(4) You do not need to comply with the operating limits for the emission capture system and add-on control device required by § 63.3492 until after you have completed the performance tests specified in paragraph (a)(1) of this section. Instead, you must maintain a log detailing the operation and maintenance of the emission capture system, add-on control device, and continuous parameter monitors during the period between the compliance date and the performance test. You must begin complying with the operating limits for your affected source on the date you complete the performance tests specified in paragraph (a)(1) of this section. The requirements in this paragraph (a)(4) do not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements in § 63.3541(i).

(b) *Existing affected sources.* For an existing affected source, you must meet the requirements of paragraphs (b)(1) through (3) of this section.

(1) All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the applicable compliance date specified in § 63.3483. Except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.3541(i), you must conduct a performance test of each capture system and add-on control device according to the procedures in §§ 63.3543, 63.3544, and 63.3545 and establish the operating limits required by § 63.3492 no later than the compliance date specified in § 63.3483. For a solvent recovery system for which you conduct liquid-liquid material balances according to § 63.3541(i), you must initiate the first material balance no later than the compliance date specified in § 63.3483.

(2) You must develop and begin implementing the work practice plan required by § 63.3493 no later than the compliance date specified in § 63.3483.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of § 63.3541. The initial compliance period begins on the applicable compliance date specified in § 63.3483 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and volume of coating solids used each month and then calculate a 12-month organic HAP emission rate at the end of the initial 12-month compliance period. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§ 63.3543, 63.3544, and 63.3545; results of liquid-liquid material balances conducted according to § 63.3541(i); calculations according to § 63.3541 and supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the emission limit in § 63.3490(b); the operating limits established during the performance tests and the results of the continuous parameter monitoring required by § 63.3547; and documentation of whether you developed and implemented the work practice plan required by § 63.3493.

§ 63.3541 How do I demonstrate initial compliance?

(a) You may use the emission rate with add-on controls option for any coating operation, for any group of coating operations within a subcategory or coating type segment, or for all of the coating operations within a subcategory or coating type segment. You may include both controlled and uncontrolled coating operations in a group for which you use this option. You must use either the compliant material option, the emission rate without add-on controls option, or the control efficiency/outlet concentration option for any coating operation in the affected source for which you do not use the emission rate with add-on controls option. To demonstrate initial compliance, the coating operation(s) for which you use the emission rate with add-on controls option must meet the applicable emission limitations in § 63.3490. You must conduct a separate initial compliance demonstration for each one and two-piece draw and iron can body coating, sheetcoating, three-piece can body assembly coating, and

end coating affected source. You must meet all the requirements of this section to demonstrate initial compliance with the emission limitations. When calculating the organic HAP emission rate according to this section, do not include any coatings or thinners used on coating operations for which you use the compliant material option, the emission rate without add-on controls option, or the control efficiency/outlet concentration option. You do not need to redetermine the mass of organic HAP in coatings or thinners that have been reclaimed onsite and reused in the coating operation(s) for which you use the emission rate with add-on controls option.

(b) *Compliance with operating limits.* Except as provided in §63.3540(a)(4) and except for solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements of §63.3541(i), you must establish and demonstrate continuous compliance during the initial compliance period with the operating limits required by §63.3492 using the procedures specified in §§63.3546 and 63.3547.

(c) *Compliance with work practice requirements.* You must develop, implement, and document your implementation of the work practice plan required by §63.3493 during the initial compliance period, as specified in §63.3512.

(d) *Compliance with emission limits.* You must follow the procedures in paragraphs (e) through (n) of this section to demonstrate compliance with the applicable emission limit in §63.3490.

(e) *Determine the mass fraction of organic HAP, density, volume used, and volume fraction of coating solids.* Follow the procedures specified in §63.3531(a) through (d) to determine the mass fraction of organic HAP, density, and volume of each coating and thinner used during each month and the volume fraction of coating solids for each coating used during each month.

