure the level in the storage vessel be calibrated initially and at least once per year. If the device produces an output signal, it must have either a digital or printed output. If the device is a visually-read device, it must have permanent graduated markings.

5. Prohibition on the Use of HAP-based Adhesives

The EPA requested comment on the technical feasibility of prohibiting the use of HAP-based adhesives for foam repair in molded foam production. Two responses to this request were received. The first commenter reported that HAP-free adhesives have not been successful in all applications. The commenter recommended a review process that would allow a facility to use HAP-based mold release agents if they demonstrated that product quality suffered with the use of HAP-free adhesives. The second commenter was also concerned about the proposed prohibition, and recommended that the EPA defer consideration of HAP-based adhesives until development of the foam fabrication NESHAP.

The EPA acknowledges the commenters' concern that HAP-free adhesives may not be successful in all applications. In further conversations after proposal of the regulations, adhesive manufacturers indicated that the molded foam production source category was not a major market for their products. The EPA therefore agrees with the second commenter that consideration of HAP-based adhesives should be deferred until development of the foam fabrication NESHAP. The proposed provisions at 63.1300(c) prohibiting the use of HAP-based adhesives to repair foam products in a molded flexible polyurethane foam source have been removed. The Agency expects to consider use of HAP-based molded foam repair adhesives in the

development of the flexible polyurethane foam fabrication NESHAP.

B. Other Rule Changes in Response to Public Comments

1. IFD and Density Testing

The proposed rule required that the indentation force deflection (IFD) and density be tested for every grade of foam produced. It also required that the amount of polyol used be monitored for every foam grade, and that records of this usage be maintained. A comment was received stating that there was no benefit to testing foams or monitoring and keeping records of the amount of polyol added for grades that do not have any ABA in the formulation.

For each specific grade, the allowable emissions are calculated using the formulation limitation (which is calculated using the IFD and density of the grade) and the amount of polyol used to produce the grade. The calculation of the allowable HAP ABA emissions is unrelated to the amount of HAP ABA added to the formulation for that grade. The amount of HAP ABA added represents the actual emissions. Therefore, if a facility produced a particular grade (e.g., Grade A) with a formulation limitation greater than zero, but used no HAP ABA, then emission "credits" would be generated. This "credit" would then allow the owner or operator to use an amount of HAP ABA higher than the formulation limitation for another grade (e.g., Grade B). If no testing of the grade, or records of polyol used, were kept for Grade A, then credits would not be generated to allow the production of Grade B with the desired amount. Therefore, the EPA sees considerable benefit in testing and keeping records for all grades that have formulation limitations greater than zero.

However, the EPA does believe that the burden can be reduced by eliminating the requirement that any IFD or density testing be conducted for grades where the owner or operator designates the formulation limitation as zero. This decision is reflected in the final rule.

2. Definition of Flexible

One comment was received regarding the adjective "flexible" in the term "flexible polyurethane foam". The commenter (IV-D-07) noted that while "flexible polyurethane foam" is defined in the rule, the definition did not address "the degree of flexibility or rigidity associated with the foam." The commenter believed that their "foam-in-place" operation is intended to be included within the scope of the

proposed rule. However, the foam, which is sprayed into boxes to provide a protective cushioning layer for shipment of products, is "quite rigid in nature". The commenter requested clarification regarding the meaning of flexible.

The EPA agrees that there is a need to clarify "flexible" as it is used in the definition of flexible polyurethane foam, and has added language to the definition provided in the rule, as follows:

"*Flexible polyurethane foam* means a flexible cellular polymer containing urea and carbamate linkages in the chain backbone produced by reacting a diisocyanate, polyol, and water. Flexible polyurethane foams are open-celled, permit the passage of air through the foam, and possess the strength and flexibility to allow repeated distortion or compression under stress with essentially complete recovery upon removal of the stress."

By comparison, rigid polyurethane foams are closed-celled, do not allow the passage of air through the foam, and do not distort or compress under stress until there is sufficient stress to crush the foam. Rigid foams that have been crushed do not recover to their original shape.

Based on information provided by the commenter, the EPA is unable to definitively determine if the foam produced is flexible polyurethane foam and if the commenter's process is subject to the rule. However, it is believed that the "foam-in-place" process described is a molded foam process and would be subject to the rule, if the foam produced meets the revised definition of flexible polyurethane foam cited above.

3. HAP ABA Emission Calculation

One commenter noted that there was a typographical error in the equation as published in the preamble. The first term should appear as "-25(IFD)." Two commenters noted that the HAP ABA formulation equation results in a negative (<0) value for the ABA limitation in some cases. One commenter felt that this was a result of a typing error in the published equation. The second commenter was concerned that it would be "possible for certain foam grades to calculate a negative monthly ABA, thus reducing the total ABA and misrepresenting the intent of the ABA formulation limitation equation." This commenter recommended that the minimum amount of ABA be limited to zero (0) for averaging purposes.

The EPA recognizes that there was a typographical error in the equation as

published in the preamble. The first term in the equation 25(IFD) should be preceded by a negative sign. The proposed regulatory language was correct. The final rule and the rule summary in the preamble for the promulgated regulation include the correct equation.

However, the commenter was incorrect in assuming that an error in the published equation resulted in the equation yielding negative values. The equation indeed results in negative values for some combinations of density and indentation force deflection (IFD). The EPA did not intend for these negative values to be used in calculating allowable emissions. Rather, the intent was for the foam manufacturer to use zero if the calculated HAP ABA formulation limitation was negative. However, the proposed regulation did not state this intention, and the Agency recognizes that this situation would clearly lead to confusion. Therefore, in accordance with the commenter's suggestion, the EPA has revised the regulation to clearly state that zero shall be the formulation limitation if the results of the formulation limitation equation are negative. A new table has been added to § 63.1297(d)(2) to clarify the new source formulation limitation requirements.

4. State Delegation

One comment was received requesting clarification as to what authorities, if any, have been delegated to States. The commenter reported that in some instances, the EPA has specified within given Part 63 standards that certain authorities were not to be delegated to States.

The proposal regulation was silent on the implementation and enforcement authorities that may be delegated to States. The EPA agrees that the regulations should specify which authorities are and are not delegated to State and local permitting authorities. § 63.1308 has been added to the regulations to identify these authorities. The new provisions clarify that the authority to approve alternative monitoring plans and emission limitations shall be retained by the EPA Administrator and not transferred to a State or local permitting authority. The Administrator must approve alternative programs required in § 63.1303(b)(5) for monitoring HAP ABA and polyol added to the foam production line at the mixhead. Alternative emission limitations allowed under § 63.1305(d) must also be approved by the Administrator. These requirements are in keeping with longstanding EPA policy that emission limits to satisfy

Clean Air Act requirements for protecting the public health, as well as the monitoring to demonstrate compliance with those limits, must be determined by the Administrator.

C. Other Changes to the Proposed Regulation

In addition to the changes in response to public comments discussed above, changes to the proposed rule have been made to clarify the requirements of the regulations. These changes do not add emission standards or requirements to the regulation. In general, they specify aspects of the regulations that were not included in sufficient detail in the proposed rule. The effect of these changes will be to assure compliance with the standards while providing flexibility and regulatory certainty for affected sources, as well as for permitting and enforcement agencies. The changes are related to a test method for carbon adsorption and a continuous compliance demonstration.

The proposed rule required monitoring of HAP or organic compounds from storage vessel carbon adsorption systems to determine breakthrough. However, the rule did not indicate the test method to use if the owner or operator elected to monitor organic compound concentration. Section 63.1303(a)(4) now specifies the use of Method 25A for measuring organic emissions from carbon adsorption systems. This change clarifies the compliance requirements for carbon adsorption system use.

The regulation has been revised to clarify what constitutes compliance with the rule. No new emission standards or work practice requirements have been added to the regulations. While the compliance requirements could be inferred from the proposed regulation, the final rule now directly states the specific actions needed and the records required to demonstrate compliance, absent credible evidence to the contrary. These changes will ensure compliance to protect the public health, ensure the practical enforceability of the standards, identify the permit terms and conditions implementing the standards, and provide regulatory clarity for affected sources. They are in keeping with the Agency's priorities for streamlining the regulatory process and minimizing the burden on affected sources by clearly defining compliance terms.

Section 63.1308 summarizes what indicates compliance with the standards in § 63.1293–63.1301, absent credible evidence to the contrary, as well as what constitutes a violation of the standard, for each requirement in the rule. Facility

owners will not have to speculate on how compliance with a particular requirement may be interpreted. For regulating agencies, these provisions identify the terms and conditions that could be included in the permit. The provisions thus increase regulatory certainty, minimize the amount of time spent developing and reviewing permit terms, and ensure enforceability.

The provisions of §§ 63.1306(g) and 63.1308 do not, and are not intended to, alter or affect the requirements of 40 CFR part 70 for the purposes of addressing the requirements of this subpart, or any applicable requirements, in part 70 permits. Sources required to have a Title V operating permit must submit annual compliance certifications consistent with § 70.6(c)(5) applicable to all permit terms and conditions, which include applicable requirements such as subpart III. The certification requirements of part 70 require a statement from part 70 sources that, based on information and belief formed after reasonable inquiry, the statements and information in certifications—including annual compliance certifications—are true, accurate, and complete (40 CFR 70.5(d) and 71.5(d)). While a part 70 compliance certification may be used to satisfy the requirements of § 63.1306(g) (see § 63.1306(g)(2)) the annual compliance certification required by § 63.1306(g) may not be used to satisfy the compliance certification requirements of part 70, for purposes of part 70 permits that include subpart III as an applicable requirement.

In addition to the clarifying changes noted above, the EPA has removed the requirement that each facility develop, maintain, and implement a startup, shutdown, and malfunction plan.

The General Provisions include the requirements for a startup, shutdown, and malfunction plan in § 63.6(e)(3). A table of the proposed rule indicated that the provisions of § 63.6 were applicable to flexible polyurethane foam production affected sources. In the exercise of improving the clarity of the rule, the EPA decided that it would be more apparent to affected sources if the provisions related to the startup, shutdown, and malfunction were included in this rule, rather than simply referring to subpart A. However, in adding these provisions, the EPA concluded that they were not appropriate for the flexible polyurethane foam production industry. Therefore, the final rule has removed the requirement that flexible polyurethane foam affected sources create and implement a startup, shutdown, and malfunction plan. This is indicated by a "NO" in the General

Provisions table (Table 2) of the final rule for § 63.6(e)(3). The rationale for this conclusion is briefly discussed below.

The fundamental problem in applying the General Provisions startup, shutdown, and malfunction provisions to flexible polyurethane foam production facilities is defining a startup and a shutdown. The foam production process is intermittent in nature and, based on the EPA's knowledge of the industry, every foam production process will undergo at least one routine "startup" and one routine "shutdown" per day. The EPA never intended that these routine activities be addressed by the startup, shutdown, and malfunction plan.

The intent of the startup, shutdown, and malfunction plan is to identify methods to reduce excess emissions that may occur during these events when air pollution is emitted in quantities greater than anticipated by the standard. Given the comprehensive approach of subpart III to regulate emissions by restricting the amount of HAP used, the EPA does not believe that, for foam production facilities, startups, shutdowns, or malfunctions provide the opportunity for excess emissions not already anticipated in the regulation. Finally, as discussed in section I.A, two of the HAP used and potentially emitted during malfunctions by the flexible polyurethane foam industry (2,4-toluene diisocyanate and propylene oxide) are subject to the risk management program rule requirements under section 112(r) of the 1990 Clean Air Act Amendments.

V. Administrative Requirements

A. Docket

A record has been established for this rulemaking under docket number A-95-48. The record includes printed, paper versions of comments and data submitted electronically. A public version of this record, which does not include any information included as CBI, is available for inspection from 8:00 a.m. to 5:30 p.m. Monday-Friday, excluding legal holidays. The public record is located in the Air & Radiation Docket & Information Center, Room M1500, 401 M Street SW, Washington, DC 20460.

Response-to-Comment Document. The response-to-comment document for the promulgated standards contains: (1) A summary of the public comments made on the proposed standards and the Administrator's response to the comments; and (2) a summary of the changes made to the standards since proposal. The document may be obtained from the U.S. EPA Library

(MD-35), Research Triangle Park, North Carolina 27711, telephone (919) 541-2777. It may also be obtained from the National Technical Information Services, 5285 Port Royal Road, Springfield, Virginia 22151, telephone (703) 487-4650. Please refer to "Hazardous Air Pollutant Emissions from the Flexible Polyurethane Foam Production Industry—Basis and Purpose Document for Final Standards, Summary of Public Comments and Responses" (EPA-453/R-97-008b, December 1997). This document is also located in the docket (Docket Item No. V-B-1) and is available for downloading from the Technology Transfer Network (TTN). The TTN is one of the EPA's electronic bulletin boards. The TTN provides information and technology exchange in various areas of air pollution control. The service is free except for the cost of a phone call. Dial (919) 541-5742 for up to a 14,400 bps modem, or connect through the internet to the following address: "www.epa.gov/ttn/oarpg". If more information on the Technology Transfer Network is needed, call the HELP line at (919) 541-5384.

Previous Background Documents. Other materials related to this rulemaking are available for review in the docket. The Basis and Purpose Document, which contains the rationale for the various components of the standard, is available in the docket and on the TTN. This document is entitled "Hazardous Air Pollutant Emissions from the Production of Flexible Polyurethane Foam—Basis and Purpose Document for Proposed Standards," September 1996, and has been assigned document number EPA-453/D-96-008a.

Some of the technical memoranda have been compiled into a single document, the Supplementary Information Document (SID), to allow interested parties more convenient access to the information. The SID is available in the docket (Docket No. A-95-48 Category III-B), and, in limited supply, from the EPA Library by calling (919) 541-2777. The document is entitled Hazardous Air Pollutant Emissions from the Production of Flexible Polyurethane Foam—Supplementary Information Document for Proposed Standards, October 1996, and has been assigned document number EPA-453/D-96-009a.

B. Executive Order 12866

Under Executive Order 12866 (58 FR 5173, October 4, 1993), the EPA must determine whether the regulatory action is "significant" and therefore subject to Office of Management and Budget

(OMB) review and the requirements of the Executive Order. The Executive Order defines "significant regulatory action" as one that is likely to result in standards 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 entitlement, 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.

It has been determined that this rule is not a "significant regulatory action" under the terms of Executive Order 12866 and is therefore not subject to OMB review.

C. Applicability of Executive Order 13045

Executive Order 13045, entitled "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997), applies to any rule that the EPA determines (1) is "economically significant," as defined under Executive Order 12866, and (2) the environmental health or safety risk addressed by the rule has a disproportionate effect on children. If the regulatory action 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.

This final rule is not subject to Executive Order 13045 because it is not an economically significant regulatory action as defined by Executive Order 12866, and it does not address an environmental health or safety risk that would have a disproportionate effect on children.

