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National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[AD–FRL–5664–8]

RIN 2060–AE–86

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

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule and notice of public hearing.

SUMMARY: This proposed rule would reduce emissions of hazardous air pollutants (HAP) from existing and new facilities that manufacture flexible polyurethane foam. In the production of flexible polyurethane foam a variety of HAP are used as reactants or process solvents. The HAP emitted by the facilities covered by this proposed rule include methylene chloride, 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. This proposed rule is estimated to reduce emissions of these pollutants by over 12,500 Megagrams per year (Mg/yr), with over 99 percent of this total expected to be methylene chloride emission reductions. The emission reductions achieved by these standards, when combined with the emission reductions achieved by other similar standards, will achieve the primary goal of the Clean Air Act, which is to ''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.''

This proposed rule implements section 112(d) of the Clean Air Act of 1990 (CAAA), which requires the Administrator to regulate emissions of HAP listed in section 112(b) of the CAAA. The intent of this rule is to protect the public by requiring the maximum degree of reduction in emissions of HAP from new and existing major sources, taking into consideration the cost of achieving such emission reduction, and any nonair quality, health and environmental impacts, and energy requirements.

DATES: *Comments.* Comments must be received on or before February 25, 1997.

Public Hearing. If anyone contacts the EPA requesting to speak at a public hearing by January 17, 1997, a public hearing will be held on January 27, 1997 beginning at 10 a.m. Persons interested in attending the hearing should call Ms. Marguerite Thweatt at (919) 541–5607 to verify that a hearing will be held.

Request to Speak at Hearing. Persons wishing to present oral testimony must contact the EPA by January 17, 1997 by contacting Ms. Marguerite Thweatt, Organic Chemicals Group (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone number (919) 541–5607.

ADDRESSES: *Comments.* Comments should be submitted (in duplicate, if possible) to: Air Docket Section (LE–131), Attention: Docket No. A–95–48, U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460. The EPA requests that a separate copy also be sent to the contact person listed below. The public hearing, if required, will be held at the EPA's Office of Administration Auditorium, Research Triangle Park, North Carolina.

The docket is located at the above address in room M–1500, Waterside Mall (ground floor), and may be inspected from 8:00 a.m. to 5:30 p.m., Monday through Friday; telephone number (202) 260–7548. A reasonable fee may be charged for copying docket materials.

FOR FURTHER INFORMATION CONTACT: For information concerning this proposed rule, contact Mr. David Svendsgaard at (919) 541–2380, Organic Chemicals Group, Emission Standards Division (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

SUPPLEMENTARY INFORMATION:

Regulated Entities

Entities regulated by this action, upon promulgation, are flexible polyurethane foam production facilities. 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 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 your facility is regulated by this proposed action, you should carefully examine the applicability criteria in section 63.1290 of the proposed rule. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

In addition to its inclusion in this Federal Register notice, the regulatory text is available in Docket No. A–95–48, or from the EPA contact person designated in this notice. The proposed regulatory language is also available on the Technology Transfer Network (TTN) on 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 telephone call. Dial (919) 541–5742 for up to a 14,400 bps modem. For further information, contact the TTN HELP line at (919) 541–5348, from 1:00 p.m. to 5:00 p.m. Monday through Friday, or access the TTN web site at: http://ttnwww.rtpnc.epa.gov.

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.

Other materials related to this rulemaking are available for review in the docket. 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.

A record has been established for this rulemaking under docket number A–95–48 (including comments and data submitted electronically as described below). A public version of this record, including printed, paper versions of electronic comments, 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 S.W., Washington, D.C. 20460. Electronic comments can be

sent directly to EPA at: a-and-r-docket@epamail.epa.gov.

Electronic comments must be submitted as an ASCII file avoiding the use of special characters and any form of encryption. Comments and data will also be accepted on disks in WordPerfect 5.1 format or ASCII file format. All comments and data in electronic form must be identified by the docket number A–95–48. No Confidential Business Information (CBI) should be submitted through e-mail. Electronic comments on this proposed rule may be filed online at many Federal Depository Libraries.

The official record for this rulemaking, as well as the public version, as described above, will be kept in paper form. Accordingly, the EPA will transfer all comments received into printed, paper form as they are received and will place the paper copies in the official rulemaking record, which will also include all comments submitted directly in writing. The official rulemaking record is the paper record maintained at the address in the **ADDRESSES** section of this document.

The information presented in this preamble is organized as follows:

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I. List of Source Categories

Section 112 of the CAAA requires that the EPA evaluate and control emissions of HAP. The control of HAP is achieved through promulgation of emission standards under sections 112(d) and 112(f) and work practice and equipment standards under section 112(h) for categories of sources that emit HAP. On July 16, 1992, the EPA published an initial list of major and area source categories to be regulated, as required under section 112(c) of the CAAA. Included on that list were major sources emitting HAP from the production of flexible polyurethane foam.

The EPA chose to subcategorize the flexible polyurethane foam source category into molded flexible polyurethane foam production, slabstock flexible polyurethane foam production, and rebond foam production. Subcategorization was necessary to reflect major variations in production methods, and/or HAP emissions that affect the applicability of controls. All technical analyses were conducted on a subcategory basis to determine the appropriate level of the standard. In addition, on June 4, 1996 the EPA added to the source category list a separate source category for flexible polyurethane foam fabrication (61 FR 28197). These operations are occasionally co-located with slabstock foam production facilities, but occur other places as well. A future standard will address flexible polyurethane foam fabrication operations.