(f) *Calculate the total mass of organic HAP emissions before add-on controls.* Using Equation 1 of §63.3531, calculate the total mass of organic HAP emissions before add-on controls from all coatings and thinners used during each month in the coating operation or group of coating operations for which you use the emission rate with add-on controls option.

(g) *Calculate the organic HAP emission reduction for each controlled coating operation.* Determine the mass of organic HAP emissions reduced for each controlled coating operation during each month. The emission reduction determination quantifies the total organic HAP emissions that pass through the emission capture system and are destroyed or removed by the add-on control device. Use the procedures in paragraph (h) of this section to calculate the mass of organic HAP emission reduction for each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances. For each controlled coating operation using a solvent recovery system for which you conduct a liquid-liquid material balance, use the procedures in paragraph (j) of this section to calculate the organic HAP emission reduction.

(h) *Calculate the organic HAP emission reduction for each controlled coating operation not using liquid-liquid material balances.* For each controlled coating operation using an emission capture system and add-on control device, other than a solvent recovery system for which you conduct liquid-liquid material balances, calculate the organic HAP emission reduction, using Equation 1 of this section. The calculation applies the emission capture system efficiency and add-on control device efficiency to the mass of organic HAP contained in the coatings, thinners, and cleaning materials that are used in the coating operation served by the emission capture system and add-on control device during each month. For any period of time a deviation specified in §63.3542(c) or (d) occurs in the controlled coating operation, including a deviation during a period of SSM, you must assume zero efficiency for the emission capture system and add-on control device, unless you have other data indicating the actual efficiency of the emission capture system and add-on control device, and the use of these data has been approved by the Administrator. Equation 1 of this section treats the materials used during

such a deviation as if they were used on an uncontrolled coating operation for the time period of the deviation.

$$H_c = \left(A_c + B_c - H_{unc}\right)\left(\frac{CE}{100} \times \frac{DRE}{100}\right) \qquad \text{(Eq. 1)}$$

Where:

H_c= Mass of organic HAP emission reduction for the controlled coating operation during the month, kg.

A_c= Total mass of organic HAP in the coatings used in the controlled coating operation during the month, kg, as calculated in Equation 1A of this section.

B_c= Total mass of organic HAP in the thinners used in the controlled coating operation during the month, kg, as calculated in Equation 1B of this section.

H_{unc} = Total mass of organic HAP in the coatings, thinners, and cleaning materials used during all deviations specified in §63.3542(c) and (d) that occurred during the month in the controlled coating operation, kg, as calculated in Equation 1D of this section.

CE = Capture efficiency of the emission capture system vented to the add-on control device, percent. Use the test methods and procedures specified in §§63.3543 and 63.3544 to measure and record capture efficiency.

DRE = Organic HAP destruction or removal efficiency of the add-on control device, percent. Use the test methods and procedures in §§63.3543 and 63.3545 to measure and record the organic HAP destruction or removal efficiency.

(1) Calculate the mass of organic HAP in the coatings used in the controlled coating operation, kg, using Equation 1A of this section.

$$A_c = \sum_{i=1}^{m}\left(Vol_{c,i}\right)\left(D_{c,i}\right)\left(W_{c,i}\right) \qquad \text{(Eq. 1A)}$$

Where:

A_c = Total mass of organic HAP in the coatings used in the controlled coating operation during the month, kg.

$Vol_{c,i}$ = Total volume of coating, i, used during the month, liters.

$D_{c,i}$ = Density of coating, i, kg per liter.

$W_{c,i}$ = Mass fraction of organic HAP in coating, i, kg per kg.

m = Number of different coatings used.

(2) Calculate the mass of organic HAP in the thinners used in the controlled coating operation, kg, using Equation 1B of this section.

$$B_c = \sum_{j=1}^{n}\left(Vol_{t,j}\right)\left(D_{t,j}\right)\left(W_{t,j}\right) \qquad \text{(Eq. 1B)}$$

Where:

B_c = Total mass of organic HAP in the thinners used in the controlled coating operation during the month, kg.

$Vol_{t,j}$ = Total volume of thinner, j, used during the month, liters.

