

affected source uses a VHAP of potential concern listed in Table 5 for which a baseline level has not been previously established, the baseline level shall be established as the de minimis level provided in Table 5 for that chemical. The owner or operator shall track the annual usage of each VHAP of potential concern identified in this paragraph that is present in amounts that require inclusion on an MSDS in accordance with the occupational safety and health administration hazard communication standard in 29 CFR part 1910 Subpart Z, incorporated by reference in s. NR 484.03(1). If usage of the VHAP of potential concern exceeds the de minimis level listed in Table 5 for that chemical, the owner or operator shall provide an explanation to the department that documents the reason for exceedance of the de minimis level. If the explanation is not one of those listed in par. (b), the owner or operator shall follow the procedures in par. (c).

NR 465.055 Compliance dates. (1) EXISTING SOURCES. The compliance date for existing affected sources that emit less than 50 tons per year of HAP in 1996 is December 7, 1998. The compliance date for existing affected sources that emit 50 tons or more of hazardous air pollutants in 1996 is November 21, 1997. The owner or operator of an existing area source that increases its emissions of, or its potential to emit, HAP such that the source becomes a major source that is subject to this chapter

shall comply with this chapter one year after becoming a major source.

(2) NEW SOURCES. The compliance date for new affected sources is immediately upon startup or by December 7, 1995, whichever is later. The compliance date for new area sources that become major sources is immediately upon becoming a major source.

Note: Compliance dates are federally enforceable under 40 CFR 63.800 prior to the effective date of this section.

NR 465.06 Compliance methods and procedures. (1) EXISTING SOURCES. (a) *Finishing materials.* The owner or operator of an existing affected source shall comply with s. NR 465.04(1)(a) by using any of the following methods:

1. Calculate the average VHAP content for all finishing materials used at the facility using Equation 1, and maintain a value of E no greater than 1.0.

$$E = (M_{c1}C_{c1} + M_{c2}C_{c2} + \dots + M_{cn}C_{cn} + S_1W_1 + S_2W_2 + \dots + S_nW_n) / (M_{c1} + M_{c2} + \dots + M_{cn})$$

(Equation 1)

2. Use compliant finishing materials according to the following criteria:

a. Demonstrate that each stain, sealer and topcoat has a VHAP content of no more than 1.0 kg VHAP/kg solids (1.0 lb VHAP/lb solids), as applied, and each thinner contains no more than 10.0%

VHAP by weight by maintaining certified product data sheets for each coating and thinner.

b. Demonstrate that each washcoat, basecoat and enamel that is not formulated at the affected source by thinning another finishing material has a VHAP content of no more than 1.0 kg VHAP/kg solids (1.0 lb VHAP/lb solids), as applied, and each thinner contains no more than 10.0% VHAP by weight by maintaining certified product data sheets for each coating and thinner.

c. Demonstrate that each washcoat, basecoat and enamel that is formulated at the affected source is formulated using a finishing material containing no more than 1.0 kg VHAP/kg solids (1.0 lb VHAP/lb solids) and a thinner containing no more than 3.0% VHAP by weight.

3. Use a control system with an overall control efficiency (R) such that the value of E_{ac} in Equation 2 is no greater than 1.0. The value of E_{bc} in Equation 2 shall be calculated using Equation 1 in subd. 1.

$$R = [(E_{bc} - E_{ac}) / E_{bc}](100) \quad \text{(Equation 2)}$$

4. Use any combination of the methods in subds. 1. to 3.

(b) *Foam adhesives.* The owner or operator of an existing affected source shall comply with s. NR 465.04(1)(b)1. by using foam adhesives with a VHAP content no greater than 1.8 kg VHAP/kg

solids (1.8 lb VHAP/lb solids), as applied.

(c) *Other contact adhesives.* The owner or operator of an existing affected source shall comply with s. NR 465.04(1)(b)2. by using either of the following methods:

1. Use contact adhesives with a VHAP content no greater than 1.0 kg VHAP/kg solids (1.0 lb VHAP/lb solids), as applied.

2. Use a control system with an overall control efficiency (R) such that the value of G_{ac} in Equation 3 is no greater than 1.0.

$$R = [(G_{bc} - G_{ac}) / G_{bc}] (100) \quad (\text{Equation 3})$$

(2) **NEW SOURCES.** (a) *Finishing materials.* The owner or operator of a new affected source shall comply with s. NR 465.04(2)(a) by using any of the following methods:

1. Calculate the average VHAP content across all finishing materials used at the facility using Equation 1 in sub. (1)(a)1., and maintain a value of E no greater than 0.8.