The EPA identified 78 facilities in the U.S. that produce slabstock foam. It is believed that this represents the entire slabstock foam industry. The identification of the U.S. molded foam facility population has been more difficult to estimate. This difficulty is due to the many small companies serving specialty markets, the production of molded foam at facilities that also produce other molded plastic products, and the lack of a trade association for molded foam. The EPA identified 46 molded foam facilities in the information gathering phase of the project, but industry estimates that there may be several hundred molded foam facilities nationwide. The nationwide molded foam facility population was estimated to be 228, based primarily on information found in suppliers guides. In this notice the EPA is requesting comments on this molded foam facility population estimate. If commenters dispute this estimate, the EPA would request supporting documentation for such an assertion, along with a list of molded foam facility names and locations.

The EPA identified 21 rebond foam production facilities that are co-located with slabstock or molded foam production facilities. It is estimated that this represents about one-half of the total U.S. rebond foam facility population.

This proposed rule would apply to all major sources that produce flexible polyurethane foam. Area sources would not be subject to this proposed rule. All of the slabstock foam facilities considered in the analysis supporting the proposed rule are believed to be major sources according to the CAAA criterion of having the potential to emit 10 tons per year of any one HAP or 25 tons per year of any combination of HAP.

In this proposed rule, an affected source includes all flexible polyurethane foam and rebond processes located at a contiguous plant site, where a process consists of raw material storage; production equipment and piping, ductwork, and other associated equipment; and curing and storage areas.

II. A Summary of Considerations Made in Developing This Rule

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'' (CAAA, section 101(b)(1)). Section 112(d) of the Act establishes a control technology-based program to reduce stationary source emissions of HAP. The goal of the proposed rule is to apply such control technology to reduce emissions and thereby reduce the impacts of HAP emitted from stationary sources.

Available emission data, collected during the development of these proposed National Emission Standards for Hazardous Air Pollutants (NESHAP), show that the greatest volume of HAP emitted during the production of flexible polyurethane foam is the emission of methylene chloride. The proposed emission limits are projected to reduce methylene chloride emissions by 70 percent. Following is a summary of the potential health effects associated with exposure to methylene chloride that would 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 are 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 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 hampered by (but not limited to) the following caveats, as a pre-requisite for controlling air toxics: (1) some of the HAP emitted from stationary sources are unknown, and (2) the EPA has incomplete data about the emissions of many of the HAP with which to describe health hazards. 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 plants is not included in this rulemaking.

The EPA does recognize that the degree of adverse effects to health resulting from the most significant emissions identified can range from mild to severe. The extent to which the effects could be experienced is dependent upon the ambient concentrations and exposure time. The latter is further influenced by source-specific characteristics, such as emission rates and local meteorological conditions. Human variability factors also influence the degree to which effects to health occur: genetics, age, pre-existing health conditions, and lifestyle.

The alternatives considered in the development of this regulation, including those alternatives selected as standards for new and existing sources, are based on process and emissions data received from the flexible polyurethane foam industry. This included information from every existing flexible polyurethane slabstock foam facility known to be in operation at the time of the initial data collection, and the information gathered from the 46 molded foam facilities (which was assumed to be representative of the entire molded foam industry). The EPA met with industry several times to discuss this data. In addition, facilities and State regulatory authorities had the opportunity to comment on draft versions of the regulation and to provide addition information. Several facilities did provide comments; of major concern to industry were the auxiliary blowing agent (ABA) emission limitation, and the reporting and recordkeeping requirements. The proposed standards reflect these comments.

The proposed standards give existing facilities 3 years from the date of promulgation to comply. This is the maximum amount of time allowed under the Clean Air Act. New sources are required to comply with the standard upon startup. The EPA sees no reason why new facilities would not be able to comply with the requirements of the standards upon startup. For existing sources, the EPA believes that the required retrofit or other actions can be achieved in the time frame allotted.

Included in the proposed 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.

As described in the Basis and Purpose document, regulatory alternatives were considered that included a combination of requirements equal to, and above, the maximum achievable control technology (MACT) ''floor.'' Cost-effectiveness was a factor considered in evaluating options above the MACT floor; in cases where options more stringent than the floor were selected, they were judged to have a reasonable cost effectiveness Non-air environmental and health factors, as well as energy impacts were also considered and deemed to be reasonable for the proposed standards.

Representative from other interested EPA offices and programs, as well as representative from State regulatory agencies, are included in the regulatory development process as members of the Work Group. The Work Group is involved in the regulatory development process, and must review and concur with the regulation before proposal and promulgation. Therefore, the EPA believes that the implication to other statutory authorities and programs have been adequately considered during the development of these standards.

In addition to this proposed standards, two of the HAP use and emitted by the flexible polyurethane foam industry (toluene diisocyanate and propylene oxide) are subject to the risk management program rule requirements under section 112(r) of the CAAA. The risk management rule was signed May 24, 1996, and the rule was published in the Federal Register on June 20, 1996. Facilities handling a listed subject in quantities greater than threshold amount must comply with the risk management requirements by June 20, 1999. The list of substances and threshold quantities were published in the Federal Register on January 31, 1994.

III. Authority for National Emission Standards for Hazardous Air Pollutants Decision Process

A. Source of Authority for NESHAP Development

Section 112 of the CAAA gives the EPA the authority to establish national standards to reduce air emissions from sources that emit one or more HAP. Section 112(b) contains a list of HAP to be regulated by NESHAP. Section 112(c) directs the EPA to use this pollutant list to develop and publish a list of source categories for which NESHAP will be developed. The EPA must list source categories and subcategories of ''major sources'' (defined below) that emit one or more of the listed HAP. A major source is defined in section 112(a) as any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit in the aggregate, considering controls, 10 tons per year or more of any one HAP or 25 tons per year or more of any combination of HAP. This initial list of source categories was published in the Federal Register on July 26, 1992 (57 FR 31576) and include flexible polyurethane foam.