D. Paperwork Reduction Act

The Office of Management and Budget (OMB) has approved the information collection requirements contained in this rule under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* and has assigned OMB control number 2060-0357.

The public reporting burden for this collection of information is estimated to

average 101 hours per respondent per year. The average burden for the 78 affected slabstock foam producers is somewhat higher than this estimate, due to their monthly recordkeeping and semiannual reporting requirements, while the average burden for the 98 affected molded foam manufacturers is less than 101 hours, since they are only required to submit an initial one-time notification of compliance. No cost burden associated with the purchase of new equipment or technology is estimated to result from this collection of information. These estimates include time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of 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 regulations are listed in 40 CFR Part 9 and 48 CFR Chapter 15. The EPA is amending the table in 40 CFR Part 9 of currently approved ICR control numbers issued by OMB for various regulations to list the information requirements contained in this final rule.

E. Regulatory Flexibility Act

The EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with this final rule. The EPA has also determined that this rule will not have a significant economic impact on a substantial number of small entities.

Due to insufficient data on the ownership of the plants in the flexible polyurethane foam industry, an analysis of each parent company in the industry was not feasible. Consequently, the EPA used data collected in the section 114 survey to evaluate the impact on small businesses based on model facilities. That analysis indicates that there is a total of approximately 121 businesses (31 slabstock, 90 molded) that are affected by the promulgated regulation, of which approximately 71 are small businesses (18 slabstock, 53 molded).

The calculation of average compliance costs as a percent of revenues is less than one percent for nearly all model facilities in the analysis. The analysis also indicates a potential for business closures ranging from 0 to 3 of the total number of estimated entities. However, because there is insufficient data to determine the exact size of the plants that may close, the analysis cannot determine if these impacts will occur at small businesses. Given the results of the analysis and the use of worst-case

assumptions in the closure analysis, the EPA believes that the effect of the promulgated regulation on small businesses will be minimal.

Pursuant to section 605(b) of the Regulatory Flexibility Act, 5 U.S.C. 605(b), as amended, Pub. L. 104-121, 110 Stat. 847, the EPA certifies that this rule will not have a significant economic impact on a substantial number of small entities and therefore no initial regulatory flexibility analysis under section 604(a) of the Act is required.

F. Submission to Congress and the Comptroller General

The Congressional Review Act, 5 U.S.C. 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act 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. The EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. This rule is not a "major rule" as defined by 5 U.S.C. 804(2).

G. Unfunded Mandates

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), P.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, the 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 to State, local, and tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires the EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows the 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 the 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 contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, and tribal governments, in aggregate, or the private sector in any one year, nor does the rule significantly or uniquely impact small governments, because it contains no requirements that apply to such governments or impose obligations upon them. Thus, the requirements of the UMRA do not apply to this rule.

H. Executive Order 12875: Enhancing Intergovernmental Partnerships

Under Executive Order 12875, the EPA may not issue a regulation that is not required by statute and that creates a mandate upon a State, local or tribal government, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by those governments. If the mandate is unfunded, the EPA must provide to the Office of Management and Budget a description of the extent of EPA's prior consultation with representatives of affected State, local and tribal governments, the nature of their concerns, copies of any written communications from the governments, and a statement supporting the need to issue the regulation. In addition, Executive Order 12875 requires the EPA to develop an effective process permitting elected officials and other representatives of State, local and tribal governments "to provide meaningful and timely input in the development of regulatory proposals containing significant unfunded mandates."

Today's rule implements requirements specifically set forth by the Congress in Section 112 of the Clean Air Act without the exercise of any discretion by the EPA. Accordingly, the requirements of section 1(a) of Executive Order 12875 do not apply to this rule.

I. Executive Order 13084: Consultation and Coordination With Indian Tribal Governments

Under Executive Order 13084, the 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. If the mandate is unfunded, the EPA must provide to the Office of Management and Budget, 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 the EPA to develop an effective process permitting elected 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 implements requirements specifically set forth by the Congress in Section 112 of the Clean Air Act without the exercise of any discretion by the EPA. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this rule.

J. Clean Air Act

In accordance with section 117 of the Act, publication of this rule was preceded by consultation with appropriate advisory committees, independent experts, and Federal departments and agencies.

This regulation will be reviewed 8 years from the date of promulgation. This review will include an assessment of such factors as evaluation of the residual health risks, any overlap with other programs, the existence of alternative methods, enforceability, improvements in emission control technology and health data, and the recordkeeping and reporting requirements.

K. National Technology Transfer and Advancement Act

Section 12 of the National Technology Transfer and Advancement Act of 1995 (NTTAA) requires federal agencies to evaluate existing technical standards when developing new regulations. To

comply with the NTTAA, the EPA must consider and use "voluntary consensus standards" (VCS), if available and applicable, when developing NESHAP and other programs and policies unless doing so would be inconsistent with applicable law or otherwise impractical.

A VCS is a technical standard developed or adopted by a legitimate standards developing organization. The NTTAA defines "technical standards" as "performance-based or design-specific technical specifications and related management systems practices." According to NTTAA's legislative history, a "technical standard" pertains to "products and processes, such as size, strength, or technical performance of a product, process or material." A legitimate standards-developing organization must produce standards by consensus and observe the principles of due process, openness, and balance of interests.

Examples of organizations generally regarded as voluntary consensus standards bodies include the American Society for Testing and Materials (ASTM), International Organization for Standardization (ISO), International Electrotechnical Commission (IEC), American Petroleum Institute (API), National Fire Protection Association (NFPA) and the Society of Automotive Engineers (SAE).

The well-known American National Standards Institute (ANSI) evaluates the standards development processes of these bodies, and when requested by one of them, certifies standards meeting the above criteria as American National Standards. Such a designation is an important indicator for determining whether a given standard qualifies as a legitimate VCS.

In developing the flexible polyurethane foam regulation, the EPA searched for potentially useful VCS. This search included the use of the National Standards System Network and the National Center for Standards for Certification Information. The Agency also conducted extensive conversations with the affected industry and other stakeholders. In response to this information, the regulation includes two VCS—ASTM D3574 and National Institute of Standards and Technology Handbook 44. ASTM D3574 is used to determine IFD and density of slabstock foam buns. Transfer vehicle weight may be determined by using the procedures contained in the National Institute of Standards and Technology Handbook 44. These VCS were selected for incorporation by reference because they provide the proper information with sufficient accuracy for this rule.

The EPA is not required to give deference under NTTAA to a standard that does not qualify as a VCS. Sight gauges and other level measurement devices, which are commonly used in the industry, do not qualify as VCS. However, the Agency did elect to utilize such devices to measure HAP ABA added to storage vessels in slabstock flexible polyurethane foam facilities. These requirements are described in Section II. C.4. of this preamble. The decision to adopt common industry practices reflects the Agency's commitment to reduce costs to the private sector where technically feasible and in accordance with Clean Air Act requirements.

List of Subjects in 40 CFR Parts 9 and 63

Environmental protection, Air pollution control, Hazardous substances, Incorporation by reference, Reporting and recordkeeping requirements.

Dated: September 15, 1998.

Carol M. Browner,
Administrator.

For the reasons set out in the preamble, parts 9 and 63 of title 40, chapter I of the Code of Federal Regulations are amended as follows:

PART 9—[AMENDED]

1. The authority citation for part 9 continues to read as follows:

Authority: 7 U.S.C. 135 *et seq.*, 136–136y; 15 U.S.C. 2001, 2003, 2005, 2006, 2601–2671; 21 U.S.C. 331j, 346a, 348; 31 U.S.C. 9701; 33 U.S.C. 1251 *et seq.*, 1311, 1313d, 1314, 1318, 1321, 1326, 1330, 1342, 1344, 1345 (d) and (e), 1361; E.O. 11735, 38 FR 21243, 3 CFR, 1971–1975 Comp. p. 973; 42 U.S.C. 241, 242b, 243, 246, 300f, 300g, 300g–1, 300g–2, 300g–3, 300g–4, 300g–5, 300g–6, 300j–1, 300j–2, 300j–3, 300j–4, 300j–9, 1857 *et seq.*, 6901–6992k, 7401–7671q, 7542, 9601–9657, 11023, 11048.

2. Section 9.1 is amended by adding the new entries to the table under the indicated heading in numerical order to read as follows:

§ 9.1 OMB approvals under the Paperwork Reduction Act.

| 40 CFR citation | OMB control No. |
|-----------------|-----------------|
| 63.1290—63.1309 | 2060–0357 |

National Emission Standards for Hazardous Air Pollutants for Source Categories³
* * * * *

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR AFFECTED SOURCE CATEGORIES

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

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

Subpart A—General Provisions

4. Section 63.14 is amended by revising paragraph (b) introductory text, and adding paragraphs (b)(20) and (e) to read as follows:

§ 63.14 Incorporation by reference.
* * * * *

(b) The materials listed below are available for purchase from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959; or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.
* * * * *

(20) ASTM D3574-91, Standard Test Methods for Flexible Cellular Materials—Slab, Bonded, and Molded Urethane Foams, IBR approved for § 63.1304(b).
* * * * *

(e) The materials listed below are available for purchase from the National Institute of Standards and Technology, Springfield, VA 22161, (800) 553-6847.

(1) Handbook 44, Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices 1998, IBR approved for § 63.1303(e)(3).

(2) [Reserved]

5. Part 63 is amended by adding subpart III to read as follows:

Subpart III—National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production
Sec.

- 63.1290 Applicability.
 - 63.1291 Compliance schedule.
 - 63.1292 Definitions.
 - 63.1293 Standards for slabstock flexible polyurethane foam production.
 - 63.1294 Standards for slabstock flexible polyurethane foam production—diisocyanate emissions.
 - 63.1295 Standards for slabstock flexible polyurethane foam production—HAP ABA storage vessels.
 - 63.1296 Standards for slabstock flexible polyurethane foam production—HAP ABA equipment leaks.
 - 63.1297 Standards for slabstock flexible polyurethane foam production—HAP ABA emissions from the production line.
 - 63.1298 Standards for slabstock flexible polyurethane foam production—HAP emissions from equipment cleaning.
 - 63.1299 Standards for slabstock flexible polyurethane foam production—source-wide emission limitation.
 - 63.1300 Standards for molded flexible polyurethane foam production.
 - 63.1301 Standards for rebond foam production.
 - 63.1302 Applicability of subpart A requirements.
 - 63.1303 Monitoring requirements.
 - 63.1304 Testing requirements.
 - 63.1305 Alternative means of emission limitation.
 - 63.1306 Reporting requirements.
 - 63.1307 Recordkeeping requirements.
 - 63.1308 Compliance demonstrations.
 - 63.1309 Delegation of authority.
- Appendix to Subpart III—Tables

Subpart III—National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production

§ 63.1290 Applicability.

(a) The provisions of this subpart apply to each new and existing flexible polyurethane foam or rebond foam

process that meets the criteria listed in paragraphs (a)(1) through (3) of this section.

(1) Produces flexible polyurethane or rebond foam;

(2) Emits a HAP, except as provided in paragraph (c)(2) of this section; and

(3) Is located at a plant site that is a major source, as defined in § 63.2 of subpart A.

(b) For the purpose of this subpart, an affected source includes all processes meeting the criteria in paragraphs (a)(1) through (a)(3) of this section that are located at a contiguous plant site, with the exception of those processes listed in paragraph (c) of this section.

(c) A process meeting one of the following criteria listed in paragraphs (c)(1) through (3) of this section shall not be subject to the provisions of this subpart:

(1) A process exclusively dedicated to the fabrication of flexible polyurethane foam;

(2) A research and development process; or

(3) A slabstock flexible polyurethane foam process at a plant site where the total amount of HAP, excluding diisocyanate reactants, used for slabstock foam production and foam fabrication is less than or equal to five tons per year, provided that slabstock foam production and foam fabrication processes are the only processes at the plant site that emit HAP. The amount of non-diisocyanate HAP used, HAP_{used}, shall be calculated using Equation 1. Owners or operators of slabstock foam processes exempt from the regulation in accordance with this paragraph shall maintain records to verify that total non-diisocyanate HAP use at the plant site is less than 5 tons per year (4.5 megagrams per year).

$$HAP_{used} = \left[\sum_{i=1}^m (VOL_{ABA,i})(D_{ABA,i}) + \sum_{j=1}^n (VOL_{clean,j})(D_{clean,j})(WT_{HAPclean,j}) + \sum_{k=1}^o (VOL_{adh,k})(D_{adh,k})(WT_{HAPadh,k}) \right] \div 2000$$

(Equation 1)

Where,

HAP_{used} = amount of HAP, excluding diisocyanate reactants, used at the plant site for slabstock foam production and foam fabrication, tons per year

VOL_{ABA,i} = volume of HAP ABA i used at the facility, gallons per year

D_{ABA,i} = density of HAP ABA i, pounds per gallon

m = number of HAP ABAs used

VOL_{clean,j} = volume of HAP used as an equipment cleaner, gallons per year

D_{clean,j} = density of HAP equipment cleaner j, pounds per gallon

WT_{HAPclean,k} = HAP content of equipment cleaner j, weight percent
n = number of HAP equipment cleaners used

VOL_{adh,k} = volume of adhesive k, gallons per year

D_{adh,k} = density of adhesive k, pounds per gallon

WT_{HAPadh,k} = HAP content of adhesive k, weight percent

o = number of adhesives used

§ 63.1291 Compliance schedule.

(a) Existing affected sources shall be in compliance with all provisions of this subpart no later than October 8, 2001.

(b) New or reconstructed affected sources shall be in compliance with all provisions of this subpart upon initial startup.

³The ICRs referenced in this section of the Table encompass the applicable general, provisions

contained in 40 CFR part 63, subpart A, which are

not independent information collection requirements.

§ 63.1292 Definitions.

All terms used in this subpart shall have the meaning given them in the Act, in subpart A of this part, and in this section. If a term is defined in subpart A and in this section, it shall have the meaning given in this section for purposes of this subpart.

Auxiliary blowing agent, or ABA, means a low-boiling point liquid added to assist foaming by generating gas beyond that resulting from the isocyanate-water reaction.

Breakthrough means that point in the adsorption step when the mass transfer zone (i.e., the section of the carbon bed where the HAP is removed from the carrier gas stream) first reaches the carbon bed outlet as the mass transfer zone moves down the bed in the direction of flow. The breakthrough point is characterized by the beginning of a sharp increase in the outlet HAP or organic compound concentration.

Calibrate means to verify the accuracy of a measurement device against a known standard. For the purpose of this subpart, there are two levels of calibration. The initial calibration includes the verification of the accuracy of the device over the entire operating range of the device. Subsequent calibrations can be conducted for a point or several points in a limited range of operation that represents the most common operation of the device.

Canned motor pump means a pump with interconnected cavity housings, motor rotors, and pump casing. In a canned motor pump, the motor bearings run in the process liquid and all seals are eliminated.