$D_{t,j}$ = Density of thinner, j, kg per liter thinner.

$W_{t,j}$ = Mass fraction of organic HAP in thinner, j, kg organic HAP per kg thinner.

n = Number of different thinners used.

(3) Calculate the mass of organic HAP in the cleaning materials used in the controlled coating operation during the month, kg, using Equation 1C of this section.

$$C_c = \sum_{k=1}^{p} \left(Vol_{s,k}\right)\left(D_{s,k}\right)\left(W_{s,k}\right) \qquad \text{(Eq. 1C)}$$

Where:

C_c = Total mass of organic HAP in the cleaning materials used in the controlled coating operation during the month, kg.

$Vol_{s,k}$ = Total volume of cleaning material, k, used during the month, liters.

$D_{s,k}$ = Density of cleaning material, k, kg per liter.

$W_{s,k}$ = Mass fraction of organic HAP in cleaning material, k, kg per kg.

p = Number of different cleaning materials used.

(4) Calculate the mass of organic HAP in the coatings, thinners, and cleaning materials used in the controlled coating operation during deviations specified in §63.3542(c) and (d), using Equation 1D of this section.

$$H_{unc} = \sum_{h=1}^{q} \left(Vol_h\right)\left(D_h\right)\left(W_h\right) \qquad \text{(Eq. 1D)}$$

Where:

H_{unc} = Total mass of organic HAP in the coatings, thinners, and cleaning materials used during all deviations specified in §63.3542(c) and (d) that occurred during the month in the controlled coating operation, kg.

Vol_h = Total volume of coating, thinner, or cleaning material, h, used in the controlled coating operation during deviations, liters.

D_h = Density of coating, thinner, or cleaning material, h, kg per liter.

W_h = Mass fraction of organic HAP in coating, thinner, or cleaning material, h, kg organic HAP per kg coating.

q = Number of different coatings, thinners, or cleaning materials.

(i) *Calculate the organic HAP emission reduction for each controlled coating operation using liquid-liquid material balances.* For each controlled coating operation using a solvent recovery system for which you conduct liquid-liquid material balances, calculate the organic HAP emission reduction by applying the volatile organic matter collection and recovery efficiency to the mass of organic HAP contained in the coatings and thinners that are used in the coating operation controlled by the solvent recovery system during each month. Perform a liquid-liquid material balance for each month as specified in paragraphs (i)(1) through (6) of this section. Calculate the mass of organic HAP emission reduction by the solvent recovery system as specified in paragraph (i)(7) of this section.

(1) For each solvent recovery system, install, calibrate, maintain, and operate according to the manufacturer's specifications, a device that indicates the cumulative amount of volatile organic matter recovered by the solvent recovery system each month.

(2) For each solvent recovery system, determine the mass of volatile organic matter recovered for the month, kg, based on measurement with the device required in paragraph (i)(1) of this section.

(3) Determine the mass fraction of volatile organic matter for each coating and thinner used in the coating operation controlled by the solvent recovery system during the month, kg volatile organic matter per kg coating. You may determine the volatile organic matter mass fraction using Method 24 of 40 CFR part 60, appendix A, or an EPA approved alternative method, or you may use information provided by the manufacturer or supplier of the coating. In the event of any inconsistency between information provided by the manufacturer or supplier and the results of Method 24 of 40 CFR part 60, appendix A, or an approved alternative method, the test method results will take precedence unless, after consultation, a regulated

source can demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(4) Determine the density of each coating and thinner used in the coating operation controlled by the solvent recovery system during the month, kg per liter, according to § 63.3531(c).

(5) Measure the volume of each coating, thinner, and cleaning material used in the coating operation controlled by the solvent recovery system during the month, liters.

(6) Each month, calculate the solvent recovery system's volatile organic matter collection and recovery efficiency, using Equation 2 of this section.

$$R_V = 100 \frac{M_{VR}}{\sum_{i=1}^{m} (Vol_i)(D_i)(WV_{c,i}) + \sum_{j=1}^{n} (Vol_j)(D_j)(WV_{t,j})} \qquad \text{(Eq. 2)}$$

Where:

R_V = Volatile organic matter collection and recovery efficiency of the solvent recovery system during the month, percent.