The proposed rule, as noted in § 63.1290(a), applies only to major sources (sources which emit or have the potential to emit HAP in excess of the major source thresholds). The rule does not affect area sources (those that do not emit or have the potential to emit HAP

in excess of the major source thresholds). A definition of ''major source'' and ''potential to emit'' is contained in § 63.2 of the general provisions to part 63. Some sources which would otherwise have a potential to emit HAP in excess of the major source thresholds can become area sources by accepting enforceable limitations on their operations. A number of issues exist with respect to the requirements for such enforceable limitations. These issues (particularly whether such limitations must be federally enforceable) will be subject to a separate upcoming rulemaking. In this separate rulemaking, the EPA will be amending the definitions of ''major source'' and ''potential to emit'' in § 63.2. The EPA requests that any comments on requirements for potential to emit limitations be directed towards this separate rulemaking.

For those facilities that may seek enforceable limitations on their potential to emit, the EPA believes that mechanisms are in place in most States to provide such limitations. In addition, the owners or operators of sources in the flexible polyurethane foam industry will have had to address whether the title V operating permits program affects their particular facilities well before the compliance date of the NESHAP. Title V applications vary from State to State, but generally will be due within the 1995–97 time frame. The compliance date for the proposed NESHAP would be in 3 years after promulgation of the standard, which will likely be sometime in the year 2000.

The proposed rule provides a mechanism that could be used by sources seeking area sources status to limit their emissions. The mechanism requires owners or operations to notify the Administrator of their commitment to maintaining emissions below major source levels. This notification would be included in the Precompliance Report, and would include recordkeeping and reporting procedures. The EPA requests comments on whether this provision, contained in § 63.1290(c)(1) of the proposed rule, is necessary. In addition, the EPA requests comments on any amendments to the provision that would make it more useful or understandable.

B. Criteria for Development of NESHAP

The NESHAP are to be developed to control HAP emissions from both new and existing sources according to the statutory directives set out in section 112(d) of the CAAA. The statute requires the standards to reflect the maximum degree of reduction in emissions of HAP that is achievable for new or existing sources, considering costs and other impacts. This control level is referred to as MACT.

The MACT floor is the least stringent level allowed for MACT standards. 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 categories and subcategories with 30 or more sources or the average emission limitation achieved by the best performing 5 sources for categories 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. When the selection of MACT considers control levels more stringent than the MACT floor (described below), its selection must reflect consideration of the cost of achieving the emission reduction, any non-air quality, health, and environmental impacts, and energy requirements.

IV. Summary of Proposed Standards

This section provides a summary of the proposed regulation. The full regulatory text is available in Docket No. A–95–48, directly from the EPA, or from the Technology Transfer Network (TTN) on the EPA's electronic bulletin boards. More information on how to obtain a copy of the proposed regulation is provided at the beginning of the **SUPPLEMENTARY INFORMATION** section of this document.

A. Source Categories To Be Regulated

These proposed standards would regulate HAP emissions from facilities that produce slabstock, molded, or rebond flexible polyurethane foam, provided that a facility is a major source or is located at a plant site that is a major source. Flexible polyurethane foam processes meeting one of three criteria are exempted from the regulation: (1) A process located at a plant site, where the plant site is limited by a federally enforceable limit to emissions less than 10 tons per year of any single HAP and less than 25 tons per year of all HAP; (2) a process exclusively dedicated to the fabrication of flexible polyurethane foam; and (3) a research and development process.

B. Pollutants To Be Regulated

The HAP currently emitted by the facilities covered by this proposed rule include methylene chloride, toluene diisocyanate, methyl chloroform, methylene diphenyl diisocyanate, propylene oxide, diethanolamine, methyl ethyl ketone, methanol, and toluene. Emission of any of these HAP or any other HAP that are emitted from emission points discussed in the next section will be affected. Methylene chloride, which comprises over 98 percent of the total HAP emissions from this industry, will be the primary HAP affected.

C. Affected Emission Points

As noted above, three basic areas of the foam production facility are covered by the proposed regulation: (1) raw material storage; (2) production equipment and associated piping, ductwork, etc.; and (3) curing and storage areas. These areas contain the following emission points, which are covered by the proposed regulation: storage vessels, equipment leaks, mixhead flush, mold release agents, repair adhesives, equipment cleaning, and ABA.

D. Format of the Standards

This section discusses the selected formats for the proposed standards. The formats and their selection are discussed in more detail in the Basis and Purpose Document for this proposed regulation.

For mixhead flush, mold release agents, and repair adhesives at molded foam facilities; mold release agents and equipment cleaners at rebond foam facilities; and equipment cleaning at slabstock foam facilities, the format of the proposed standards is the prohibition of the use of HAP or HAP-based products.

For storage vessels at slabstock facilities, the format is an equipment standard. For equipment leaks at slabstock facilities, the proposed standards incorporate several formats including equipment standards, design standards, work practices, and operational practices.

For HAP ABA at slabstock facilities, the format of the proposed standards is an emission limitation. The proposed regulation includes provisions for the calculation of an allowable HAP ABA emissions level, which is compared to the actual HAP ABA emissions.

E. Proposed Standards

Existing sources subject to the proposed regulation would be required to comply within three years of the effective date of the regulations, and

new sources would be required to comply at startup. Following is a description of the requirements of the proposed standards.