Carbon adsorption system means a system consisting of a tank or container that contains a specific quantity of activated carbon. For the purposes of this subpart, a carbon adsorption system is used as a control device for storage vessels. Typically, the spent carbon bed does not undergo regeneration, but is replaced.

Connector means flanged, screwed, or other joined fittings used to connect two pipe lines or a pipe line and a piece of equipment. A common connector is a flange. Joined fittings welded completely around the circumference of the interface are not considered to be connectors for the purposes of this subpart.

Cured foam means flexible polyurethane foam with fully developed physical properties. A period of 12 to 24 hours from pour is typically required to completely cure foam, although mechanical or other devices are sometimes used to accelerate the curing process.

Curing area means the area in a slabstock foam production facility where foam buns are allowed to fully develop physical properties.

Diaphragm pump means a pump where the driving member is a flexible diaphragm made of metal, rubber, or plastic. In a diaphragm pump, there is no packing or seals that are exposed to the process liquid.

Diisocyanate means a compound containing two isocyanate groups per molecule. The most common diisocyanate compounds used in the flexible polyurethane foam industry are toluene diisocyanate (TDI) and methylene diphenyl diisocyanate (MDI).

Flexible polyurethane foam means a flexible cellular polymer containing urea and carbamate linkages in the chain backbone produced by reacting a diisocyanate, polyol, and water. Flexible polyurethane foams are open-celled, permit the passage of air through the foam, and possess the strength and flexibility to allow repeated distortion or compression under stress with essentially complete recovery upon removal of the stress.

Flexible polyurethane foam process means the equipment used to produce a flexible polyurethane foam product. For the purpose of this subpart, the flexible polyurethane foam process includes raw material storage; production equipment and associated piping, ductwork, etc.; and curing and storage areas.

Foam fabrication process means an operation for cutting or bonding flexible polyurethane foam pieces together or to other substrates.

Grade of foam means foam with a distinct combination of indentation force deflection (IFD) and density values.

HAP ABA means methylene chloride, or any other HAP compound used as an auxiliary blowing agent.

HAP-based means to contain 5 percent (by weight) or more of HAP. This applies to equipment cleaners (and mixhead flushes) and mold release agents. The concentration of HAP may be determined using EPA test method 18, material safety data sheets, or engineering calculations.

High-pressure mixhead means a mixhead where mixing is achieved by impingement of the high pressure streams within the mixhead.

Indentation Force Deflection (IFD) means a measure of the load bearing capacity of flexible polyurethane foam. IFD is generally measured as the force (in pounds) required to compress a 50 square inch circular indenter foot into a four inch thick sample, typically 15 inches square or larger, to 25 percent of the sample's initial height.

In diisocyanate service means a piece of equipment that contains or contacts a diisocyanate.

In HAP ABA service means a piece of equipment that contains or contacts a HAP ABA.

Initial startup means the first time a new or reconstructed affected source begins production of flexible polyurethane foam.

Isocyanate means a reactive chemical grouping composed of a nitrogen atom bonded to a carbon atom bonded to an oxygen atom; or a chemical compound, usually organic, containing one or more isocyanate groups.

Magnetic drive pump means a pump where an externally-mounted magnet coupled to the pump motor drives the impeller in the pump casing. In a magnetic drive pump, no seals contact the process fluid.

Metering pump means a pump used to deliver reactants, ABA, or additives to the mixhead.

Mixhead means a device that mixes two or more component streams before dispensing foam producing mixture to the desired container.

Molded flexible polyurethane foam means a flexible polyurethane foam that is produced by shooting the foam mixture into a mold of the desired shape and size.

Mold release agent means any material which, when applied to the mold surface, serves to prevent sticking of the foam part to the mold.

Plant site means all contiguous or adjoining property that is under common control, including properties that are separated only by a road or other public right-of-way. Common control includes properties that are owned, leased, or otherwise operated by the same entity, parent entity, subsidiary, or any combination thereof.

Polyol, for the purpose of this subpart, means a polyether or polyester polymer with more than one reactive hydroxyl group attached to the molecule.

Rebond foam means the foam resulting from a process of adhering small particles of foam (usually scrap or recycled foam) together to make a usable cushioning product. Various adhesives and bonding processes are used. A typical application for rebond foam is for carpet underlay.

Rebond foam process means the equipment used to produce a rebond foam product. For the purpose of this subpart, the rebond foam process includes raw material storage; production equipment and associated piping, ductwork, etc.; and curing and storage areas.

Reconstructed source means an affected source undergoing

reconstruction, as defined in subpart A. For the purposes of this subpart, process modifications made to reduce HAP ABA emissions to meet the existing source requirements of this subpart shall not be counted in determining whether or not a change or replacement meets the definition of reconstruction.

Recovery device means an individual unit of equipment capable of and used for the purpose of recovering chemicals for use, reuse, or sale. Recovery devices include, but are not limited to, carbon adsorbers, absorbers, and condensers.

Research and development process means a laboratory or pilot plant operation whose primary purpose is to conduct research and development into new processes and products, where the operations are under the close supervision of technically trained personnel, and which is not engaged in the manufacture of products for commercial sale except in a de minimis manner.

Run of foam means a continuous production of foam, which may consist of several grades of foam.

Sealless pump means a canned-motor pump, diaphragm pump, or magnetic drive pump, as defined in this section.

Slabstock flexible polyurethane foam means flexible polyurethane foam that is produced in large continuous buns that are then cut into the desired size and shape.

Slabstock flexible polyurethane foam production line includes all portions of the flexible polyurethane foam process from the mixhead to the point in the process where the foam is completely cured.

Storage vessel means a tank or other vessel that is used to store diisocyanate or HAP ABA for use in the production of flexible polyurethane foam. Storage vessels do not include vessels with capacities smaller than 38 cubic meters (or 10,000 gallons).

Transfer pump means all pumps used to transport diisocyanate or HAP ABA that are not metering pumps.

Transfer vehicle means a railcar, tank truck, or other vehicle used to transport HAP ABA to the flexible polyurethane foam facility.

§ 63.1293 Standards for slabstock flexible polyurethane foam production.

Each owner or operator of a new or existing slabstock affected source shall comply with § 63.1294 and either paragraph (a) or (b) of this section:

(a) The emission point specific limitations in §§ 63.1295 through 63.1298; or

(b) For sources that use no more than one HAP as an ABA and an equipment cleaner, the source-wide emission limitation in § 63.1299.

§ 63.1294 Standards for slabstock flexible polyurethane foam production—diisocyanate emissions.

Each new and existing slabstock affected source shall comply with the provisions of this section.

(a) *Diisocyanate storage vessels.* Diisocyanate storage vessels shall be equipped with either a system meeting the requirements in paragraph (a)(1) of this section, or a carbon adsorption system meeting the requirements of paragraph (a)(2) of this section.

(1) The storage vessel shall be equipped with a vapor return line from the storage vessel to the tank truck or rail car that is connected during unloading.

(i) During each unloading event, the vapor return line shall be inspected for leaks by visual, audible, or any other detection method.

(ii) When a leak is detected, it shall be repaired as soon as practicable, but not later than the subsequent unloading event.

(2) The storage vessel shall be equipped with a carbon adsorption system, meeting the monitoring requirements of § 63.1303(a), that routes displaced vapors through activated carbon before being discharged to the atmosphere. The owner or operator shall replace the existing carbon with fresh carbon upon indication of breakthrough before the next unloading event.

(b) *Transfer pumps in diisocyanate service.* Each transfer pump in diisocyanate service shall meet the requirements of paragraph (b)(1) or (b)(2) of this section.

(1) The pump shall be a sealless pump; or

(2) The pump shall be a submerged pump system meeting the requirements in paragraphs (b)(2)(i) through (iii) of this section.

(i) The pump shall be completely immersed in bis(2-ethylhexyl)phthalate (DEHP, CAS #118-81-7), 2(methyloctyl)phthalate (DINP, CAS #68515-48-0), or another neutral oil.

(ii) The pump shall be visually monitored weekly to detect leaks,

(iii) When a leak is detected, it shall be repaired in accordance with the procedures in paragraphs (b)(2)(iii)(A) and (B) of this section, except as provided in paragraph (d) of this section.

(A) The leak shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected.

(B) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. First attempts at repair include, but are not limited to, the following practices where practicable:

(1) Tightening of packing gland nuts.

(2) Ensuring that the seal flush is operating at design pressure and temperature.

(c) *Other components in diisocyanate service.* If evidence of a leak is found by visual, audible, or any other detection method, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in paragraph (d) of this section. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) *Delay of repair.* (1) Delay of repair of equipment for which leaks have been detected is allowed for equipment that is isolated from the process and that does not remain in diisocyanate service.

(2) Delay of repair for valves and connectors is also allowed if:

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

(ii) The purged material is collected and destroyed or recovered in a control device when repair procedures are effected.

(3) Delay of repair for pumps is also allowed if repair requires replacing the existing seal design with a sealless pump, and repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

§ 63.1295 Standards for slabstock flexible polyurethane foam production—HAP ABA storage vessels.

Each owner or operator of a new or existing slabstock affected source complying with the emission point specific limitation option provided in § 63.1293(a) shall control HAP ABA storage vessels in accordance with the provisions of this section.

(a) Each HAP ABA storage vessel shall be equipped with either a vapor balance system meeting the requirements in paragraph (b) of this section, or a carbon adsorption system meeting the requirements of paragraph (c) of this section.

(b) The storage vessel shall be equipped with a vapor balance system. The owner or operator shall ensure that the vapor return line from the storage vessel to the tank truck or rail car is connected during unloading.

(1) During each unloading event, the vapor return line shall be inspected for leaks by visual, audible, olfactory, or any other detection method.

(2) When a leak is detected, it shall be repaired as soon as practicable, but not later than the subsequent unloading event.

(c) The storage vessel shall be equipped with a carbon adsorption system, meeting the monitoring requirements of § 63.1303(a), that routes displaced vapors through activated carbon before discharging to the atmosphere. The owner or operator shall replace the existing carbon with fresh carbon upon indication of breakthrough before the next unloading event.

§ 63.1296 Standards for slabstock flexible polyurethane foam production—HAP ABA equipment leaks.

Each owner or operator of a new or existing slabstock affected source complying with the emission point specific limitation option provided in § 63.1293(a) shall control HAP ABA emissions from leaks from transfer pumps, valves, connectors, pressure-relief valves, and open-ended lines in accordance with the provisions in this section.

(a) *Pumps.* Each pump in HAP ABA service shall be controlled in accordance with either paragraph (a)(1) or (a)(2) of this section.

(1) The pump shall be a sealless pump, or

(2) Each pump shall be monitored for leaks in accordance with paragraphs (a)(2)(i) and (ii) of this section. Leaks shall be repaired in accordance with paragraph (a)(2)(iii) of this section.

(i) Each pump shall be monitored quarterly to detect leaks by the method specified in § 63.1304(a). If an instrument reading of 10,000 parts per million (ppm) or greater is measured, a leak is detected.

(ii) Each pump shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal, a leak is detected.

(iii) When a leak is detected, it shall be repaired in accordance with the procedures in paragraphs (a)(2)(iii)(A) and (B) of this section, except as provided in paragraph (f) of this section.

(A) The leak shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected.

(B) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. First attempts at repair include, but are not limited to, the following practices, where practicable:

(1) Tightening of packing gland nuts.

(2) Ensuring that the seal flush is operating at design pressure and temperature.

(b) *Valves.* Each valve in HAP ABA service shall be monitored for leaks in accordance with paragraph (b)(1) of this section, except as provided in

paragraphs (b)(3) and (4) of this section. Leaks shall be repaired in accordance with paragraph (b)(2) of this section.

(1) Each valve shall be monitored quarterly to detect leaks by the method specified in § 63.1304(a). If an instrument reading of 10,000 parts per million or greater is measured, a leak is detected.

(2) When a leak is detected, the owner or operator shall repair the leak in accordance with the procedures in paragraphs (b)(2)(i) and (ii) of this section, except as provided in paragraph (f) of this section.

(i) The leak shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected.

(ii) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. First attempts at repair include, but are not limited to, the following practices where practicable:

(A) Tightening of bonnet bolts;

(B) Replacement of bonnet bolts;

(C) Tightening of packing gland nuts; and

(D) Injection of lubricant into lubricated packing.

(3) Any valve that is designated as an unsafe-to-monitor valve is exempt from the requirements of paragraphs (b)(1) and (2) of this section if:

(i) The owner or operator of the valve determines that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraphs (b)(1) and (2) of this section; and

(ii) The owner or operator of the valve has a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times. The plan shall also include requirements for repairing leaks as soon as possible after detection.

(iii) The owner or operator shall monitor the unsafe-to-monitor valve in accordance with the written plan, and

(iv) The owner or operator shall repair leaks in accordance with the written plan.

(4) Any valve that is designated as a difficult-to-monitor valve is exempt from the requirements of paragraphs (b)(1) and (2) of this section if:

(i) The owner or operator of the valve determines that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface or it is not accessible at any time in a safe manner;

(ii) The process within which the valve is located is an existing source, or the process within which the valve is located is a new source that has less

than 3 percent of the total number of valves designated as difficult to monitor; and

(iii) The owner or operator of the valve develops a written plan that requires monitoring of the valve at least once per calendar year. The plan shall also include requirements for repairing leaks as soon as possible after detection.

(iv) The owner or operator shall monitor the difficult-to-monitor valve in accordance with the written plan, and

(v) The owner or operator shall repair leaks in accordance with the written plan.

(c) *Connectors.* Each connector in HAP ABA service shall be monitored for leaks in accordance with paragraph (c)(1) of this section, except as provided in paragraph (c)(3) of this section. Leaks shall be repaired in accordance with (c)(2) of this section, except as provided in paragraph (c)(4) of this section.

(1) Connectors shall be monitored at the times specified in paragraphs (c)(1)(i) through (iii) of this section to detect leaks by the method specified in § 63.1304(a). If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(i) Each connector shall be monitored annually, and

(ii) Each connector that has been opened or has otherwise had the seal broken shall be monitored for leaks within the first 3 months after being returned to HAP ABA service.

(iii) If a leak is detected, the connector shall be monitored for leaks in accordance with paragraph (c)(1) of this section within the first 3 months after its repair.

(2) When a leak is detected, it shall be repaired in accordance with the procedures in paragraphs (c)(2)(i) and (ii) of this section, except as provided in paragraph (c)(4) and paragraph (f) of this section.

(i) The leak shall be repaired as soon as practicable, but not later than 15 calendar days after the leak is detected.

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

(3) Any connector that is designated as an unsafe-to-monitor connector is exempt from the requirements of paragraph (c)(1) of this section if:

(i) The owner or operator determines that the connector is unsafe to monitor because personnel would be exposed to an immediate danger as a result of complying with paragraph (c)(1) of this section; and

(ii) The owner or operator has a written plan that requires monitoring of the connector as frequently as practicable during safe-to-monitor periods.