M_{VR} = Mass of volatile organic matter recovered by the solvent recovery system during the month, kg.

Vol_i = Volume of coating, i, used in the coating operation controlled by the solvent recovery system during the month, liters.

D_i = Density of coating, i, kg per liter.

$WV_{c,i}$ = Mass fraction of volatile organic matter for coating, i, kg volatile organic matter per kg coating.

Vol_j = Volume of thinner, j, used in the coating operation controlled by the solvent recovery system during the month, liters.

D_j = Density of thinner, j, kg per liter.

$WV_{t,j}$ = Mass fraction of volatile organic matter for thinner, j, kg volatile organic matter per kg thinner.

m = Number of different coatings used in the coating operation controlled by the solvent recovery system during the month.

n = Number of different thinners used in the coating operation controlled by the solvent recovery system during the month.

(7) Calculate the mass of organic HAP emission reduction for the coating operation controlled by the solvent recovery system during the month using Equation 3 of this section.

$$H_{CSR} = (A_{CSR} + B_{CSR})\left(\frac{R_V}{100}\right) \qquad \text{(Eq. 3)}$$

Where:

H_{CSR} = Mass of organic HAP emission reduction for the coating operation controlled by the solvent recovery system using a liquid-liquid material balance during the month, kg.

A_{CSR} = Total mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 3A of this section.

B_{CSR} = Total mass of organic HAP in the thinners used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 3B of this section.

R_V = Volatile organic matter collection and recovery efficiency of the solvent recovery system, percent, from Equation 2 of this section.

(i) Calculate the mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system, kg, using Equation 3A of this section.

$$A_{CSR} = \sum_{i=1}^{m} \left(Vol_{c,i}\right)\left(D_{c,i}\right)\left(W_{c,i}\right) \qquad \text{(Eq. 3A)}$$

Where:

A_{CSR} = Total mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system during the month, kg.

$Vol_{c,i}$ = Total volume of coating, i, used during the month in the coating operation controlled by the solvent recovery system, liters.

$D_{c,i}$ = Density of coating, i, kg per liter.

$W_{c,i}$ = Mass fraction of organic HAP in coating, i, kg per kg.

m = Number of different coatings used.

(ii) Calculate the mass of organic HAP in the thinners used in the coating operation controlled by the solvent recovery system using Equation 3B of this section.

$$B_{CSR} = \sum_{j=1}^{n} \left(Vol_{t,j}\right)\left(D_{t,j}\right)\left(W_{t,j}\right) \qquad \text{(Eq. 3B)}$$

Where:

B_{CSR} = Total mass of organic HAP in the thinners used in the coating operation controlled by the solvent recovery system during the month, kg.

$Vol_{t,j}$ = Total volume of thinner, j, used during the month in the coating operation controlled by the solvent recovery system, liters.

$D_{t,j}$ = Density of thinner, j, kg per liter.

$W_{t,j}$ = Mass fraction of organic HAP in thinner, j, kg per kg.

n = Number of different thinners used.

(j) *Calculate the total volume of coating solids used.* Determine the total volume of coating solids used, which is the combined volume of coating solids for all the coatings used during each month in the coating operation or group of coating operations for which you use the emission rate with add-on controls option, using Equation 2 of §63.3531.

(k) *Calculate the mass of organic HAP emissions for each month.* Determine the mass of organic HAP emissions during each month using Equation 4 of this section.

$$H_{HAP} = H_e - \sum_{i=1}^{q} \left(H_{c,i}\right) - \sum_{j=1}^{r} \left(H_{CSR,j}\right) \qquad \text{(Eq. 4)}$$

Where:

H_{HAP} = Total mass of organic HAP emissions for the month, kg.

H_e = Total mass of organic HAP emissions before add-on controls from all the coatings and thinners used during the month, kg, determined according to paragraph (f) of this section.