1. Standards for Molded Flexible Polyurethane Foam Production

At molded foam facilities subject to the proposed rule, emissions from three emission sources are covered by the proposed rule: mixhead flushing, mold release agent usage, and the use of adhesives to repair molded foam. For each of these emission sources, the proposed rule prohibits the use of HAP or HAP-based products at new and existing sources. Other than the initial notification and notification of compliance, there are no associated monitoring, reporting, or recordkeeping requirements for molded foam producers.

2. Standards for Rebond Foam Production

This proposed regulation would prohibit the use of HAP-based cleaners or mold release agents in the production of rebond foam at new and existing sources. Other than the initial notification and notification of compliance, there are no associated monitoring, reporting, or recordkeeping requirements for rebond foam producers.

3. Standards for Slabstock Flexible Polyurethane Foam Production

At slabstock foam facilities subject to the proposed rule, emissions from four types of emission points are covered by the proposed rule: storage vessels, equipment leaks, HAP auxiliary blowing agent (ABA) use, and equipment cleaning. The requirements are separated into two basic categories corresponding to the two major uses of HAP in the slabstock process: (1) diisocyanate used as a reactant in the foam process, and (2) HAP ABA and equipment cleaning. The diisocyanate used in the production of slabstock foam is almost always toluene diisocyanate (TDI), and the HAP ABA used is almost always methylene chloride.

a. Diisocyanate emissions

Emissions of diisocyanate from storage vessels and equipment leaks are covered by the proposed standards. 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. 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.

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.

b. HAP ABA storage and equipment leak emissions, HAP ABA emissions from the production line, and equipment cleaning HAP emissions

HAP ABA emissions from three types of emission points—storage vessels, equipment leaks, and the production line—are covered by the proposed regulation. In addition, HAP emissions from equipment cleaning are covered.

This proposed regulation requires that owners or operators comply with requirements for each of the 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 methylene chloride is the primary HAP used as an ABA and as an equipment cleaner, this proposed 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.

HAP ABA storage vessel requirements. The requirements for HAP ABA storage vessels are identical 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.

HAP ABA equipment leaks. These proposed 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, 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.

HAP ABA Emissions from the production line. Compliance with the proposed provisions for HAP ABA emissions from the production line is determined by comparing actual HAP ABA emissions to an allowable emission level for a 12-month period. Compliance must be determined each month for the previous consecutive 12-month period.

This proposed 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:

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

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. The development of this equation is discussed in docket item no. II–B–6.

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 allowable HPA 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,

$emis_{allow,\ month}$= 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 continuously monitoring the amount of polyol added to the slabstock foam production line at the mixhead when foam is being poured (see section IV(E)(4)(b) below for more information).

Actual HAP ABA emissions are determined by continuously monitoring the HAP ABA added to the slabstock foam production line at the mixhead when foam is being poured. The allowable monitoring methods for HPA ABA are the same as for polyol.

This proposed regulation also contains provisions to allow for the use of HAP ABA recovery devises. 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.

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.

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. Other than the initial notification, there are no associated reporting, recordkeeping, or monitoring requirements.

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 achieve a slightly 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:

$$PWE_{actual} = \sum_{i}^{n}\left(ST_{i,begin} - ST_{i,end} + ADD_i\right)$$

Where,

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

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

$ST_{i,end}$ = 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 beginning and end of month amounts 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 is 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.

4. Monitoring Requirements

This proposed 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.

a. Storage Vessel Emissions Monitoring

Storage vessels equipped with carbon adsorption systems must monitor either the concentration of HAP or the concentration of total organic compounds (TOC) at the exit of the adsorption system. Measurements of HAP or TOC concentration must be made using Method 18 or 25A of Appendix A of 40 CFR 60. Outlet concentration measurements must be made monthly (or each time the vessel is filled, if filling occurs less frequently than monthly), or the owner or operator can install a monitoring system that continuously monitors HAP or TOC concentrations during vessel filling.

b. 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 shall 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. 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 is being poured. The requirements for monitoring the amount of HAP ABA added are exactly the same as discussed above for polyol, except that the device must be calibrated at least once per month.

c. Recovered HAP ABA Monitoring

The proposed 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.

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

The amount of HAP ABA in a storage vessel must be determined by monitoring the HAP ABA level in the storage vessel using a monitoring device that has been certified by its manufacturer to be at least 99 percent accurate, that has either a digital or printed output, and that is calibrated at least once a year. The level of HAP ABA in each storage vessel must be measured and recorded at least once per week.

e. 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 three options. The first 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 second options 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 third 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.

5. 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 proposed rule requires these parameters to be determined using 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.

6. Alternative Means of Emission Limitation

This proposed 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 combustive 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.

7. Applicability of General Provisions

The General Provisions for Part 63; 40 CFR 63, Sub Part 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, and recordkeeping and reporting, and 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 proposed standard for flexible polyurethane foam production. However, certain requirements in the General Provisions may be overridden in individual standards. This proposed regulation contains a table outlining the sections of the General Provisions that are applicable to subpart III, and outlining the General Provisions' sections that are being overridden or not incorporated.

F. Reporting and Recordkeeping Requirements

1. Reporting Requirements

This proposed regulation requires the submittal of six 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, and (6) other reports. These reports are briefly described below.

a. 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 process.

b. Application for Approval of Construction or Reconstruction

Owners or operators constructing a new affected source, or reconstructing an existing process, 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.

c. Precompliance Report

One year before the compliance date, each slabstock owner or operator 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 emission 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 a 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 owner or operator of a flexible polyurethane foam production facility that is planning to maintain HAP emissions below major source levels and achieve an enforceable limitation through this subpart, must report this intention in the precompliance report.

d. Notification of Compliance Status

Each owner or operator of an affected source must submit a notification of compliance status report 180 days after the compliance date. For slabstock affected sources, this report must contain notification of the compliance status of diisocyanate storage vessels and dissocyanate transfer pumps. In addition, for slabstock affected sources complying with the emission point specific limitations for HAP ABA, this report must contain compliance information for HAP ABA storage vessels and equipment in HAP ABA service. Molded and rebound affected sources must submit a statement that compliance is being achieved with the standards.