2. Use compliant finishing materials according to the following criteria:

a. Demonstrate that each sealer and topcoat has a VHAP content of no more than 0.8 kg VHAP/kg solids (0.8 lb VHAP/lb solids), as applied, each stain has a VHAP content of no more than 1.0 kg VHAP/kg solids (1.0 lb VHAP/lb solids), as applied, and each thinner contains no more than 10.0% VHAP by weight by

maintaining certified product data sheets for each coating and thinner.

b. Demonstrate that each washcoat, basecoat and enamel that is not formulated at the affected source by thinning another finishing material has a VHAP content of no more than 0.8 kg VHAP/kg solids (0.8 lb VHAP/lb solids), as applied, and each thinner contains no more than 10.0% VHAP by weight by maintaining certified product data sheets for each coating and thinner.

c. Demonstrate that each washcoat, basecoat and enamel that is formulated at the affected source is formulated using a finishing material containing no more than 0.8 kg VHAP/kg solids (0.8 lb VHAP/lb solids) and a thinner containing no more than 3.0% VHAP by weight.

3. Use a control system with an overall control efficiency (R) such that the value of E_{ac} in Equation 4 is no greater than 0.8. The value of E_{bc} in Equation 4 shall be calculated using Equation 1 in sub. (1)(a)1.

$$R = [(E_{bc} - E_{ac}) / E_{bc}] (100) \quad \text{(Equation 4)}$$

4. Use any combination of the methods in subds. 1. to 3.

(b) *Contact adhesives.* The owner or operator of a new affected source shall comply with s. NR 465.04(2)(b) by using either of the following methods:

1. Use contact adhesives with a VHAP content no greater than 0.2 kg VHAP/kg solids (0.2 lb VHAP/lb solids), as applied.

2. Use a control system with an overall control efficiency (R) such that the value of G_{ac} in Equation 3 in sub. (1)(c)2. is no greater than 0.2.

NR 465.07 Initial compliance demonstration. (1) FINISHING MATERIALS. The owner or operator of an affected source subject to the provisions of s. NR 465.04(1)(a) or (2)(a) shall demonstrate initial compliance according to the following procedures as appropriate:

(a) If complying by using the methods in s. NR 465.06(1)(a)1. or (2)(a)1., submit the results of the averaging calculation using Equation 1 in s. NR 465.06(1)(a)1. for the first month with the initial compliance status report required by s. NR 465.11(2). The first month's calculation shall include data for the entire month in which the compliance date falls.

(b) If complying by using the methods s. NR 465.06(1)(a)2. or (2)(a)2., state in the initial compliance status report under s. NR 465.11(2) that compliant stains, washcoats, sealers, topcoats, basecoats, enamels and thinners, as applicable, are being used by the affected source.

(c) If complying by using the methods in s. NR 465.06(1)(a)2. or (2)(a)2. and applying coatings using continuous coaters, do one

of the following:

1. State in the initial compliance status report under s. NR 465.11(2) that compliant coatings, as determined by the VHAP content of the coating in the reservoir and the VHAP content as calculated from records, and compliant thinners are being used.

2. State in the initial compliance status report under s. NR 465.11(2) that compliant coatings, as determined by the VHAP content of the coating in the reservoir, are being used; the viscosity of the coating in the reservoir is being monitored; and compliant thinners are being used. The owner or operator shall also submit data that demonstrate that viscosity is an appropriate parameter for demonstrating compliance.

(d) If complying by using the methods in s. NR 465.06(1)(a)3. or (2)(a)3., do all of the following:

1. Submit a monitoring plan that identifies each operating parameter to be monitored for the capture device and discusses why each parameter is appropriate for demonstrating continuous compliance.

2. Conduct an initial performance test as required under s. NR 460.06 using the procedures and test methods listed in ss. NR 460.06 and 465.09(3) and (4).