(4) Any connector that is designated as an unsafe-to-repair connector is exempt from the requirements of paragraph (c)(2) of this section if:

(i) The owner or operator determines that repair personnel would be exposed to an immediate danger as a consequence of complying with paragraph (c)(2) of this section; and

(ii) The connector will be repaired as soon as practicable, but not later than 6 months after the leak was detected.

(d) *Pressure-relief devices.* Each pressure-relief device in HAP ABA service shall be monitored for leaks in accordance with paragraph (d)(1) of this section. Leaks shall be repaired in accordance with paragraph (d)(2) of this section.

(1) Each pressure-relief device in HAP ABA service shall be monitored within 5 calendar days by the method specified in § 63.1304(a) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(2) When a leak is detected, the leak shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in paragraph (f) of this section.

The owner or operator shall make a first attempt at repair no later than 5 calendar days after the leak is detected.

(e) *Open-ended valves or lines.* (1)(i) Each open-ended valve or line in HAP ABA service shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in paragraph (e)(4) of this section.

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

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

(3) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (e)(1) of this section at all other times.

(4) Open-ended valves or lines in an emergency shutdown system which are

designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs (e)(1), (2), and (3) of this section.

(f) *Delay of repair.* (1) Delay of repair of equipment for which leaks have been detected is allowed for equipment that is isolated from the process and that does not remain in HAP ABA service.

(2) Delay of repair for valves and connectors is also allowed if:

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

(ii) The purged material is collected and destroyed or recovered in a control device when repair procedures are effected.

(3) Delay of repair for pumps is also allowed if repair requires replacing the existing seal design with a sealless pump, and repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

§ 63.1297 Standards for slabstock flexible polyurethane foam production—HAP ABA emissions from the production line.

(a) Each owner or operator of a new or existing slabstock affected source complying with the emission point specific limitation option provided in § 63.1293(a)(1) shall control HAP ABA emissions from the slabstock polyurethane foam production line in accordance with the provisions in this section. Compliance shall be determined on a rolling annual basis as described in paragraph (a)(1) of this section. As an alternative, the owner or operator can determine compliance on a monthly basis, as described in paragraph (a)(2) of this section.

(1) *Rolling annual compliance.* In determining compliance on a rolling annual basis, actual HAP ABA emissions shall be compared to allowable HAP ABA emissions for each consecutive 12-month period. The allowable HAP ABA emission level shall be calculated based on the production for the 12-month period, resulting in a potentially different allowable level for each 12-month period. Compliance shall be determined each month for the previous 12-month period. The compliance requirements are provided in paragraph (b) of this section.

(2) *Monthly compliance alternative.* As an alternative to determining compliance on a rolling annual basis, an owner or operator can determine compliance by comparing actual HAP ABA emissions to allowable HAP ABA emissions for each month. The allowable HAP ABA emission level shall be calculated based on the production for the month, resulting in a potentially different allowable level each month. The requirements for this monthly compliance alternative are provided in paragraph (c) of this section.

(3) Each owner or operator electing to change between the compliance methods described under paragraphs (a)(1) and (a)(2) of this section shall notify the Administrator no later than 180 calendar days prior to the change.

(b) *Rolling annual compliance.* At each slabstock foam production source complying with the rolling annual compliance provisions described in paragraph (a)(1) of this section, actual HAP ABA emissions shall not exceed the allowable HAP ABA emission level for a consecutive 12-month period. The actual HAP ABA emission level for a consecutive 12-month period shall be determined using the procedures in paragraph (b)(1) of this section, and the allowable HAP ABA emission level for the corresponding 12-month period shall be calculated in accordance with paragraph (b)(2) of this section.

(1) The actual HAP ABA emissions for a 12-month period shall be calculated as the sum of actual monthly HAP ABA emissions for each of the individual 12 months in the period. Actual monthly HAP ABA emissions shall be equal to the amount of HAP ABA added to the slabstock foam production line at the mixhead, determined in accordance with § 63.1303(b), unless a recovery device is used. Slabstock foam production sources using recovery devices to reduce HAP ABA emissions shall determine actual monthly HAP ABA emissions using the procedures in paragraph (e) of this section.

(2) The allowable HAP ABA emissions for a consecutive 12-month period shall be calculated as the sum of allowable monthly HAP ABA emissions for each of the individual 12 months in the period. Allowable HAP ABA emissions for each individual month shall be calculated using Equation 2.

$$\text{emiss}_{\text{allow, month}} = \sum_{j=1}^m \left(\sum_{i=1}^n \frac{(\text{limit}_i) (\text{polyol}_i)}{100} \right)_j \quad (\text{Equation 2})$$

Where:

$emiss_{allow,month}$ = Allowable HAP ABA emissions from the slabstock foam production source for the month, pounds.

m = Number of slabstock foam production lines.

$polyol_i$ = Amount of polyol used in the month in the production of foam grade i on foam production line j , determined in accordance with paragraph (b)(3) of this section, pounds.

n = Number of foam grades produced in the month on foam production line j .

$limit_i$ = HAP ABA formulation limit for foam grade i , parts HAP ABA per 100 parts polyol. The HAP ABA formulation limits are determined in accordance with paragraph (d) of this section.

(3) The amount of polyol used for specific foam grades shall be based on the amount of polyol added to the slabstock foam production line at the

mixhead, determined in accordance with the provisions of § 63.1303(b).

(c) *Monthly compliance alternative.* At each slabstock foam production source complying with the monthly compliance alternative described in paragraph (a)(2) of this section, actual HAP ABA emissions shall not exceed the corresponding allowable HAP ABA emission level for the same month. The actual monthly HAP ABA emission level shall be determined using the procedures in paragraph (c)(1) of this section, and the allowable monthly HAP ABA emission level shall be calculated in accordance with paragraph (c)(2) of this section.

(1) The actual monthly HAP ABA emissions shall be equal to the amount of HAP ABA added to the slabstock foam production line at the mixhead, determined in accordance with § 63.1303(b), unless a recovery device is used. Slabstock foam production sources using recovery devices to reduce HAP ABA emissions shall determine actual monthly HAP ABA

emissions using the procedures in paragraph (e) of this section.

(2) The allowable HAP ABA emissions for the month shall be determined in accordance with Equation 2 of this section.

(d) *HAP ABA formulation limitations.* For each grade, the HAP ABA formulation limitation shall be determined in accordance with paragraphs (d)(1) through (d)(3) of this section. For any grade, the owner or operator may designate zero as the HAP ABA formulation limitation and not determine the HAP ABA formulation limitation in accordance with paragraphs (d)(1) through (d)(3) of this section.

(1) For existing sources, the HAP ABA formulation limitation for each grade of slabstock foam produced shall be determined using Equation 3 of this section. Zero shall be the formulation limitation for any grade of foam where the result of the formulation limitation equation (Equation 3) is negative (i.e., less than zero).

$$ABA_{limit} = -0.25(IFD) - 19.1\left(\frac{1}{IFD}\right) - 16.2(DEN) - 7.56\left(\frac{1}{DEN}\right) + 36.5 \quad (\text{Equation 3})$$

Where:

ABA_{limit} = HAP ABA formulation limitation, parts HAP ABA allowed per hundred parts polyol (pph).

IFD = Indentation force deflection, pounds.

DEN = Density, pounds per cubic foot.

(2) For new sources, the HAP ABA formulation limitation for each grade of slabstock foam produced shall be determined as described in paragraphs (d)(2)(i) through (d)(2)(iv) of this section and in Table 1 of this subpart.

(i) For each foam grade with a density of 0.95 pounds per cubic foot or less, the HAP ABA formulation limitation shall be determined using Equation 3. Zero shall be the formulation limitation for any grade of foam where the result of the formulation limitation equation

(Equation 3 of this section) is negative (i.e., less than zero).

(ii) For each foam grade with a density of 1.4 pounds per cubic foot or less, and an IFD of 15 pounds or less, the HAP ABA formulation limitation shall be determined using Equation 3.

(iii) For each foam grade with a density greater than 0.95 pounds per cubic foot and an IFD greater than 15 pounds, the HAP ABA formulation limitation shall be zero.

(iv) For each foam grade with a density greater than 1.40 pounds per cubic foot, the HAP ABA formulation limitation shall be zero.

(3) With the exception of those grades for which the owner or operator has designated zero as the HAP ABA formulation limitation, the IFD and density for each foam grade shall be

determined in accordance with § 63.1304(b) and recorded in accordance with § 63.1307(c)(1)(i)(B) or § 63.1307(c)(2)(i)(B) within 10 working days of the production of the foam.

(e) *Compliance using recovery devices.* If a recovery device is used to comply with paragraphs (b) or (c) of this section, the owner or operator shall determine the allowable HAP ABA emissions for each month using Equation 2 in paragraph (b)(2) of this section, and the actual monthly HAP ABA emissions in accordance with paragraph (e)(1) of this section. The owner or operator shall also comply with the provisions of paragraph (e)(2) of this section.

(1) The actual monthly HAP ABA emissions shall be determined using Equation 4:

$$E_{actual} = E_{unc} - HAPABA_{recovered} \quad (\text{Equation 4})$$

Where:

E_{actual} = Actual HAP ABA emissions after control, pounds/month.

E_{unc} = Uncontrolled HAP ABA emissions, pounds/month, determined in accordance with paragraph (b)(1) of this section.

$HAPABA_{recovered}$ = HAP ABA recovered, pounds/month, determined in accordance with paragraph (e)(2) of this section.

(2) The amount of HAP ABA recovered shall be determined in accordance with § 63.1303(c).

§ 63.1298 Standards for slabstock flexible polyurethane foam production—HAP emissions from equipment cleaning.

Each owner or operator of a new or existing slabstock affected source complying with the emission point specific limitation option provided in § 63.1293(a)(1) shall not use a HAP or a

HAP-based material as an equipment cleaner.

§ 63.1299 Standards for slabstock flexible polyurethane foam production—source-wide emission limitation.

Each owner or operator of a new or existing slabstock affected source complying with the source-wide emission limitation option provided in § 63.1293(b) shall control HAP ABA storage and equipment leak emissions, HAP ABA emissions from the production line, and equipment cleaning HAP emissions in accordance with the provisions in this section. Compliance shall be determined on a rolling annual basis in accordance with paragraph (a) of this section. As an alternative, the owner or operator can determine compliance monthly, as described in paragraph (b) of this section.

(a) *Rolling annual compliance.* Under the rolling annual compliance provisions, actual source-wide HAP ABA storage and equipment leak emissions, HAP ABA emissions from the production line, and equipment cleaning HAP emissions are compared to allowable source-wide emissions for each consecutive 12-month period. The allowable source-wide HAP emission

level is calculated based on the production for the 12-month period, resulting in a potentially different allowable level for each 12-month period. While compliance is on an annual basis, compliance shall be determined monthly for the preceding 12-month period. The actual source-wide HAP emission level for a consecutive 12-month period shall be determined using the procedures in paragraphs (c)(1) through (4) of this section, unless a recovery device is used. Slabstock foam production sources using recovery devices shall determine actual source-wide HAP emissions in accordance with paragraph (e) of this section. The allowable HAP emission level for a consecutive 12-month period shall be determined using the procedures in paragraph (d) of this section.

(b) *Monthly compliance alternative.* As an alternative to determining compliance on a rolling annual basis, an owner or operator can determine compliance by comparing actual HAP emissions to allowable HAP emissions for each month. The allowable source-wide emission level is calculated based on the production for the month, resulting in a potentially different

allowable level each month. The actual monthly emission level shall be determined using the procedures in paragraphs (c)(1) through (3) of this section, unless a recovery device is used. Slabstock foam production sources using recovery devices shall determine actual source-wide HAP emissions in accordance with paragraph (e) of this section. The allowable monthly HAP ABA emission level shall be determined in accordance with Equation 6.

(c) *Procedures for determining actual source-wide HAP emissions.* The actual source-wide HAP ABA storage and equipment leak emissions, HAP ABA emissions from the production line, and equipment cleaning HAP emissions shall be determined using the procedures in this section. Actual source-wide HAP emissions for each individual month shall be determined using the procedures specified in paragraphs (c)(1) through (3) of this section.

(1) Actual source-wide HAP emissions for a month shall be determined using Equation 5 and the information determined in accordance with paragraphs (c)(2) and (3) of this section.

$$PWE_{\text{actual}} = \sum_i^n (ST_{i, \text{begin}} - ST_{i, \text{end}} + ADD_i) \quad (\text{Equation 5})$$

Where:

PWE_{actual} = Actual source-wide HAP ABA and equipment cleaning HAP emissions for a month, pounds/month.

n = Number of HAP ABA storage vessels.

$ST_{i, \text{begin}}$ = Amount of HAP ABA in storage vessel i at the beginning of the month, pounds, determined in accordance with the procedures listed in paragraph (c)(2) of this section.

$ST_{i, \text{end}}$ = Amount of HAP ABA in storage vessel i at the end of the month, pounds, determined in accordance with the procedures listed in paragraph (c)(2) of this section.

ADD_i = Amount of HAP ABA added to storage vessel i during the month, pounds, determined in accordance with the procedures listed in paragraph (c)(3) of this section.

(2) The amount of HAP ABA in a storage vessel shall be determined by monitoring the HAP ABA level in the storage vessel in accordance with § 63.1303(d).

(3) The amount of HAP ABA added to a storage vessel for a given month shall be the sum of the amounts of all individual HAP ABA deliveries that occur during the month. The amount of each individual HAP ABA delivery shall be determined in accordance with § 63.1303(e).

(4) Actual source-wide HAP emissions for each consecutive 12-month period shall be calculated as the sum of actual monthly source-wide HAP emissions for each of the individual 12 months in the period, calculated in accordance with paragraphs (c) (1) through (3) of this section.

(d) Allowable source-wide HAP emissions for a consecutive 12-month period shall be calculated as the sum of allowable monthly source-wide HAP emissions for each of the individual 12 months in the period. Allowable source-wide HAP emissions for each individual month shall be calculated using Equation 6.

$$\text{emiss}_{\text{allow, month}} = \sum_{j=1}^m \left(\sum_{i=1}^n \frac{(\text{limit}_i) (\text{polyol}_i)}{100} \right) j \quad (\text{Equation 6})$$

Where:

$\text{emiss}_{\text{allow, month}}$ = Allowable HAP ABA storage and equipment leak

emissions, HAP ABA emissions from the production line, and equipment cleaning HAP emissions

from the slabstock foam production source for the month, pounds.

m = Number of slabstock foam production lines.

polyol_i = Amount of polyol used in the month in the production of foam grade i on foam production line j , determined in accordance with § 63.1303(b), pounds.

n = Number of foam grades produced in the month on foam production line j .

limit_i = HAP ABA formulation limit for foam grade i , parts HAP ABA per 100 parts polyol. The HAP ABA formulation limits are determined in accordance with § 63.1297(d).