An owner or operator of a flexible polyurethane foam production facility that is committing to an enforceable limit to maintain emissions below major source levels must submit an affidavit stating the annual HAP emissions will not exceed the major source levels in the notification of compliance status. This affidavit must be signed by the owner, operator, or other responsible individual.

e. Semi-annual Compliance Reports

Each slabstock owner or operator must submit semi-annual compliance 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 for the six months in the reporting period.

f. Other Reports

A slapstock owner or operator must provide a report to the Administrator indicating the intent to change the selected compliance alternative (emission point specific limitation 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 12 months prior to the change.

2. Recordkeeping Requirements

Records must be recorded 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 of operator complies with the source-wide emission limitation, no records are required for HAP ABA storage vessel controls (see section ''a'' below) or controls for equipment in HAP ABA service (see section ''b'' below).

a. 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 absorption system, the records must include the design parameters of the system and the monitoring records.

(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)(3).

(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)(2). For scales meeting the criteria of § 63.1303(e)(2)(i), this documentation shall be in the form of written confirmation of the State or local approval. For scales complying with § 63.1303(e)(2)(ii), this documentation shall be in the form of a report provided by the registered scale technician.

(d) *Records for sources with enforceable emission limitations below major source levels.* Processes exempted from this subpart through a federally enforceable emission limitation in accordance with § 63.1290(b)(1), and that have notified the Administrator of this self-imposed limitation through § 63.1306(c)(9), shall maintain records to support the emission estimates provided in the annual emission reports, submitted in accordance with § 63.1306(f)(3). These emission estimates may be based on inventory records, material balance calculations, emission tests, or other engineering analyses.

b. 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, then records listing each component in HAP ABA service must also be maintained.

When a leak, as defined in the proposed 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 months 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.

c. 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, and the results of the density and IFD testing for each grade. Monthly, a cumulative record must be maintained listing the foam grades 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) emission level. If complying on an annual rolling basis, the allowable HAP ABA (or HAP ABA and equipment cleaning) emission 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 daily 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.

d. Records for Sources With Enforceable Emission Limitations Below Major Source Levels

The owner or operator of a flexible polyurethane foam production facility that is committing to an enforceable limit to maintain emissions below major source levels must keep records documenting HAP emissions. These records can consist of basic inventory records and engineering calculations.

V. Request for Comment on Specific Issues

The Administrator welcomes comments from interested persons on any aspect of this proposed standards, and on any statement in the preamble or the referenced supporting documents. These proposed standards were developed on the basis of information available. The Administrator is specifically requesting factual information that may support either the approach taken in these proposed standards or an alternate approach. To receive proper consideration, documentation or data should be provided. Specifically, the EPA is requesting comment and data on the following issue.

The proposed standards for slabstock foam production contain provisions to control emissions of TDI from storage vessels and equipment leaks. However, the standards do not contain provisions to control TDI emissions from the foam production line. At baseline, no facilities in the industry reported control for these TDI emissions; therefore, the MACT floor was determined to be ''no control.'' Further, no control options more stringent than the MACT floor were investigated, since

no demonstrated technology were identified. However, some State and local agencies have requirements affecting sources emitting TDI in their air toxics regulations. One State with such a regulation has expressed concern to the EPA that this proposed regulation will not reduce TDI emissions from foam production. Therefore, the EPA is requesting comments on the need for additional controls for TDI from this industry. The EPA would like to be made aware of any control technologies that are being used, or could be used, to reduce TDI emissions from slabstock foam production lines. Comments should be detailed and include costs, control effectiveness, operation and monitoring requirements, and any other relevant factors to be considered.

For the proposed requirements for HAP ABA emissions from the production line, and source-wide HAP ABA and equipment cleaning HAP emissions, the EPA considered two averaging time formats: (1) Compliance determined monthly for the previous 12 months (i.e., a rolling annual compliance determination), and (2) compliance determined for each individual month. The Agency determined that the rolling annual compliance format was most appropriate for this industry, but the industry was particularly concerned about enforcement implications of this format. Therefore, the proposed rule allows each slabstock facility to choose the individual monthly averaging time as an alternative, because it is more stringent. The EPA is specifically requesting comments from State and local agencies, as well as the industry, on the burdens caused by the inclusion of this choice in the proposed regulation.

The point of compliance for the proposed source-wide HAP ABA and equipment cleaning ABA emission limitation would be the HAP ABA storage vessel, where a monthly material balance would be performed to determine the amount of HAP ABA and HAP equipment cleaner used/emitted. This proposed rule requires sources complying with the source-wide emission limitation to monitor the amount of HAP ABA in each storage vessel at least once per week. These monitoring results are used to determine monthly source-wide HAP ABA emissions. The device used to determine this amount must meet three criteria: (1) It must be certified by its manufacturer to be accurate to within +/−1 percent, (2) it must have either a digital or printed output, and (3) it must be calibrated at least once per year. As proposed, the rule would not allow the use of gauge glasses and simple float systems (i.e., float and tape), which are common practices in the industry. The concerns that led the Agency to propose requirements that exclude the use of these devices were the uncertainty of the accuracy of these devices, and the potential errors associated with the visual reading of the level of liquid in the tank. Since the use of these technologies is wide-spread in the slabstock foam industry, the EPA would prefer that the use of these technologies be allowed. However, questions regarding the concerns mentioned above remain unanswered. Therefore, the EPA is requesting comment on the proposed monitoring requirements to determine the amount of HAP ABA in storage vessels. The EPA is also specifically requesting comment on whether the use of gauge glasses, float and tape systems, and other visually-read systems should be allowed under this rule. Commenters that believe that it is appropriate to allow the use of these systems should provide rationale and supporting documentation regarding the accuracy of these systems, measures to ensure the accuracy of visual readings, and calibration procedures.