3. Calculate the overall control efficiency (R) following the procedures in s. NR 465.09(4).

4. Determine those operating conditions critical to

determining compliance and establish one or more operating parameters that will ensure compliance with the standard.

Operating parameters shall include the following:

a. For a thermal incinerator, minimum combustion temperature shall be the operating parameter.

b. For a catalytic incinerator equipped with a fixed catalyst bed, the minimum gas temperature both upstream and downstream of the catalyst bed shall be the operating parameters.

c. For a catalytic incinerator equipped with a fluidized catalyst bed, the minimum gas temperature upstream of the catalyst bed and the pressure drop across the catalyst bed shall be the operating parameters.

d. For a carbon adsorber, the total regeneration mass stream flow for each regeneration cycle and the carbon bed temperature after each regeneration, or the concentration level of organic compounds exiting the adsorber, shall be the operating parameters, unless the owner or operator requests and receives approval from the administrator to establish other operating parameters.

e. For a control device not listed in this subdivision, one or more operating parameter values shall be established as follows: The owner or operator shall submit, for the administrator's approval, a description of the device, test data verifying the performance of the device, and appropriate site-specific operating parameters that will be monitored to

demonstrate continuous compliance with the standard.

(e) The value for each site-specific operating parameter in par. (d)4. shall be calculated as the arithmetic average of the maximum or minimum operating parameter values, as appropriate, that demonstrate compliance with the standards, during the 3 test runs required by s. NR 465.09(3) (a).

(2) CONTACT ADHESIVES. The owner or operator of an affected source subject to the provisions of s. NR 465.04(1)(b) or (2)(b) shall demonstrate initial compliance according to the following procedures as appropriate:

(a) If complying by using the methods in s. NR 465.06(1)(b), (c)1. or (2)(b)1., state in the initial compliance status report under s. NR 465.11(2) that compliant contact adhesives are being used by the affected source.

(b) If complying by using the methods in s. NR 465.06(1)(c)2. or (2)(b)2., do all of the following:

1. Submit a monitoring plan that identifies each operating parameter to be monitored for the capture device and discusses why each parameter is appropriate for demonstrating continuous compliance.

2. Conduct an initial performance test as required under s. NR 460.06 using the procedures and test methods listed in ss. NR 460.06 and 465.09(3) and (4).

3. Calculate the overall control efficiency (R) following the

procedures in s. NR 465.09(4).

4. Determine those operating conditions critical to determining compliance and establish one or more operating parameters that will ensure compliance with the standard.

Operating parameters shall include the following:

a. For a thermal incinerator, minimum combustion temperature shall be the operating parameter.

b. For a catalytic incinerator equipped with a fixed catalyst bed, the minimum gas temperature both upstream and downstream of the catalyst shall be the operating parameters.

c. For a catalytic incinerator equipped with a fluidized catalyst bed, the minimum gas temperature upstream of the catalyst bed and the pressure drop across the catalyst bed shall be the operating parameters.

(c) The value for each site-specific operating parameter in par. (b) 4. shall be calculated as the arithmetic average of the maximum or minimum operating values, as appropriate, that demonstrate compliance with the standards, during the 3 test runs required by s. NR 465.09(3)(a).

(3) STRIPPABLE SPRAY BOOTH COATINGS. The owner or operator of an affected source subject to the provisions s. NR 465.04(1)(c) or (2)(c) shall demonstrate initial compliance by stating in the initial compliance status report under s. NR 465.11(2) that compliant strippable spray booth coatings are being used.

(4) WORK PRACTICE STANDARDS. The owner or operator of an affected source subject to the work practice standards in s. NR 465.05 shall demonstrate initial compliance by stating in the initial compliance status report under s. NR 465.11(2) that the work practice implementation plan has been developed and procedures have been established for implementing the provisions of the plan.

NR 465.08 Continuous compliance demonstration. (1) FINISHING MATERIALS. The owner or operator of an affected source subject to the provisions of s. NR 465.04(1)(a) or (2)(a) shall demonstrate continuous compliance according to the following procedures as appropriate:

(a) If complying by using the methods in s. NR 465.06(1)(a)1. or (2)(a)1., submit the results of the averaging calculation using Equation 1 in s. NR 465.06(1)(a)1. for each month within that semiannual period, and submit a compliance certification in accord with s. NR 465.11(3) which states that the value of E, as calculated using Equation 1 in s. NR 465.06(1)(a)1., is no greater than 1.0 for existing sources or 0.8 for new sources. An affected source is in violation of the standard if the value of E is greater than 1.0 for existing sources or 0.8 for new sources for any month. A violation of the monthly average is a separate violation of the standard for each day of operation during the

month, unless the affected source can demonstrate through records that the violation of the monthly average can be attributed to a particular day or days during the period.