$H_{C,i}$ = Total mass of organic HAP emission reduction for controlled coating operation, i, not using a liquid-liquid material balance, during the month, kg, from Equation 1 of this section.

$H_{CSR,j}$ = Total mass of organic HAP emission reduction for coating operation, j, controlled by a solvent recovery system using a liquid-liquid material balance, during the month, kg, from Equation 3 of this section.

q = Number of controlled coating operations not using a liquid-liquid material balance.

r = Number of coating operations controlled by a solvent recovery system using a liquid-liquid material balance.

(l) *Calculate the organic HAP emission rate for the 12-month compliance period.* Determine the organic HAP emission rate for the 12-month compliance period, kg organic HAP per liter coating

solids used, using Equation 5 of this section.

$$H_{annual} = \frac{\sum_{y=1}^{12} H_{HAP,\,y}}{\sum_{y=1}^{12} V_{st,\,y}} \qquad \text{(Eq. 5)}$$

Where:

H_{annual} = Organic HAP emission rate for the 12-month compliance period, kg organic HAP per liter coating solids.

$H_{HAP,y}$ = Organic HAP emission rate for month, y, determined according to Equation 4 of this section.

$V_{st,y}$ = Total volume of coating solids used during month, y, liters, from Equation 2 of § 63.3531.

y = Identifier for months.

(m) *Compliance demonstration.* To demonstrate initial compliance with the emission limit, the organic HAP emission rate, calculated using Equation 5 of this section, must be less than or equal to the applicable emission limit in § 63.3490. You must keep all records as required by §§ 63.3512 and 63.3513. As part of the Notification of Compliance Status required by § 63.3510, you must identify the coating operation(s) for which you used the emission rate with add-on controls option and submit a statement that the coating operation(s) was in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate was less than or equal to the applicable emission limit in § 63.3490, and you achieved the operating limits required by § 63.3492 and the work practice standards required by § 63.3493.

(n) *Alternative calculation of overall subcategory emission limit.* Alternatively, if your affected source applies coatings in more than one coating type segment within a subcategory, you may calculate an overall HAP emission limit for the subcategory using Equation 4 of § 63.3531. If you use this approach, you must limit organic HAP emissions to the atmosphere to the OSEL specified by Equation 4 of § 63.3531 during each 12-month compliance period. You must use the OSEL determined by Equation 4 of § 63.3531 throughout the 12-month compliance period and may not switch between compliance with individual coating type limits and an OSEL. If you follow this approach, you may not include coatings in different subcategories in determining your OSEL. You must keep all records as required by §§ 63.3512 and 63.3513. As part of the Notification of Compliance Status required by § 63.3510, you must identify the subcategory for which you used a calculated OSEL and submit a statement that the coating operation(s) was in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate for the subcategory was less than or equal to the OSEL determined according to this section.

§ 63.3542 How do I demonstrate continuous compliance with the emission limitations?

(a) To demonstrate continuous compliance with the applicable emission limit in § 63.3490, the organic HAP emission rate for each compliance period, determined according to the procedures in § 63.3541, must be equal to or less than the applicable emission limit in § 63.3490. Alternatively, if you calculate an OSEL for all coating type segments within a subcategory according to § 63.3531(i), the organic HAP emission rate for the subcategory for each compliance period must be less than or equal to the calculated OSEL. You must use the calculated OSEL throughout each compliance period. A compliance period consists of 12 months. Each month after the end of the initial compliance period described in § 63.3540 is the end of a compliance period consisting of that month and the preceding 11 months. You must perform the calculations in § 63.3541 on a monthly basis using data from the previous 12 months of operation.

(b) If the organic HAP emission rate for any 12-month compliance period exceeded the applicable emission limit in § 63.3490, that is a deviation from the emission limitation for that compliance period and must be reported as specified in §§ 63.3510(b)(6) and 63.3511(a)(7).

(c) You must demonstrate continuous compliance with each operating limit required by § 63.3492 that applies to you as specified in Table 4 to this subpart.