The EPA estimated that there are 228 molded foam facilities in the U.S. The EPA is requesting comments on this estimate, and any information related to the molded foam production facility population.

This proposed regulation prohibits the use of HAP-based adhesives for molded foam repair. The EPA is requesting comments on the technical feasibility of these requirements.

VI. Summary of Environmental, Energy, Cost, and Economic Impacts

This section 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 proposed regulation. This consists of 57 slabstock foam facilities, 21 facilities with slabstock and rebond processes, and 98 molded foam facilities. It is assumed that 130 molded foam facilities are area sources, and will not be subject to today's proposed rule. It is also assumed that all rebond facilities not co-located with a slabstock foam process are area sources.

B. Primary Air Impacts

These proposed 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 proposed 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, mixhead flushes, and repair adhesives. 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.

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 proposed 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 in $6.1 million, and the total estimated annual cost is almost $760,000 per year. The total annual HAP emission reduction is 2,100 Mg/year, resulting in a cost effectiveness of $360/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 proposed regulation is estimated at $74 million. The total estimated annual cost is $8.1 million per year. The total emission reduction is over 12,560 Mg/yr, resulting in an overall cost effectiveness of around $650/Mg per year.

F. Economic Impacts

An economic impact analysis of these proposed standards was prepared to evaluate primary and secondary impacts on (1) the slabstock and molded foam sectors of the flexible polyurethane foam industry, (2) consumers, and (3) society.

For the slabstock foam sector of the industry, the total annualized social cost (in 1994 dollars) of this proposed 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 proposed 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, 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 proposed standard. For the molded foam sector, closures are estimated to be zero for this proposed 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 proposed regulation is likely to be minimal.

VII. Administrative Requirements

A. Public Hearing

A public hearing will be held, if requested, to discuss the proposed standard in accordance with section 307(d)(5) of the Clean Air Act. Persons wishing to make oral presentation on the proposed standards for flexible polyurethane foam production should contact the EPA at the address given in the **ADDRESSES** section of this preamble. Oral presentations will be limited to 15 minutes each. Any member of the public may file a written statement before, during, or within 30 days after the hearing. Written statements should be addressed to the Air Docket Section address given in the **ADDRESSES** section of this preamble and should refer to Docket No. A–95–48.

A verbatim transcript of the hearing and written statements will be available for public inspection and copying during normal working hours at the EPA's Air Docket Section in Washington, DC (see **ADDRESSES** section of this preamble).

B. Docket

The docket is an organized and complete file of all the information submitted to or otherwise considered by the EPA in the development of this proposed rulemaking. The principal purposes of the docket are:

(1) To allow interested parties to readily identify and locate documents so that they can intelligently and effectively participate in the rulemaking process; and

(2) To serve as the record in case of judicial review (except for interagency review materials [section 307(d)(7)(A)]).

C. Executive Order 12866

Under Executive Order 12866, (58 FR 51,735 (October 4, 1993)) the Agency 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 Order defines ''significant regulatory action'' as one that is likely to result in a rule that may:

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

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

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

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

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.

D. Enhancing the Intergovernmental Partnership Under Executive Order 12875

In compliance with Executive Order 12875 the EPA has involved State and local Governments in the development of this rule. These governments are not directly impacted by the rule; i.e., they are not required to purchase control systems to meet the requirements of the rule. However, they will be required to implement the rule; e.g., incorporate the rule into permits and enforce the rule. They will collect permit fees that will be used to offset the resource burden of implementing the rule. Three representatives of the State and local governments have been members of the EPA Work Group developing the rule. The Work Group has met numerous times, and comments have been solicited from the Work Group members, including the State representatives; and their comments

have been carefully considered in the rule development. In addition, all States are encouraged to comment on this proposed rule during the public comment period, and the EPA intends to fully consider these comments in the final rulemaking.

E. Paperwork Reduction Act

The information collection requirements in this proposed rule have been submitted for approval to the OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. An Information Collection Request (ICR) document has been prepared by the EPA (ICR) No. 1783.01) and a copy may be obtained from Sandy Farmer, OPPE Regulatory Information Division; U.S. EPA (2137); 401 M St., S.W.; Washington, DC 20460 or by calling (202) 260–2740.

The information collection is needed as part of the overall compliance and enforcement program required by section 112 of the CAAA. The prescribed records and reports are necessary to enable the EPA to identify sources subject to the emission standards and to ensure that the standards are being achieved. All information submitted to the EPA for which a claim of confidentiality is made will be safeguarded according to the Agency policies set forth in 40 CFR part 2, subpart B—Confidentiality of Information.

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.

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

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 the EPA's regulations are listed in 40 CFR Part 9 and 48 CFR Chapter 15.

Comments are requested on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques. Send comments on the ICR to the Director, OPPE Regulatory Information Division; U.S. Environmental Protection Agency (2137); 401 M St., S.W.; Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th St., N.W., Washington, DC 20503, marked ''Attention: Desk Officer for EPA.'' Include the ICR number in any correspondence. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after December 27, 1996 a comment to the OMB is best assured of having its full effect if the OMB receives it by January 27, 1997. The final rule will respond to any OMB or public comments on the information collection requirements contained in this proposal.

