Environmental Protection Agency

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

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

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

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

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

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

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

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

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

\(\text{Equation 2}\)

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.
- \(\text{polyol}_i\) = 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 \(j\).
- \(\text{limit}_i\) = HAP ABA formulation limit for foam grade \(i\), parts HAP ABA per 100 parts polyol. The HAP ABA formulation limits are determined in accordance with paragraph (d) of this section.

(3) The amount of polyol used for specific foam grades shall be based on the amount of polyol added to the slabstock foam production line at the mixhead, determined in accordance with the provisions of §63.1303(b).

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

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

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

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

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

\[
\text{ABA}_{\text{limit}} = -0.25(\text{IFD}) - 19.1 \left(\frac{1}{\text{IFD}}\right) - 16.2(\text{DEN}) - 7.56 \left(\frac{1}{\text{DEN}}\right) + 36.5
\]

(Equation 3)

Where:
- \(\text{ABA}_{\text{limit}}\) = HAP ABA formulation limitation, parts HAP ABA allowed per hundred parts polyol (pph).
- IFD = Indentation force deflection, pounds.
- DEN = Density, pounds per cubic foot.

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

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

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

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

(iv) For each foam grade with a density greater than 1.40 pounds per cubic foot, and an IFD of 15 pounds or less, the HAP ABA formulation limitation shall be zero.

(3) With the exception of those grades for which the owner or operator has designated zero as the HAP ABA formulation limitation, the IFD and density for each foam grade shall be determined in accordance with §63.1304(b) and recorded in accordance with §63.1307(c)(1)(B) or §63.1307(c)(2)(1)(B) within 10 working days of the production of the foam.

(e) Compliance using recovery devices. If a recovery device is used to comply with paragraphs (b) or (c) of this section, the owner or operator shall determine the allowable HAP ABA emissions for each month using Equation 2 in paragraph (b)(2) of this section, and the actual monthly HAP ABA emissions in accordance with paragraph (e)(1) of this section. The owner or operator shall also comply with the provisions of paragraph (e)(2) of this section.
(1) The actual monthly HAP ABA emissions shall be determined using Equation 4:

\[ E_{\text{actual}} = E_{\text{unc}} - HAPABA_{\text{recovered}} \]  

(Equation 4)

Where:
- \( E_{\text{actual}} \) = Actual HAP ABA emissions after control, pounds/month.
- \( E_{\text{unc}} \) = Uncontrolled HAP ABA emissions, pounds/month, determined in accordance with paragraph (b)(1) of this section.
- \( HAPABA_{\text{recovered}} \) = HAP ABA recovered, pounds/month, determined in accordance with paragraph (e)(2) of this section.

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

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

Each owner or operator of a new or existing slabstock affected source complying with the emission point specific limitation option provided in §63.1293(a)(1) shall not use a HAP or a HAP-based material as an equipment cleaner.

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

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

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

(b) Monthly compliance alternative. As an alternative to determining compliance on a rolling annual basis, an owner or operator can determine compliance by comparing actual HAP emissions to allowable HAP emissions for each month. The allowable monthly emission level shall be determined using the procedures in paragraphs (c)(1) through (3) of this section, unless a recovery device is used. Slabstock foam production sources using recovery devices shall determine actual source-wide HAP emissions in accordance with paragraph (e) of this section. The allowable monthly HAP ABA emission level shall be determined in accordance with Equation 6.

(c) Procedures for determining actual source-wide HAP emissions. The actual source-wide HAP ABA storage and equipment leak emissions, HAP ABA...