(e) *Compliance using recovery devices.* If a recovery device is used to comply with paragraphs (a) or (b) of this section, the owner or operator shall determine the allowable source-wide HAP emissions for each month using

Equation 6 in paragraph (d) of this section, and the actual monthly source-wide HAP emissions in accordance with paragraph (e)(1) of this section. The owner or operator shall also comply with the provisions of paragraph (e)(2) of this section.

(1) Actual monthly source-wide HAP emissions shall be determined using Equation 7.

$$E_{\text{actual}} = E_{\text{unc}} - \text{HAPABA}_{\text{recovered}} \quad (\text{Equation 7})$$

Where:

E_{actual} = Actual source-wide HAP emissions after control, pounds/month.

E_{unc} = Uncontrolled source-wide HAP emissions, pounds/month, determined in accordance with paragraph (c) (1) through (3) of this section.

$\text{HAPABA}_{\text{recovered}}$ = HAP ABA recovered, pounds/month, determined in accordance with paragraph (e)(2) of this section.

(2) The amount of HAP ABA recovered shall be determined in accordance with § 63.1303(c).

§ 63.1300 Standards for molded flexible polyurethane foam production.

Each owner or operator of a new or existing molded affected source shall comply with the provisions in paragraphs (a) and (b) of this section.

(a) A HAP or HAP-based material shall not be used as an equipment cleaner to flush the mixhead, nor shall it be used elsewhere as an equipment cleaner in a molded flexible polyurethane foam process, with the following exception. Diisocyanates may be used to flush the mixhead and associated piping during periods of startup or maintenance, provided that the diisocyanate compounds are contained in a closed-loop system and are re-used in production.

(b) A HAP-based mold release agent shall not be used in a molded flexible polyurethane foam source process.

§ 63.1301 Standards for rebond foam production.

Each owner or operator of a new or existing rebond foam affected source shall comply with the provisions in paragraphs (a) and (b) of this section.

(a) A HAP or HAP-based material shall not be used as an equipment cleaner at a rebond foam source.

(b) A HAP-based mold release agent shall not be used in a rebond foam source.

§ 63.1302 Applicability of subpart A requirements.

The owner or operator of an affected source shall comply with the applicable requirements of subpart A of this part, as specified in Table 2 of this subpart.

§ 63.1303 Monitoring requirements.

Owners and operators of affected sources shall comply with each applicable monitoring provision in this section.

(a) *Monitoring requirements for storage vessel carbon adsorption systems.* Each owner or operator using a carbon adsorption system to meet the requirements of § 63.1294(a) or § 63.1295 shall monitor the concentration level of the HAP or the organic compounds in the exhaust vent stream (or outlet stream exhaust) from the carbon adsorption system at the frequency specified in (a)(1) or (2) of this section in accordance with either (a)(3) or (4) of this section.

(1) The concentration level of HAP or organic compounds shall be monitored during each unloading event, or once per month during an unloading event if multiple unloading events occur in a month.

(2) As an alternative to monthly monitoring, the owner or operator can set the monitoring frequency at an interval no greater than 20 percent of the carbon replacement interval, which is established using a design analysis described below in paragraphs (a)(1)(i) through (iii) of this section.

(i) The design analysis shall consider the vent stream composition, constituent concentration, flow rate, relative humidity, and temperature.

(ii) The design analysis shall establish the outlet organic concentration level, the capacity of the carbon bed, and the working capacity of activated carbon used for the carbon bed, and

(iii) The design analysis shall establish the carbon replacement interval based on the total carbon working capacity of the carbon

adsorption system and the schedule for filling the storage vessel.

(3) Measurements of HAP concentration shall be made using 40 CFR part 60, appendix A, Method 18. The measurement shall be conducted over at least one 5-minute interval during which the storage vessel is being filled.

(4) Measurements of organic compounds shall be made using 40 CFR part 60, Appendix A, Method 25A. The measurement shall be conducted over at least one 5-minute interval during which the storage vessel is being filled.

(b) *Monitoring for HAP ABA and polyol added to the foam production line at the mixhead.* (1) The owner or operator of each slabstock affected source shall comply with the provisions in paragraph (b)(1)(i) of this section, and, if applicable, the provisions of paragraph (b)(1)(ii) of this section. Alternatively, the owner or operator may comply with paragraph (b)(5) of this section.

(i) Owners or operators of all slabstock affected sources shall continuously monitor the amount of polyol added at the mixhead when foam is being poured, in accordance with paragraphs (b)(2) through (4) of this section.

(ii) Owners or operators of slabstock foam affected sources using the emission point specific limitation option provided in § 63.1293(a)(1) shall continuously monitor the amount of HAP ABA added at the mixhead when foam is being poured, in accordance with paragraphs (b)(2)(ii), (b)(3), and (b)(4) of this section.

(2) The owner or operator shall monitor either:

- (i) Pump revolutions; or
- (ii) Flow rate.

(3) The device used to monitor the parameter from paragraph (b)(2) shall have an accuracy to within ± 2.0 percent of the HAP ABA being measured, and shall be calibrated initially, and periodically, in

accordance with paragraph (b)(3)(i) or (ii) of this section.

(i) For polyol pumps, the device shall be calibrated at least once each 6 months.

(ii) For HAP ABA pumps, the device shall be calibrated at least once each month.

(4) Measurements must be recorded at the beginning and end of the production of each grade of foam within a run of foam.

(5) As an alternative to the monitoring described in paragraphs (b)(2) through (4) of this section, the owner or operator may develop an alternative monitoring program. Alternative monitoring programs must be submitted to the Administrator for approval in the Precompliance Report as specified in § 63.1306(c)(4) for existing sources or in the Application for approval of construction or reconstruction for new sources. If an owner or operator wishes to develop an alternative monitoring program after the compliance date, the program shall be submitted to the Administrator for approval before the owner or operator wishes to begin using the alternative program. If the Administrator does not notify the owner or operator of objections to the program, or any part of the program, within 45 days after its receipt, the program shall be deemed approved. Until the program is approved, the owner or operator of an affected source remains subject to the requirements of this subpart. The components of an alternative monitoring program shall include, at a minimum, the items listed in paragraphs (b)(5)(i) through (iv) of this section.

(i) A description of the parameter to be continuously monitored when foam is being poured to measure the amount of HAP ABA or polyol added at the mixhead.

(ii) A description of how the monitoring results will be recorded, and how the results will be converted into amount of HAP ABA or polyol delivered to the mixhead.

(iii) Data demonstrating that the monitoring device is accurate to within ± 2.0 percent.

(iv) Procedures to ensure that the accuracy of the parameter monitoring results is maintained. These procedures shall, at a minimum, consist of periodic calibration of all monitoring devices.

(c) *Recovered HAP ABA monitoring.* The owner or operator of each slabstock affected source using a recovery device to reduce HAP ABA emissions shall develop and comply with a recovered HAP ABA monitoring and recordkeeping program. The components of these plans shall

include, at a minimum, the items listed in paragraphs (c)(1) through (5) of this section. These plans must be submitted for approval in accordance with paragraph (c)(6) of this section.

(1) A device, installed, calibrated, maintained, and operated according to the manufacturer's specifications, that indicates the cumulative amount of HAP ABA recovered by the solvent recovery device over each 1-month period. The device shall be certified by the manufacturer to be accurate to within ± 2.0 percent.

(2) The location where the monitoring will occur shall ensure that the measurements are taken after HAP ABA has been fully recovered (i.e., after separation from water introduced into the HAP ABA during regeneration).

(3) A description of the parameter to be monitored, and the times the parameter will be monitored.

(4) Data demonstrating that the monitoring device is accurate to within ± 2.0 percent.

(5) Procedures to ensure that the accuracy of the parameter monitoring results is maintained. These procedures shall, at a minimum, consist of periodic calibration of all monitoring devices.

(6) Recovered HAP ABA monitoring and recordkeeping programs must be submitted to the Administrator for approval in the Precompliance Report as specified in § 63.1306(c)(6) for existing sources or in the Application for approval of construction or reconstruction for new sources. If an owner or operator wishes to develop a recovered HAP ABA monitoring program after the compliance date, the program shall be submitted to the Administrator for approval before the owner or operator wishes to begin using the program. If the Administrator does not notify the owner or operator of objections to the program within 45 days after its receipt, the program shall be deemed approved. Until the program is approved, the owner or operator of an affected source remains subject to the requirements of this subpart.

(d) *Monitoring of HAP ABA in a storage vessel.* The amount of HAP ABA in a storage vessel shall be determined weekly by monitoring the HAP ABA level in the storage vessel using a level measurement device that meets the criteria described in paragraphs (d)(1) and either (d)(2) or (d)(3) of this section.

(1) The level measurement device must be calibrated initially and at least once per year thereafter.

(2) With the exception of visually-read level measurement devices (i.e., gauge glass), the device must have either a digital or printed output.

(3) If the level measurement device is a visually-read device, the device must be equipped with permanent graduated markings to indicate HAP ABA level in the storage tank.

(e) *Monitoring of HAP ABA added to a storage vessel.* The amount of HAP ABA added to a storage vessel during a delivery shall be determined in accordance with either paragraphs (e)(1), (2), (3), or (4) of this section.

(1) The volume of HAP ABA added to the storage vessel shall be determined by recording the volume in the storage vessel prior to the delivery and the volume after the delivery, provided that the storage tank level measurement device used to determine the levels meets the criteria in (d) of this section.

(2) The volume of HAP ABA added to the storage vessel shall be determined by monitoring the flow rate using a device with an accuracy of ± 2.0 percent, and calibrated initially and at least once each six months thereafter.

(3) The weight of HAP ABA added to the storage vessel shall be calculated as the difference of the full weight of the transfer vehicle prior to unloading into the storage vessel and the empty weight of the transfer vehicle after unloading into the storage vessel. The weight shall be determined using a scale meeting the requirements of either paragraph (e)(2)(i) or (ii) of this section.

(i) A scale approved by the State or local agencies using the procedures contained in Handbook 44, Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices 1998 (incorporation by reference—see § 63.14).

(ii) A scale determined to be in compliance with the requirements of the National Institute of Standards and Technology Handbook 44 at least once per year by a registered scale technician.

(4) As an alternative to the monitoring options described in paragraphs (e)(1) through (e)(3) of this section, the owner or operator may develop an alternative monitoring program. Alternative monitoring programs must be submitted to the Administrator for approval in the Precompliance Report as specified in § 63.1306(c)(4) for existing sources or in the Application for approval of construction or reconstruction for new sources. If an owner or operator wishes to develop an alternative monitoring program after the compliance date, the program shall be submitted to the Administrator for approval before the owner or operator wishes to begin using the alternative program. If the Administrator does not notify the owner or operator of objections to the program within 45 days after its receipt, the

program shall be deemed approved. Until the program is approved, the owner or operator of an affected source remains subject to the requirements of this subpart. The components of an alternative monitoring program shall include, at a minimum, the items listed in paragraphs (e)(3)(i) through (iv) of this section.

(i) A description of the parameter to be monitored to determine the amount of HAP ABA added to the storage vessel during a delivery.

(ii) A description of how the results will be recorded, and how the results will be converted into the amount of HAP ABA added to the storage vessel during a delivery.

(iii) Data demonstrating that the monitoring device is accurate to within ± 2.0 percent, and

(iv) Procedures to ensure that the accuracy of the monitoring measurements is maintained. These procedures shall, at a minimum, consist of periodic calibration of all monitoring devices.

§ 63.1304 Testing requirements.

Owners and operators of affected sources shall use the test methods listed in this section, as applicable, to demonstrate compliance with this subpart.

(a) *Test method and procedures to determine equipment leaks.* Monitoring, as required under § 63.1296, shall comply with the following requirements:

(1) Monitoring shall comply with Method 21 of 40 CFR part 60, appendix A.

(2) The detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except that the instrument response factor criteria in section 3.1.2(a) of Method 21 shall be for the average composition of the source fluid, rather than for each individual VOC in the stream. For source streams that contain nitrogen, air, or other inerts which are not HAP or VOC, the average stream response factor shall be calculated on an inert-free basis. The response factor may be determined at any concentration for which monitoring for leaks will be conducted.

(3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A.

(4) Calibration gases shall be:

(i) Zero air (less than 10 ppm of hydrocarbon in air); and

(ii) A mixture of methane and air at a concentration of approximately, 1,000 ppm for all transfer pumps; and 500 ppm for all other equipment, except as

provided in paragraph (a)(4)(iii) of this section.

(iii) The instrument may be calibrated at a higher methane concentration (up to 2,000 ppm) than the leak definition concentration for a specific piece of equipment for monitoring that piece of equipment. If the monitoring instrument's design allows for multiple calibration gas concentrations, then the lower concentration calibration gas shall be no higher than 2,000 ppm methane and the higher concentration calibration gas shall be no higher than 10,000 ppm methane.

(5) Monitoring shall be performed when the equipment is in HAP ABA service, in use with an acceptable surrogate volatile organic compound which is not a HAP ABA, or is in use with any other detectable gas or vapor.

(6) If no instrument is available onsite that will meet the performance criteria specified in section 3.1.2(a) of Method 21 of 40 CFR Part 60, appendix A, the readings from an available instrument may be adjusted by multiplying by the average response factor for the stream.

(b) *Test method to determine foam properties.* The IFD and density of each grade of foam produced during each run of foam shall be determined using ASTM D3574-91, Standard Test Methods for Flexible Cellular Materials—Slab, Bonded, and Molded (incorporation by reference—see § 63.14), using a sample of foam cut from the center of the foam bun. The maximum sample size for which the IFD and density is determined shall not be larger than 24 inches by 24 inches by 4 inches. For grades of foam where the owner or operator has designated the HAP ABA formulation limitation as zero, the owner or operator is not required to determine the IFD and density in accordance with this paragraph.

§ 63.1305 Alternative means of emission limitation.

An owner or operator of an affected source may request approval to use an alternative means of emission limitation, following the procedures in this section.

(a) The owner or operator can request approval to use an alternative means of emission limitation in the precompliance report for existing sources, the application for construction or reconstruction for new sources, or at any time.

(b) This request shall include a complete description of the alternative means of emission limitation.

(c) Each owner or operator applying for permission to use an alternative means of emission limitation under

§ 63.6(g) shall be responsible for collecting and verifying data to demonstrate the emission reduction achieved by the alternative means of emission limitation.

(d) Use of the alternative means of emission limitation shall not begin until approval is granted by the Administrator in accordance with § 63.6(g).

§ 63.1306 Reporting requirements.

Owners and operators of affected sources shall comply with each applicable reporting provision in this section.

(a) *Initial notification.* Each affected source shall submit an initial notification in accordance with § 63.9(b).

(b) *Application for approval of construction or reconstruction.* Each owner or operator shall submit an application for approval of construction or reconstruction in accordance with the provisions of § 63.5(d).