F. Regulatory Flexibility Act

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.

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 proposed 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 courses 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 affect of the proposed regulation on small businesses will be minimal.

G. Unfunded Mandates Reform Act

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, because

they contain no requirements that apply to such governments or impose obligations upon them.

H. Miscellaneous

In accordance with section 117 of the Act, publication of this proposal was preceded by consultation with appropriate advisory committees, independent experts, and Federal departments and agencies. The Administrator will welcome comments on all aspects of this proposed regulation, including health, economic and technical issues, and on the proposed test methods.

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 and environmental 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.

List of Subjects in 40 CFR Part 63

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

Dated: December 9, 1996.

Carol M. Browner,

Administrator.

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

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

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

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

2. It is proposed that part 63 be amended by adding subpart III, consisting of §§ 63.1290 through 63.1307, to read as follows:

Subpart III—National Emission Standards for Hazardous Air Pollutant Emissions from 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.

Subpart III—National Emission Standards for Hazardous Air Pollutant Emissions from 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) Uses a HAP, except as provided in paragraph (c)(2) of this section; and

(3) Is located at a major source plant site.

(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.

(c) A process meeting one of criteria listed in paragraphs (c) (1) through (3) of this section shall not be subject to the provisions of this subpart, but shall maintain supporting documentation of the applicable criteria.

(1) A process located at a plant site for which the plant site does not have a potential to emit more than 10 tons per year of any single HAP, or more than 25 tons per year of all HAP. A limitation on potential to emit may be obtained by notifying the Administrator of a commitment to maintain emissions below the major source levels noted in the Precompliance Report, as specified in § 63.1306(c)(9), and following the applicable reporting and recordkeeping procedures.

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

(3) A research and development process.

§ 63.1291 Compliance schedule.

(a) Existing affected sources shall be in compliance with all provisions of this subpart no later than [3 years from effective date of final rule].

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

§ 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 adsorbate 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 adsorbate 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 are 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 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.

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.

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

Identation 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 indentor 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.

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.

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

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.

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.

Rebond foam means the foam resulting from a process of adhering small particles of 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 absorbers, 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.

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 only one HAP as an ABA and 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, and contains no leaks, where

a leak is detected by visual, audible, or any other detection method.

(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.

(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 is 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.

(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 § 63.1296(f). The first attempt at repair shall be made no later than 5 calendar days after each leak is 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 must ensure that the vapor return line from the storage vessel to the tank truck or rail car is connected during unloading, and that there are no significant leaks in the system.

(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.

§ 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 applicable:

(*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, but not more frequently than monthly.

(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 owner or operator designates less

than 3 percent of the total number of valves in a new source as difficult-to-monitor; and

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

(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 paragraphs (c) (3) and (4) of this section. Leaks shall be repaired in accordance with (c)(2) 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 no 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, but not more frequently than annually.

(4) Any connector that is designated as an unsafe-to-repair connector is exempt from the requirements of paragraphs (c)(1) and (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) 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)(5) of this section.

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

(3) 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.

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

(5) 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), (3), and (4) 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 diisocyanate or 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 paragraphs (a)(2) and (a)(3) 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 complying with the monthly compliance alternative described under paragraph

(a)(2) of this section shall include notification of the intent to use this option in the precompliance report.

(4) 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 days prior to the change.

(b) *Rolling Annual Compliance.* At each slabstock foam production source complying with the rolling annual compliance provisions described in § 63.1297(a)(1), 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 based on the amount of HAP ABA added to the slabstock foam production line at the mixhead, determined in accordance with § 63.1303(b). 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 month shall be calculated using Equation 1.

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

Where:

$\text{emiss}_{\text{allow, month}}$ = 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 emission shall be based on the amount of HAP ABA added to the slabstock foam production line at the mixhead, determined in accordance with § 63.1303(b). 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 1.

(d) *HAP ABA Formulation Limitations.* The HAP ABA formulation limitations shall be determined 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 2.

$$\text{ABA}_{\text{limit}} = -0.25(\text{IFD}) - 19.1\left(\frac{1}{\text{IFD}}\right) - 16.2(\text{DEN}) - 7.56\left(\frac{1}{\text{DEN}}\right) + 36.5 \qquad \text{(Eq. 2)}$$

Where:

$\text{ABA}_{\text{limit}}$ = HAP ABA formulation limitation, parts HAP ABA allowed per hundred parts polyol (pph).

IFD = Indentation force deflection, pounds.

DEAN = 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.

(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 2.

(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 2.

(iii) For each foam grade with a density greater than 0.95 pounds per cubic foot and an IDF 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) The IFD and density for each foam grade shall be determined in accordance with § 63.1304(b).

(e) *Compliance using recovery devices.* If a recovery device is used to comply with paragraphs (b) through (c) of this section, the owner or operator shall determine the allowable HAP ABA emissions for each month using Equation 1 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 3.

$$E_{actual} = E_{unc} - HAPABA_{recovered} \quad \text{(Eq. 3)}$$

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)(2) 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-containing product, 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(a)(2) 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 paragraph (c) of this section, and 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 paragraph (c) of this section, and the allowable monthly HAP ABA emission level shall be determined using the procedures in paragraph (e) of this section.

(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 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 this period. 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) The actual source-wide HAP emissions for a month shall be determined using Equation 4 and the information determined in accordance with paragraphs (c) (2) and (3) of this section.

$$PWE_{actual} = \sum_{i}^{n} \left(ST_{i,begin} - ST_{i,end} + ADD_i \right) \quad \text{(Eq. 4)}$$

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.

