

# Step-by-Step B3 Compliance Demonstration

## Monthly Allowable Organic HAP Applied

### ' 63.3370(d)

**Overview:** This approach allows a facility to average all coatings and use a combination of MACT limits. The approach recognizes that the organic HAP mass fraction limit is less stringent for coatings applied at less than 20% solids whereas the organic HAP to solids mass fraction limit is less stringent for coatings applied at greater than 20% solids.

In this approach, a facility needs to:

1. Identify all coatings and additives used in process.
2. Gather "NESHAP quality" data for each coating material applied.
3. Calculate the total organic HAP applied in a month. (Note: Total organic HAP applied recognizes allowance for volatile retained on the web.)
4. Calculate the total allowable organic HAP for the month.
5. Demonstrate that the total organic HAP applied is less than the calculated allowable.
6. Maintain monitoring and other compliance records.

#### MACT limits

##### Existing Sources

$$H_L \leq 0.04 \text{ kg HAP/kg coating}$$

or

$$H_S \leq 0.20 \text{ kg HAP/kg solids}$$

##### New Sources

$$H_L \leq 0.016 \text{ kg HAP/kg coating}$$

or

$$H_S \leq 0.08 \text{ kg HAP/kg solids}$$

See separate listing  
of all variables

Detailed Approach	Citation
<b>1. Identify all coatings and additives used in process.</b>	' 63.3370(l)(1)
<b>2. Determine the as-purchased coating solids content for each coating material (' 63.3360(d)(1)) using one of the following:</b> <u>Method 24</u> <ul style="list-style-type: none"> <li>• Determine the VOC as a mass fraction of non-aqueous volatile matter and substitute for organic HAP content.</li> <li>• Calculate solids content from measured volatile content.</li> </ul> OR <u>Formulation data</u> <ul style="list-style-type: none"> <li>• Provided by the manufacturer of the material</li> <li>• Method 311 data takes precedence when available</li> <li>• Formulation data must meet the criteria for quantifying organic HAPs as defined (above) under Method 311.</li> </ul>	' 63.3370(l)(2)  §63.3360(d)(2) and App. A of Part 60.  §63.3360(d)(3)
<b>3. Calculate the total organic HAP applied in a month.</b> <ul style="list-style-type: none"> <li>• Use Equation 6 (' 63.3370(d)) to calculate the total organic HAP applied in a month</li> </ul>	§63.3370(d)  <div style="border: 1px solid black; padding: 5px; width: fit-content;"> Per 40 CFR 63.3360(g), in order to use the volatile matter retained on web allowance, one must either use volatile organic matter as a surrogate for HAP content in the coating or determine the mass of organic HAP retained on the web for use as <math>M_{vret}</math> </div>

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' 63.3370(d)

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<b>4. Determine the as-purchased mass fraction of coating materials which were applied at <math>\geq 20</math> % (mass) on an as-applied basis.</b>	' 63.3370(1)(3)
<b>5. Determine the mass of each solvent, diluent, thinner, or reducer added to coating materials applied at <math>&lt; 20</math> % (mass) coating solids content on an as-applied basis each month.</b>	' 63.3370(1)(4)
<b>6. Calculate the total allowable organic HAP for the month using equations 13a or 13b of 40 CFR 63.3370.</b> <ul style="list-style-type: none"> <li>• Use Equation 13a to calculate the total organic HAP allowable for a month for existing affected facilities</li> <li>• Use Equation 13b of 40 CFR 63.3370 to calculate the total organic HAP allowable for a month for new affected facilities</li> </ul>	' 63.3370(1)(5)
<b>7. Demonstrate that the total organic HAP applied is less than the calculated allowable.</b> <ul style="list-style-type: none"> <li>• The total organic HAP applied in a month, <math>H_m</math>, is calculated using equation 6.</li> <li>• The total organic HAP allowed in a month, <math>H_a</math>, is calculated using equation 13a or 13b.</li> <li>• You are in compliance if <math>H_m &lt; H_a</math>.</li> <li>• <math>H_m</math> and <math>H_a</math> need to be calculated based on all coating constituents applied in a month.</li> </ul>	The method requires that each individual coating as-applied (including all additions) needs to be tracked separately and that for each coating a determination must be made as to solids content (above or below 20%)
<b>8. Maintain compliance records.</b> <ul style="list-style-type: none"> <li>• Maintain records of organic HAP content data.</li> <li>• Maintain records of volatile matter and coating solids content data</li> <li>• Maintain records of material usage, organic HAP usage, volatile matter usage, and coating solids usage and compliance demonstrations.</li> </ul>	§63.3410(a)(1)(iii) ' 63.3410(a)(1)(iv) §63.3410(a)(1)(vi)

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