(c) *Precompliance report.* Each slabstock affected source shall submit a precompliance report no later than 12 months before the compliance date. This report shall contain the information listed in paragraphs (c)(1) through (c)(8) of this section, as applicable.

(1) Whether the source will comply with the emission point specific limitations described in § 63.1293(a), or with the source-wide emission limitation described in § 63.1293(b).

(2) For a source complying with the emission point specific limitations, whether the source will comply on a rolling annual basis in accordance with § 63.1297(b), or will comply with the monthly alternative for compliance contained in § 63.1297(c).

(3) For a source complying with the source-wide emission limitation, whether the source will comply on a rolling annual basis in accordance with § 63.1299(a), or will comply with the monthly alternative for compliance contained in § 63.1299(b).

(4) A description of how HAP ABA and/or polyol added at the mixhead will be monitored. If the owner or operator is developing an alternative monitoring program, the alternative monitoring program containing the information in § 63.1303(b)(5)(i) through (iv) shall be submitted.

(5) Notification of the intent to use a recovery device to comply with the provisions of § 63.1297 or § 63.1299.

(6) For slabstock affected sources complying with § 63.1297 or § 63.1299 using a recovery device, the continuous recovered HAP ABA monitoring and

recordkeeping program, developed in accordance with § 63.1303(c).

(7) For sources complying with the source-wide emission limitation, a description of how the amount of HAP ABA in a storage vessel shall be determined.

(8) For sources complying with the source-wide emission limitation, a description of how the amount of HAP ABA added to a storage vessel during a delivery will be monitored. If the owner or operator is developing an alternative monitoring program, the alternative monitoring program containing the information in § 63.1303(e)(4)(i) through (iv) shall be submitted.

(9) If the Administrator does not notify the owner or operator of objections to an alternative monitoring program submitted in accordance with (c)(4) or (c)(6) of this section, or a recovered HAP ABA monitoring and recordkeeping program submitted in accordance with (c)(7) of this section, the program shall be deemed approved 45 days after its receipt by the Administrator.

(d) *Notification of compliance status.* Each affected source shall submit a notification of compliance status report no later than 180 days after the compliance date. For slabstock affected sources, this report shall contain the information listed in paragraphs (d)(1) through (3) of this section, as applicable. This report shall contain the information listed in paragraph (d)(4) of this section for molded foam processes and in paragraph (d)(5) for rebond foam processes.

(1) A list of diisocyanate storage vessels, along with a record of the type of control utilized for each storage vessel.

(2) For transfer pumps in diisocyanate service, a record of the type of control utilized for each transfer pump.

(3) If the source is complying with the emission point specific limitations of §§ 63.1294 through 63.1298, the information listed in paragraphs (b)(3)(i) through (iii) of this section.

(i) A list of HAP ABA storage vessels, along with a record of the type of control utilized for each storage vessel.

(ii) A list of pumps, valves, connectors, pressure-relief devices, and open-ended valves or lines in HAP ABA service.

(iii) A list of any modifications to equipment in HAP ABA service made to comply with the provisions of § 63.1296.

(4) A statement that the molded foam affected source is in compliance with § 63.1300, or a statement that molded foam processes at an affected source are in compliance with § 63.1300.

(5) A statement that the rebond foam affected source is in compliance with § 63.1301, or that rebond processes at an affected source are in compliance with § 63.1301.

(e) *Semiannual reports.* Each slabstock affected source shall submit a report containing the information specified in paragraphs (e)(1) through (5) of this section 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 that the Notification of Compliance Status is due and shall cover the 6-month period beginning on the date that the Notification of Compliance Status Report is due.

(1) For slabstock affected sources complying with the rolling annual compliance provisions of either § 63.1297 or § 63.1299, the allowable and actual HAP ABA emissions (or allowable and actual source-wide HAP emissions) for each of the 12-month periods ending on each of the six months in the reporting period. This information is not required to be included in the initial semi-annual compliance report.

(2) For sources complying with the monthly compliance alternative of either § 63.1297 or § 63.1299, the allowable and actual HAP ABA emissions (or allowable and actual source-wide HAP emissions) for each of the six months in the reporting period.

(3) For sources complying with the storage vessel provisions of § 63.1294(a) or § 63.1295 using a carbon adsorption system, unloading events that occurred after breakthrough was detected and before the carbon was replaced.

(4) Any equipment leaks that were not repaired in accordance with § 63.1294(b)(2)(iii), § 63.1294(c), § 63.1296(a)(2)(iii), (b)(2), (b)(3)(iv), (b)(4)(v), (c)(2), (c)(4)(ii), and (d)(2).

(5) Any leaks in vapor return lines that were not repaired in accordance with § 63.1294(a)(1)(ii) or § 63.1295(b)(2).

(f) *Other reports.* (1) Change in selected emission limitation. An owner or operator electing to change their slabstock flexible polyurethane foam emission limitation (from emission point specific limitations to a source-wide emission limitation, or vice versa), selected in accordance with § 63.1293, shall notify the Administrator no later than 180 days prior to the change.

(2) *Change in selected compliance method.* An owner or operator changing the period of compliance for either § 63.1297 or § 63.1299 (between rolling annual and monthly) shall notify the Administrator no later than 180 days prior to the change.

(g) *Annual compliance certifications.* Each affected source subject to the provisions in §§ 63.1293 through 63.1301 shall submit a compliance certification annually.

(1) The compliance certification shall be based on information consistent with that contained in § 63.1308 of this section, as applicable.

(2) A compliance certification required pursuant to a State or local operating permit program may be used to satisfy the requirements of this section, provided that the compliance certification is based on information consistent with that contained in § 63.1308 of this section, and provided that the Administrator has approved the State or local operating permit program under part 70 of this chapter.

(3) Each compliance certification submitted pursuant to this section shall be signed by a responsible official of the company that owns or operates the affected source.

§ 63.1307 Recordkeeping requirements.

The applicable records designated in paragraphs (a) through (c) of this section shall be maintained by owners and operators of all affected sources.

(a) *Storage vessel records.* (1) A list of diisocyanate storage vessels, along with a record of the type of control utilized for each storage vessel.

(2) For each slabstock affected source complying with the emission point specific limitations of §§ 63.1294 through 63.1298, a list of HAP ABA storage vessels, along with a record of the type of control utilized for each storage vessel.

(3) For storage vessels complying through the use of a carbon adsorption system, paragraph (a)(3)(i) or (ii), and paragraph (a)(3)(iii) of this section.

(i) Records of dates and times when the carbon adsorption system is monitored for carbon breakthrough and the monitoring device reading, when the device is monitored in accordance with § 63.1303(a); or

(ii) For affected sources monitoring at an interval no greater than 20 percent of the carbon replacement interval, in accordance with § 63.1303(a)(2), the records listed in paragraphs (a)(3)(ii)(A) and (B) of this section.

(A) Records of the design analysis, including all the information listed in § 63.1303(a)(2)(i) through (iii), and

(B) Records of dates and times when the carbon adsorption system is monitored for carbon breakthrough and the monitoring device reading.

(iii) Date when the existing carbon in the carbon adsorption system is replaced with fresh carbon.

(4) For storage vessels complying through the use of a vapor return line,

paragraphs (a)(4)(i) through (iii) of this section.

(i) Dates and times when each unloading event occurs and each inspection of the vapor return line for leaks occurs.

(ii) Records of dates and times when a leak is detected in the vapor return line.

(iii) Records of dates and times when a leak is repaired.

(b) *Equipment leak records.* (1) A list of components as specified below in paragraphs (b)(1)(i) and (ii).

(i) For all affected sources, a list of components in diisocyanate service,

(ii) For affected sources complying with the emission point specific limitations of §§ 63.1294 through 63.1298, a list of components in HAP ABA service.

(2) For transfer pumps in diisocyanate service, a record of the type of control utilized for each transfer pump and the date of installation.

(3) When a leak is detected as specified in § 63.1294(b)(2)(ii), § 63.1294(c), § 63.1296(a)(2), (b)(1), (c)(1), and (d)(1), the requirements listed in paragraphs (b)(3)(i) and (ii) of this section apply:

(i) Leaking equipment shall be identified in accordance with the requirements in paragraphs (b)(3)(i)(A) through (C) of this section.

(A) A readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

(B) The identification on a valve may be removed after it has been monitored for 2-successive quarters as specified in § 63.1296(b)(1) and no leak has been detected during those 2 quarters.

(C) The identification on equipment, other than a valve, may be removed after it has been repaired.

(ii) The information in paragraphs (b)(2)(ii)(A) through (H) shall be recorded for leaking components.

(A) The instrument and operator identification numbers and the equipment identification number.

(B) The date the leak was detected and the dates of each attempt to repair the leak.

(C) Repair methods applied in each attempt to repair the leak.

(D) The words "above leak definition" if the maximum instrument reading measured by the methods specified in § 63.1304(a) after each repair attempt is equal or greater than the leak definitions for the specified equipment.

(E) The words "repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(F) The expected date of the successful repair of the leak if a leak is not repaired within 15 calendar days.

(G) The date of successful repair of the leak.

(H) The date the identification is removed.

(c) *HAP ABA records.* (1) *Emission point specific limitations—rolling annual compliance and monthly compliance alternative records.* Each slabstock affected source complying with the emission point specific limitations of §§ 63.1294 through 63.1298, and the rolling annual compliance provisions of § 63.1297(a)(1), shall maintain the records listed in paragraphs (c)(1)(i), (ii), (iii), and (iv) of this section. Each flexible polyurethane foam slabstock source complying with the emission point specific limitations of §§ 63.1294 through 63.1298, and the monthly compliance alternative of § 63.1297(a)(2), shall maintain the records listed in paragraphs (c)(1)(i), (ii), and (iv) of this section.

(i) Daily records of the information listed below in paragraphs (c)(1)(i)(A) through (C) of this section.

(A) A log of foam runs each day. For each run, the log shall include a list of the grades produced during the run.

(B) Results of the density and IFD testing for each grade of foam produced during each run of foam, conducted in accordance with the procedures in § 63.1304(b). The results of this testing shall be recorded within 10 working days of the production of the foam. For grades of foam where the owner or operator has designated the HAP ABA formulation limitation as zero, the owner or operator is not required to keep records of the IFD and density.

(C) The amount of polyol added to the slabstock foam production line at the mixhead for each run of foam, determined in accordance with § 63.1303(b).

(ii) Monthly records of the information listed in paragraphs (c)(1)(ii)(A) through (E) of this section.

(A) A listing of all foam grades produced during the month,

(B) For each foam grade produced, the HAP ABA formulation limitation, calculated in accordance with § 63.1297(d).

(C) With the exception of those grades for which the owner or operator has designated zero as the HAP ABA formulation limitation, the total amount of polyol used in the month for each foam grade produced.

(D) The total allowable HAP ABA emissions for the month, determined in accordance with § 63.1297(b)(2).

(E) The total amount of HAP ABA added to the slabstock foam production line at the mixhead during the month, determined in accordance with § 63.1303(b).

(iii) Each source complying with the rolling annual compliance provisions of § 63.1297(b) shall maintain the records listed in paragraphs (c)(1)(iii)(A) and (B) of this section.

(A) The sum of the total allowable HAP ABA emissions for the month and the previous 11 months.

(B) The sum of the total actual HAP ABA emissions for the month and the previous 11 months.

(iv) Records of all calibrations for each device used to measure polyol and HAP ABA added at the mixhead, conducted in accordance with § 63.1303(b)(3).

(2) *Source-wide limitations—rolling annual compliance and monthly compliance alternative records.* Each slabstock affected source complying with the source-wide limitations of § 63.1299, and the rolling annual compliance provisions in § 63.1299(a), shall maintain the records listed in paragraphs (c)(2)(i) through (c)(2)(vii) of this section. Each flexible polyurethane foam slabstock source complying with the source-wide limitations of § 63.1299, and the monthly compliance alternative of § 63.1299(b), shall maintain the records listed in paragraphs (c)(2)(i) through (c)(2)(iii) and paragraphs (c)(2)(v) through (c)(2)(vii) of this section.

(i) Daily records of the information listed in paragraphs (c)(2)(i)(A) through (C) of this section.

(A) A log of foam runs each day. For each run, the log shall include a list of the grades produced during the run.

(B) Results of the density and IFD testing for each grade of foam produced during each run of foam, conducted in accordance with the procedures in § 63.1304(b). The results of this testing shall be recorded within 10 working days of the production of the foam. For grades of foam where the the owner or operator has designated the HAP ABA formulation limitation as zero, the owner or operator is not required to keep records of the IFD and density.

(C) With the exception of those grades for which the owner or operator has designated zero as the HAP ABA formulation limitation, the amount of polyol added to the slabstock foam production line at the mixhead for each grade produced during each run of foam, determined in accordance with § 63.1303(b).

(ii) For sources complying with the source-wide emission limitation, weekly records of the storage tank level,

determined in accordance with § 63.1303(d).

(iii) Monthly records of the information listed below in paragraphs (c)(2)(iii)(A) through (E) of this section.

(A) A listing of all foam grades produced during the month,

(B) For each foam grade produced, the residual HAP formulation limitation, calculated in accordance with § 63.1297(d).

(C) With the exception of those grades for which the owner or operator has designated zero as the HAP ABA formulation limitation, the total amount of polyol used in the month for each foam grade produced.

(D) The total allowable HAP ABA and equipment cleaning emissions for the month, determined in accordance with § 63.1297(b)(2).

(E) The total actual source-wide HAP ABA emissions for the month, determined in accordance with § 63.1299(c)(1), along with the information listed in paragraphs (c)(2)(iii)(E)(1) and (2) of this section.

(1) The amounts of HAP ABA in the storage vessel at the beginning and end of the month, determined in accordance with § 63.1299(c)(2); and

(2) The amount of each delivery of HAP ABA to the storage vessel, determined in accordance with § 63.1299(c)(3).

(iv) Each source complying with the rolling annual compliance provisions of § 63.1299(a) shall maintain the records listed in paragraphs (c)(2)(iv)(A) and (B) of this section.

(A) The sum of the total allowable HAP ABA and equipment cleaning HAP emissions for the month and the previous 11 months.

(B) The sum of the total actual HAP ABA and equipment cleaning HAP emissions for the month and the previous 11 months.

(v) Records of all calibrations for each device used to measure polyol added at the mixhead, conducted in accordance with § 63.1303(b)(3).

(vi) Records of all calibrations for each device used to measure the amount of HAP ABA in the storage vessel, conducted in accordance with § 63.1303(d)(1).

(vii) Records to verify that all scales used to measure the amount of HAP ABA added to the storage vessel meet the requirements of § 63.1303(e)(3). For scales meeting the criteria of § 63.1303(e)(3)(i), this documentation shall be in the form of written confirmation of the State or local approval. For scales complying with § 63.1303(e)(3)(ii), this documentation shall be in the form of a report provided by the registered scale technician.