$ST_{i,\ begin}$ = 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.

$ST_{i,\ end}$ = 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 in storage vessel i at the end of the month, pounds, determined in accordance with the procedures listed in paragraph (c)(1)(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) At each slabstock foam production source complying with the monthly compliance alternative described in paragraph (b) of this section, the actual source-wide HAP emissions for each month shall be calculated in accordance with paragraphs (c) (1) through (3) of this section.

(d) The allowable HAP 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 5.

$$emiss_{allow,month} = \sum_{j=1}^{m}\left(\sum_{i=1}^{n}\frac{(limit_i)(polyol_i)}{100}\right)j \qquad \text{(Eq. 5)}$$

Where:

$emiss_{allow,month}$ = 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).

§ 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), (b), and (c) of this section.

(a) A HAP solvent shall not be used as an equipment cleaner to flush the mixhead, nor shall it be used elsewhere at a molded flexible polyurethane foam source.

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

(c) A HAP-based adhesive shall not be used to repair foam products in a molded flexible polyurethane foam source.

§ 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 solvent 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.

Table 1 provides cross references to 40 CFR part 63, subpart A, indicating the applicability of the general provisions requirements to subpart III.

§ 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 monthly and replace the existing carbon with fresh carbon immediately upon indication of carbon breakthrough.

(1) 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 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.

(2) Measurement 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.

(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 the provisions of paragraph (b)(1)(ii) of this section, if applicable.

(i) 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) and (4) of this section.

(ii) For sources using the emission point specific limitation option provided in § 63.1293(a)(1), the amount of HAP ABA added at the mixhead shall be continuously monitored when foam is being poured in accordance with paragraphs (b)(2)(ii), (3), and (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. The components of an alternative monitoring plan 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 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.

(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. The location 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.

(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 device that meets the criteria described in paragraphs (d)(1) through (d)(3) of this section.

(1) A device certified by the manufacturer to be no less than 99 percent accurate,

(2) The device must have either a digital or printed output,

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

(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), or (3) of this section.

(1) 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.

(2) 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 the National Institute of Standards and Technology Handbook 44.

(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.

(3) As an alternative to the monitoring options described in paragraphs (e)(1) and (e)(2) of this section, the owner or operator may develop 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 §§ 63.1294(c) and 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 days 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 (f)(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 shall be determined using 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.

§ 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 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 (6) of this section, as applicable. Processes requesting a federally enforceable emission limitation in accordance with § 63.1290(b)(1) shall submit a precompliance report in accordance with paragraph (c)(9) of this section.

(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, and whether or not the owner or operator is developing an alternative monitoring program, as described in § 63.1303(b)(5).

(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 of 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, and whether or not the owner or operator is developing an alternative monitoring program, as described in § 63.1303(e)(3).

(9) Processes requesting a federally enforceable emission limitation in accordance with § 63.1290(b)(1) shall submit a precompliance report. This report shall notify the Agency of the intention to limit emissions to less than 10 tons per year of any single HAP, and less than 25 tons per year of all HAP from the plant site. Notification of this status relieves the owner or operator from the provisions of this subpart, other than the requirements to annually report HAP emissions in accordance with (f)(3) of this section, and to maintain records documenting the reported emission estimates.

(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 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) *Semi-Annual Compliance Reports.* Each slabstock affected source shall submit a compliance report containing the information specified in paragraphs (e)(1) through (3) 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, instances where the carbon in the system is replaced, along with the date of the replacement.

(4) Any equipment leaks that were not repaired in accordance with § 63.1294(b) or § 63.1296.

(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.

(3) *Annual emission reports for area sources.* Processes exempted from this subpart through a federally enforceable emission limitation in accordance with § 63.1290(b)(1), and that have notified the Administrator of this self-imposed limitation through § 63.1306(c)(9), shall

submit an annual emission report. This report shall be submitted once per year and shall report the total HAP emissions for the plant site for the previous 12-month period.

§ 63.1307 Recordkeeping requirements.

The applicable records designated in paragraphs (a) through (c) of this section shall be maintained by owners and operators of processes exempted from this subpart through a federally enforceable emission limitation in accordance with § 63.1290(b)(1) shall maintain records in accordance with paragraph (d) of this section.

(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 absorption system is monitored for carbon breakthrough and the monitoring device reading, when the device is monitored monthly 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)(1), 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)(1) (i) through (iii), and

(B) Records of dates 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.

(b) *Equipment Leak Records.*

(1) A list of components as specified in paragraphs (b)(1) (i) and (ii) of this section.

(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) and 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 months as specified in § 63.1296(b)(1) and no leak has been detected during those 2 months.

(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 (G) 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 § 63.1296(f) 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 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, identified by the amount of each grade produced during the run.

(B) Results of the density and IFD testing for each run of foam, conducted in accordance with the procedures in § 63.1304(b).

(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 residual HAP formulation limitation, calculated in accordance with § 63.1297(d).

(C) For each foam grade produced, the total amount of polyol used in the month.

(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, identified by the grade.

(B) Results of the density and IFD testing for each run of foam, conducted in accordance with the procedures in § 63.1304(b).

(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) 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 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) For each foam grade produced, the total amount of polyol used in the month.

(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, determination 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).

TABLE 1 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 since area sources are not subject to subpart III.
§ 63.2	Yes.	
§ 63.3	Yes.	
§ 63.4	Yes.	
§ 63.5	Yes.	
§ 63.6	Yes	Except that § 63.6(h) is not applicable since subpart III does not require opacity and visible emission standards.

TABLE 1 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
§ 63.7	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 (xiv) 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.	

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