(d) The owner or operator of each affected source complying with § 63.1297 or § 63.1299 through the use of a recovery device shall maintain the following records:

(1) A copy of the recovered HAP ABA monitoring and recordkeeping program, developed pursuant to § 63.1303(c);

(2) Certification of the accuracy of the monitoring device,

(3) Records of periodic calibration of the monitoring devices,

(4) Records of parameter monitoring results, and

(5) The amount of HAP ABA recovered each time it is measured.

(e) The owner or operator of an affected source subject to § 63.1298 of this subpart shall maintain a product data sheet for each equipment cleaner used which includes the HAP content, in kg of HAP/kg solids (lb HAP/lb solids).

(f) The owner or operator of an affected source following the compliance methods in § 63.1308(b)(1) and (c)(1) shall maintain records of each use of a vapor return line during unloading, of any leaks detected during unloading, and of repairs of leaks detected during unloading.

(g) The owner or operator of an affected source subject to § 63.1300 or § 63.1301 of this subpart shall maintain a product data sheet for each compound other than diisocyanates used to flush the mixhead and associated piping during periods of startup or maintenance, which includes the HAP content, in kg of HAP/kg solids (lb HAP/lb solids), of each solvent other than diisocyanates used to flush the mixhead and associated piping during periods of startup or maintenance.

(h) The owner or operator of an affected source subject to § 63.1300 or § 63.1301 of this subpart shall maintain a product data sheet for each mold release agent used that includes the HAP content, in kg of HAP/kg solids (lb HAP/lb solids), of each mold release agent.

§ 63.1308 Compliance demonstrations.

(a) For each affected source, compliance with the requirements listed in paragraphs (a)(1) through (a)(2) of this section shall mean compliance with the requirements contained in §§ 63.1293 through 63.1301, absent any credible evidence to the contrary.

(1) The requirements described in Tables 3, 4, and 5 of this subpart; and

(2) The requirement to submit a compliance certification annually as required under § 63.1306(g).

(b) *All slabstock affected sources.* For slabstock affected sources, failure to meet the requirements contained in

§ 63.1294 shall be considered a violation of this subpart. Violation of each item listed in the paragraphs (b)(1) through (b)(6) of this section, as applicable, shall be considered a separate violation.

(1) For each affected source complying with § 63.1294(a) in accordance with § 63.1294(a)(1), each unloading event that occurs when the diisocyanate storage vessel is not equipped with a vapor return line from the storage vessel to the tank truck or rail car, each unloading event that occurs when the vapor line is not connected, each unloading event that the vapor line is not inspected for leaks as described in § 63.1294(a)(1)(i), each unloading event that occurs after a leak has been detected and not repaired, and each calendar day after a leak is detected, but not repaired as soon as practicable;

(2) For each affected source complying with § 63.1294(a) in accordance with § 63.1294(a)(2), each unloading event that occurs when the diisocyanate storage vessel is not equipped with a carbon adsorption system, each unloading event (or each month if more than one unloading event occurs in a month) that the carbon adsorption system is not monitored for breakthrough in accordance with § 63.1303(a)(3) or (4), and each unloading event that occurs when the carbon is not replaced after an indication of breakthrough;

(3) For each affected source complying with § 63.1294(a) in accordance with § 63.1294(a)(2) through the alternative monitoring procedures in § 63.1303(a)(2), each unloading event that the diisocyanate storage vessel is not equipped with a carbon adsorption system, each time that the carbon adsorption system is not monitored for breakthrough in accordance with § 63.1303(a)(3) or (4) at the interval established in the design analysis, and each unloading event that occurs when the carbon is not replaced after an indication of breakthrough;

(4) For each affected source complying with § 63.1294(b) in accordance with § 63.1294(b)(1), each calendar day that a transfer pump in diisocyanate service is not a sealless pump;

(5) For each affected source complying with § 63.1294(b) in accordance with § 63.1294(b)(2), each calendar day that a transfer pump in diisocyanate service is not submerged as described in § 63.1294(b)(2)(i), each week that the pump is not visually monitored for leaks, each calendar day after 5 calendar days after detection of a leak that a first attempt at repair has not been made in accordance with

§ 63.1294(b)(2)(iii)(B), and the earlier of each calendar day after 15 calendar days after detection of a leak that a leak is not repaired, or a leak is not repaired as soon as practicable, each subsequent calendar day (with the exception of situations meeting the criteria of § 63.1294(d));

(6) For each affected source complying with § 63.1294(c), each calendar day after 5 calendar days after detection of a leak that a first attempt at repair has not been made, and the earlier of each calendar day after 15 calendar days after detection of a leak that a leak is not repaired, or if a leak is not repaired as soon as practicable, each subsequent calendar day (with the exception of situations meeting the criteria of § 63.1296(f)).

(c) *Slabstock affected sources complying with the emission point specific limitations.* For slabstock affected sources complying with the emission point specific limitations as provided in § 63.1293(a), failure to meet the requirements contained in §§ 63.1295 through 63.1298 shall be considered a violation of this subpart. Violation of each item listed in the paragraphs (c)(1) through (c)(17) of this section, as applicable, shall be considered a separate violation.

(1) For each affected source complying with § 63.1295(a) in accordance with § 63.1295(b), each unloading event that occurs when the HAP ABA storage vessel is not equipped with a vapor return line from the storage vessel to the tank truck or rail car, each unloading event that occurs when the vapor line is not connected, each unloading event that the vapor line is not inspected for leaks as described in § 63.1295(b)(1), each unloading event that occurs after a leak has been detected and not repaired, and each calendar day after a leak is detected but not repaired as soon as practicable;

(2) For each affected source complying with § 63.1295(a) in accordance with § 63.1295(c), each unloading event that the HAP ABA storage vessel is not equipped with a carbon adsorption system, each unloading event (or each month if more than one unloading event occurs in a month) that the carbon adsorption system is not monitored for breakthrough in accordance with § 63.1303(a)(3) or (4), and each unloading event that occurs when the carbon is not replaced after an indication of breakthrough;

(3) For each affected source complying with § 63.1295(a) in accordance with § 63.1295(c) through the alternative monitoring procedures in § 63.1303(a)(2), each unloading event

that the HAP ABA storage vessel is not equipped with a carbon adsorption system, each time that the carbon adsorption system is not monitored for breakthrough in accordance with § 63.1303(a)(3) or (4) at the interval established in the design analysis, and each unloading event that occurs when the carbon is not replaced after an indication of breakthrough;

(4) For each affected source complying with § 63.1296(a) in accordance with § 63.1296(a)(1), each calendar day that a transfer pump in HAP ABA service is not a sealless pump;

(5) For each affected source complying with § 63.1296(a) in accordance with § 63.1296(a)(2), each week that a visual inspection of a pump in HAP ABA service is not performed, each quarter that a pump in HAP ABA service is not monitored to detect leaks in accordance with § 63.1304(a), each calendar day after 5 calendar days after detection of a leak that a first attempt at repair has not been made in accordance with § 63.1296(b)(2)(iii)(B), and the earlier of each calendar day after 15 calendar days after detection of a leak that a leak is not repaired, or if a leak is not repaired as soon as practicable, each subsequent calendar day (with the exception of situations meeting the criteria of § 63.1296(f));

(6) For each affected source complying with § 63.1296(b) in accordance with § 63.1296(b)(1) and (2), each quarter that a valve in HAP ABA service is not monitored to detect leaks in accordance with § 63.1304(a), each calendar day after 5 calendar days after detection of a leak that a first attempt at repair has not been made in accordance with § 63.1296(b)(2)(ii), and each calendar day after 15 calendar days after detection of a leak that a leak is not repaired, or if a leak is not repaired as soon as practicable, whichever is earlier (with the exception of situations meeting the criteria of § 63.1296(f));

(7) For each affected source complying with § 63.1296(b)(3) for each valve designated as unsafe to monitor as described in § 63.1296(b)(3)(i), failure to develop the written plan required by § 63.1296(b)(3)(ii), each period specified in the written plan that an unsafe-to-monitor valve in HAP ABA service is not monitored, and each calendar day in which a leak is not repaired in accordance with the written plan;

(8) For each affected source complying with § 63.1296(b)(4) for one or more valves designated as difficult-to-monitor in accordance with § 63.1296(b)(4)(i) and (ii), failure to develop the written plan required by § 63.1296(b)(4)(iii), each calendar year

that a difficult-to-monitor valve in HAP ABA service is not monitored, and each calendar day in which a leak is not repaired in accordance with the written plan;

(9) For each affected source complying with § 63.1296(c) in accordance with § 63.1296(c)(1) and (2), each year that a connector in HAP ABA service is not monitored to detect leaks in accordance with § 63.1304(a); each calendar day after 3 months after a connector has been opened, has otherwise had the seal broken, or a leak is repaired, that each connector in HAP ABA service is not monitored to detect leaks in accordance with § 63.1304(a); each calendar day after 5 calendar days after detection of a leak that a first attempt at repair has not been made, and the earlier of each calendar day after 15 calendar days after detection of a leak that a leak is not repaired, or if a leak is not repaired as soon as practicable, each subsequent calendar day (with the exception of situations meeting the criteria of § 63.1296(f));

(10) For each affected source complying with § 63.1296(c)(3) for one or more connectors designated as unsafe-to-monitor in accordance with § 63.1296(c)(3)(i), failure to develop the written plan required by § 63.1296(c)(3)(ii), each period specified in the written plan that an unsafe-to-monitor valve in HAP ABA service is not monitored, each calendar day after 5 calendar days after detection of a leak of an unsafe-to-monitor connector that a first attempt at repair has not been made, and the earlier of each calendar day after 15 calendar days after detection of a leak that a leak is not repaired, or if a leak is not repaired as soon as practicable, each subsequent calendar day (with the exception of situations meeting the criteria of § 63.1296(f));

(11) For each affected source complying with § 63.1296(c)(4) for one or more connectors designated as unsafe to repair, each year that one or more unsafe-to-repair connectors in HAP ABA service is not monitored to detect leaks in accordance with § 63.1304(a); each calendar day after 3 months after one or more unsafe-to-repair connectors has been opened, has otherwise had the seal broken, or a leak is repaired, that each unsafe-to-repair connector in HAP ABA service is not monitored to detect leaks in accordance with § 63.1304(a); and the earlier of each calendar day after six-months after detection of a leak that a leak is not repaired, or if a leak is not repaired as soon as practicable, each subsequent calendar day;

(12) For each affected source complying with § 63.1296(d) in

accordance with § 63.1296(d)(1) and (2), each calendar day after the 5 days that the pressure-relief device has not been monitored in accordance with § 63.1304(a) after a potential leak was discovered as described in § 63.1296(d)(1), each calendar day after 5 calendar days after detection of a leak that a first attempt at repair has not been made, and the earlier of each calendar day after 15 calendar days after detection of a leak that a leak is not repaired, or if a leak is detected and not repaired as soon as practicable, each subsequent calendar day (with the exception of situations meeting the criteria of § 63.1296(f));

(13) For each affected source complying with § 63.1296(e) in accordance with § 63.1296(e)(1) through (5), each calendar day that an open-ended valve or line has no cap, blind flange, plug or second valve as described in § 63.1296(e)(2), and each calendar day that a valve on the process fluid end of an open-ended valve or line equipped with a second valve is not closed before the second valve is closed;

(14) For each affected source complying with § 63.1297(a) in accordance with the rolling annual compliance option in § 63.1297(a)(1) and (b), each calendar day in the 12-month period for which the actual HAP ABA emissions exceeded the allowable HAP ABA emissions level, each calendar day in which foam is being poured where the amount of polyol added at the mixhead is not monitored (as required) in accordance with § 63.1303(b)(1)(i), each calendar day in which foam is being poured where the amount of HAP ABA added at the mixhead is not monitored (as required) in accordance with § 63.1303(b)(1)(ii), each calendar day in a 6-month period in which the polyol pumps are not calibrated in accordance with § 63.1303(b)(3)(i), each calendar day in a month in which the HAP ABA pumps are not calibrated in accordance with § 63.1303(b)(3)(ii), and each calendar day after 10 working days after production where the IFD and density of a foam grade are not determined (where required) in accordance with § 63.1304(b);

(15) For each affected source complying with § 63.1297(a) in accordance with the monthly compliance option in § 63.1297(a)(2) and (c), each calendar day of each month for which the actual HAP ABA emissions exceeded the allowable HAP ABA emissions level for that month, each calendar day in which foam is being poured where the amount of polyol added at the mixhead is not monitored (as required) in accordance

with § 63.1303(b)(1)(i), each calendar day in which foam is being poured where the amount of HAP ABA added at the mixhead is not monitored (as required) in accordance with § 63.1303(b)(1)(ii), each 6-month period in which the polyol pumps are not calibrated in accordance with § 63.1303(b)(3)(i), each month in which the HAP ABA pumps are not calibrated in accordance with § 63.1303(b)(3)(ii), and each calendar day after 10 working days after production where the IFD and density of a foam grade are not determined (where required) in accordance with § 63.1304(b);

(16) For each affected source complying with § 63.1297(a) by using a recovery device as allowed under § 63.1297(e), the items listed in (c)(16)(i) or (ii) of this section, as applicable.

(i) If complying with rolling annual compliance option in § 63.1297(a)(1) and (b), each item listed in (c)(14) of this section, failure to develop a recovered HAP ABA monitoring and recordkeeping program in accordance with § 63.1303(c), and each instance when an element of the program is not followed.

(ii) If complying with the monthly compliance option in § 63.1297(a)(2) and (c), each item listed in (c)(15) of this section, failure to develop a recovered HAP ABA monitoring and recordkeeping program in accordance with § 63.1303(c), and each instance when an element of the program is not followed.

(17) For each affected source complying with § 63.1298, each calendar day that a HAP or any HAP-based material is used as an equipment cleaner.

(d) *Slabstock affected sources complying with the source-wide emission limitation.* For slabstock affected sources complying with the source-wide emission limitation as provided in § 63.1293(b), failure to meet the requirements contained in § 63.1299 shall be considered a violation of this subpart. Violation of each item listed in the paragraphs (d)(1) through (d)(3) of this section, as applicable, shall be considered a separate violation.

(1) For each affected source complying with § 63.1299 in accordance with the rolling annual compliance option in § 63.1299(a), each calendar day in the 12-month period for which the actual HAP ABA emissions exceeded the allowable HAP ABA emissions level, each calendar day in which foam is being poured where the amount of polyol added at the mixhead is not monitored (as required) in accordance with § 63.1303(b)(1)(i), each calendar day in a week in which the

amount of HAP ABA in a storage vessel is not determined in accordance with § 63.1303(d), each delivery of HAP ABA in which the amount of HAP ABA added to the storage vessel is not determined in accordance with § 63.1303(e), each calendar day in a 6-month period in which the polyol pumps are not calibrated in accordance with § 63.1303(b)(3)(i), and each calendar day after 10 working days after production where the IFD and density of a foam grade are not determined (where required) in accordance with § 63.1304(b);

(2) For each affected source complying with § 63.1299 in accordance with the monthly compliance option in § 63.1299(b), each calendar day of each month for which the actual HAP ABA emissions exceeded the allowable HAP ABA emissions level for that month, each calendar day in which foam is being poured where the amount of polyol added at the mixhead is not monitored (as required) in accordance with § 63.1303(b)(1)(i), each calendar day in a week in which the amount of HAP ABA in a storage vessel is not determined in accordance with § 63.1303(d), each delivery of HAP ABA in which the amount of HAP ABA added to the storage vessel is not determined in accordance with § 63.1303(e), and each calendar day in a 6-month period in which the polyol pumps are not calibrated in accordance with § 63.1303(b)(3)(i), and each calendar day after 10 working days after production where the IFD and density of a foam grade are not determined (where required) in accordance with § 63.1304(b).

(3) For each affected source complying with § 63.1299 by using a recovery device as allowed under § 63.1299(e), the items listed in (d)(3)(i) or (ii) of this section, as applicable.

(i) If complying with rolling annual compliance option in § 63.1299(a), each item listed in (d)(1) of this section, failure to develop a recovered HAP ABA monitoring and recordkeeping program in accordance with § 63.1303(c), and each instance when an element of the program is not followed.

(ii) If complying with the monthly compliance option in § 63.1299(b), each item listed in (d)(2) of this section, failure to develop a recovered HAP ABA monitoring and recordkeeping program in accordance with § 63.1303(c), and each instance when an element of the program is not followed.

(e) *Molded and rebond foam affected sources.* For molded and rebond foam affected sources, failure to meet the requirements contained in § 63.1300 and § 63.1301, respectively, shall be

considered a violation of this subpart. Violation of each item listed in the following paragraphs shall be considered a separate violation.

(1) For each molded foam affected source subject to the provisions in § 63.1300(a), each calendar day that a HAP-based material is used as an equipment cleaner (except for diisocyanates used to flush the mixhead and associated piping during periods of startup or maintenance, provided that the diisocyanate compounds are contained in a closed-loop system and are re-used in production);

(2) For each molded foam affected source subject to the provisions of § 63.1300(b), each calendar day that a

HAP-base material is used as a mold release agent;

(3) For each rebond foam affected source subject to the provisions of § 63.1301(a), each calendar day that a HAP-based material is used as an equipment cleaner; and

(4) For each rebond foam affected source complying with § 63.1301(b), each calendar day that a HAP-based mold release agent is used.

§ 63.1309 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under § 112(d) of the Clean Air Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) The authority conferred in § 63.1303(b)(5) and § 63.1305(d) shall not be delegated to any State.

Appendix to Subpart III—Tables

For the convenience of the readers of subpart III, the tables below summarize the requirements in §§ 63.1290 to 63.1307. These tables are intended to assist the reader in determining the requirements applicable to affected sources and do not alter an affected source's obligation to comply with the requirements in §§ 63.1290 to 63.1307.

TABLE 1 TO SUBPART III—HAP ABA FORMULATION LIMITATIONS MATRIX FOR NEW SOURCES [see § 63.1297(d)(2)]

| | | | | | | |
|--|-------|--|-----------|-----------|-----------|-------|
| Values in parts ABA per hundred parts polyol | | Density ranges (pounds per cubic foot) | | | | |
| | | 0-0.95 | 0.96-1.05 | 1.06-1.15 | 1.16-1.40 | 1.41+ |
| IFD | 0-10 | Use Equation 3 | | | | |
| | 11-15 | | | | | |
| | 16-20 | | | | | |
| | 21-25 | | | | | |
| | 26-30 | | | | | |
| | 31+ | | | | | |

TABLE 2 TO SUBPART III—APPLICABILITY OF GENERAL PROVISIONS (40 CFR PART 63, SUBPART A) TO SUBPART III.

| Subpart A reference | Applies to subpart III | Comment | |
|-------------------------|------------------------|---|---|
| § 63.1 | YES | Except that § 63.1(c)(2) is not applicable to the extent area sources are not subject to subpart III. | |
| § 63.2 | YES | Definitions are modified and supplemented by § 63.1292. | |
| § 63.3 | YES | | |
| § 63.4 | YES | | |
| § 63.5 | YES | | |
| § 63.6 (a)-(d) | YES | | |
| § 63.6(e) (1)-(2) | YES | | |
| § 63.6(e)(3) | NO | | |
| § 63.6 (f)-(g) | YES | | Owners and operators of subpart III affected sources are not required to develop and implement a startup, shutdown, and malfunction plan. |

TABLE 2 TO SUBPART III—APPLICABILITY OF GENERAL PROVISIONS (40 CFR PART 63, SUBPART A) TO SUBPART III.—
Continued

| Subpart A reference | Applies to subpart III | Comment |
|---------------------------|------------------------|--|
| § 63.6(h) | NO | Subpart III does not require opacity and visible emission standards. |
| § 63.6 (i)–(j) | YES | |
| § 63.7 | NO | Performance tests not required by subpart III. |
| § 63.8 | NO | Continuous monitoring, as defined in subpart A, is not required by subpart III. |
| § 63.9 (a)–(d) | YES | |
| § 63.9 (e)–(g) | NO | |
| § 63.9(h) | NO | Subpart III specifies Notification of Compliance Status requirements. |
| § 63.9 (i)–(j) | YES | |
| § 63.10 (a)–(b) | YES | Except that the records specified in § 63.10(b)(2)(vi) through (xi) and (xiii) are not required. |
| § 63.10(c) | NO | |
| § 63.10(d)(1) | YES | |
| § 63.10 (d) (2)–(3) | NO | |
| § 63.10 (d) (4)–(5) | YES | |
| § 63.10(e) | NO | |
| § 63.10(f) | YES | |
| § 63.11 | YES | |
| § 63.12 | YES | |
| § 63.13 | YES | |
| § 63.14 | YES | |
| § 63.15 | YES | |

TABLE 3 TO SUBPART III.—COMPLIANCE REQUIREMENTS FOR SLABSTOCK FOAM PRODUCTION AFFECTED SOURCES
COMPLYING WITH THE EMISSION POINT SPECIFIC LIMITATIONS

| Emission point | Emission point compliance option | Emission, work practice, and equipment standards | Monitoring | Recordkeeping | Reporting |
|--|---|--|---|---|------------------|
| Diisocyanate storage vessels § 63.1294(a) | Vapor balance | § 63.1294(a)(1) and (1)(ii). | § 63.1294(a)(1)(i) | § 63.1307(a)(1) and (4) | § 63.1306(e)(5). |
| | Carbon adsorber | § 63.1294(a)(2) | § 63.1303(a)(1), (3), and (4). | § 63.1307(a)(1), (3)(i), and (3)(iii). | § 63.1306(e)(3). |
| | Carbon adsorber—alternative monitoring. | § 63.1294(a)(2) | § 63.1303(a)(2), (3) and (4). | § 63.1307(a)(1), (3)(ii), and (3)(iii). | § 63.1306(e)(3). |
| Diisocyanate transfer pumps § 63.1294(b) | Sealless pump | § 63.1294(b)(1) | | § 63.1307 (b)(1)(i) and (2) | |
| | Submerged pump .. | § 63.1294(b)(2)(i) and (iii). | § 63.1294 (b)(2)(ii) .. | § 63.1307 (b)(1)(i), (2), and (3) | § 63.1306(e)(4). |
| Other components in diisocyanate service § 63.1294(c). | N/A | § 63.1294(c) | § 63.1294(c) | § 63.1307 (b)(1)(i) and (3) | § 63.1306(e)(4). |
| HAP ABA storage vessels § 63.1295 | Vapor balance | § 63.1295(b) and (b)(2). | § 63.1295 (b)(1) | § 63.1307(a)(2) and (4) | § 63.1306(e)(5). |
| | Carbon adsorber | § 63.1295(c) | § 63.1303(a)(1), (3), and (4). | § 63.1307(a)(2), (3)(i), (3)(iii) .. | § 63.1306(e)(3). |
| | Carbon adsorber—alternative monitoring. | § 63.1295(c) | § 63.1303(a)(2), (3) and (4). | § 63.1307(a)(2), (3)(ii), and (3)(iii). | § 63.1306(e)(3). |
| HAP ABA pumps § 63.1296(a): | Sealless pump | § 63.1296(a)(1) | | § 63.1307 (b)(1)(ii) | |
| | Quarterly monitoring | § 63.1296(a)(2) and (2)(iii). | § 63.1296(a)(2)(i), (2)(ii) and § 63.1304(a). | § 63.1307 (b)(1)(ii) and (3) | § 63.1304(e)(4). |
| HAP ABA valves § 63.1296(b): | Quarterly monitoring | § 63.1296(b), and (b)(2). | § 63.1296 (b)(1) and § 63.1304(a). | § 63.1307 (b)(1)(ii) and (3) | § 63.1304(e)(4). |
| | Unsafe-to-monitor .. | § 63.1296(b)(3) (i), (ii), and (iv). | § 63.1296 (b)(3)(iii) | § 63.1307 (b)(1)(ii), and (4) | § 63.1304(e)(4). |
| | Difficult-to-monitor .. | § 63.1296(b)(4) (i), (ii), (iii), and (v). | § 63.1296(b)(4)(iv) and § 63.1304(a). | § 63.1307 (b)(1)(ii) and (4) | § 63.1306(e)(4). |
| HAP ABA Connectors § 63.1296(c): | Annual monitoring .. | § 63.1296(c) and (c)(2). | § 63.1296(c)(1) and § 63.1304(a). | § 63.1307 (b)(1)(ii) and (3) | § 63.1306(e)(4). |
| | Unsafe-to-monitor .. | § 63.1296(c)(2), (3) (i), and (ii). | § 63.1296(c)(3) (iii) and § 63.1304(a). | § 63.1307 (b)(1)(ii) and (4) | § 63.1306(e)(4). |
| | Unsafe-to-repair | § 63.1296(c)(4) | § 63.1296(c)(1) | § 63.1307 (b)(1)(ii) | § 63.1306(e)(4). |

TABLE 3 TO SUBPART III.—COMPLIANCE REQUIREMENTS FOR SLABSTOCK FOAM PRODUCTION AFFECTED SOURCES COMPLYING WITH THE EMISSION POINT SPECIFIC LIMITATIONS—Continued

| Emission point | Emission point compliance option | Emission, work practice, and equipment standards | Monitoring | Recordkeeping | Reporting |
|--|--|--|------------------------------------|------------------------------------|--------------------------------------|
| Pressure-relief devices § 63.1296(d) Open-ended valves or lines § 63.1296(e). Production line § 63.1297. | N/A | § 63.1296(d) and (d)(2). | § 63.1296 (d)(1) and § 63.1304(a). | § 63.1307 (b)(1)(ii) and (3) | § 63.1306(e)(4). |
| | N/A | § 63.1296(e) | | § 63.1307 (b)(1)(ii) | |
| | Rolling annual compliance. Monthly compliance | § 63.1297(a)(1) and (b). § 63.1297(a)(2) and (c). | § 63.1303 (b) | § 63.1307(c)(1) | § 63.1306(e)(1). § 63.1306(e)(2). |
| | Compliance Using a Recovery device. | § 63.1297(a)(1), (b), and (e) for rolling annual compliance or § 63.1297(a)(2), (c), and (e) for monthly compliance. | § 63.1303 (b) and (c). | § 63.1307(c)(1) and (d) | § 63.1306(e)(1) or (2). |
| Equipment Cleaning § 63.1298. | N/A | § 63.1298 | | § 63.1307(e) | |

TABLE 4 TO SUBPART III.—COMPLIANCE REQUIREMENTS FOR SLABSTOCK FOAM PRODUCTION AFFECTED SOURCES COMPLYING WITH THE SOURCE-WIDE EMISSION LIMITATION

| Emission point | Emission point compliance option | Emission, work practice, and equipment standards | Monitoring | Recordkeeping | Reporting |
|--|---|--|--|---|-------------------------|
| Diisocyanate storage vessels § 63.1294(a). | Vapor balance | § 63.1294(a)(1) and (1)(ii). | § 63.1294(a)(1)(i) | § 63.1307(a)(1) and (4) | § 63.1306(e)(5). |
| | Carbon adsorber | § 63.1294(a)(2) | § 63.1303(a)(1), (3), and (4). | § 63.1307(a)(1), (3)(i), and (3)(iii). | § 63.1306(e)(3). |
| | Carbon adsorber—alternative monitoring. | § 63.1294(a)(2) | § 63.1303(a)(2), (3) and (4). | § 63.1307(a)(1), (3)(ii), and (3)(iii). | § 63.1306(e)(3). |
| Diisocyanate transfer pumps § 63.1294(b). | Sealless pump | § 63.1294(b)(1) | | § 63.1307 (b)(1)(i) and (2) | |
| | Submerged pump .. | § 63.1294(b)(2)(i) and (iii). | § 63.1294 (b)(2)(ii) .. | § 63.1307 (b)(1)(i), (2), and (3) | § 63.1306(e)(4). |
| Other components in diisocyanate service § 63.1294(c). | N/A | § 63.1294(c) | § 63.1294(c) | § 63.1307 (b)(1)(i) and (3) | § 63.1306(e)(4). |
| HAP ABA storage vessels, equipment leaks, production line, and equipment cleaning. | Rolling annual compliance. | § 63.1299(a), (c)(1) through (4), and (d). | § 63.1303 (b) except (b)(1)(ii), (d), and (e). | § 63.1307(c)(2) | § 63.1306(e)(1). |
| | Monthly compliance | § 63.1299(b), (c)(1) through (4), and (d). | § 63.1303 (b) except (b)(1)(ii), (d), and (e). | § 63.1307(c)(2) | § 63.1306(e)(2). |
| | Compliance Using a Recovery device. | § 63.1299(a), (d), and (e) for rolling annual compliance or § 63.1299(b), (d), and (e) for monthly compliance. | § 63.1303 (b) except (b)(1)(ii) and (c). | § 63.1307(c)(2) and (d) | § 63.1306(e)(1) or (2). |

TABLE 5 TO SUBPART III.—COMPLIANCE REQUIREMENTS FOR MOLDED AND REBOND FOAM PRODUCTION AFFECTED SOURCES

| Emission point | Emission point compliance option | Emission, work practice, and equipment standards | Monitoring | Recordkeeping | Reporting |
|-----------------------|----------------------------------|--|------------|---------------------|-----------|
| Molded Foam | | | | | |
| Equipment cleaning .. | N/A | § 63.1300(a) | | § 63.1307(g) | |
| Mold release agent .. | N/A | § 63.1300(b) | | § 63.1307 (h) | |
| Rebond Foam | | | | | |
| Equipment cleaning .. | N/A | § 63.1301(a) | | § 63.1307 (g) | |
| Mold release agent .. | N/A | § 63.1301(b) | | § 63.1307 (h) | |

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