(b) If complying by using the methods in s. NR 465.06(1)(a)2. or (2)(a)2., except as provided for in par.(c), submit a compliance certification in accord with s. NR 465.11(3) which states that compliant stains, washcoats, sealers, topcoats, basecoats, enamels and thinners, as applicable, have been used each day in the semiannual reporting period or shall otherwise identify the periods of noncompliance and the reasons for noncompliance. An affected source is in violation of the standard whenever a noncompliant coating, as demonstrated by records or by a sample of the coating, is used.

(c) If complying by using the methods in s. NR 465.06(1)(a)2. or (2)(a)2. and applying coatings using continuous coaters, do one of the following:

1. Use compliant coatings, as determined by the VHAP content of the coating in the reservoir and the VHAP content as calculated from records, use compliant thinners and submit a compliance certification in accord with s. NR 465.11(3) which states that compliant coatings have been used each day in the semiannual reporting period, or shall otherwise identify the days of noncompliance and the reasons for noncompliance. An affected source is in violation of the standard whenever a noncompliant

coating, as determined by records or by a sample of the coating, is used. Use of a noncompliant coating is a separate violation for each day the noncompliant coating is used.

2. Use compliant coatings, as determined by the VHAP content of the coating in the reservoir, use compliant thinners, maintain a viscosity of the coating in the reservoir that is no less than the viscosity of the initial coating by monitoring the viscosity with a viscosity meter or by testing the viscosity of the initial coating and retesting the coating in the reservoir each time solvent is added, maintain records of solvent additions and submit a compliance certification with the semiannual report required by s. NR 465.11(3). The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source and shall state that compliant coatings, as determined by the VHAP content of the coating in the reservoir, have been used each day in the semiannual reporting period. Additionally, the certification shall state that the viscosity of the coating in the reservoir has not been less than the viscosity of the initial coating, that is, the coating that is initially mixed and placed in the reservoir, for any day in the semiannual reporting period. An affected source is in violation of the standard when a sample of the as-applied coating exceeds the applicable limit established in s. NR 465.06(1)(a)2. or (2)(a)2., as determined using Method 311, in 40 CFR part 63, Appendix A,

incorporated by reference in s. NR 438.04, or the viscosity of the coating in the reservoir is less than the viscosity of the initial coating.

(d) If complying by using the methods in s. NR 465.06(1)(a)3. or (2)(a)3., install, calibrate, maintain and operate equipment according to manufacturer's specifications to monitor each site-specific operating parameter established in accordance with s. NR 465.07(2)(b)1. The owner or operator shall also submit the excess emissions and continuous monitoring system performance report and summary report required by ss. NR 465.11(4) and 460.09(5). The appropriate monitoring equipment and related requirements include the following:

1. For an incinerator, a temperature monitoring device equipped with a continuous recorder shall be used as follows:

a. Where a thermal incinerator is used, the temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

b. Where a catalytic incinerator equipped with a fixed catalyst bed is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

c. Where a catalytic incinerator equipped with a fluidized catalyst bed is used, the temperature monitoring device shall be

installed in the gas stream immediately before the bed. In addition, a pressure monitoring device shall be installed to determine the pressure drop across the catalyst bed. The pressure drop shall be measured monthly at a constant flow rate.

2. For a carbon adsorber, one of the following shall be used:

a. An integrating stream flow monitoring device, having an accuracy of $\pm 10\%$, capable of recording the total regeneration stream mass flow for each regeneration cycle; and a carbon bed temperature monitoring device, having an accuracy of $\pm 1\%$ of the temperature being monitored or ± 0.5 °C, whichever is greater, and capable of recording the carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle.

b. An organic compound monitoring device, equipped with a continuous recorder, to indicate the concentration level of organic compounds exiting the carbon adsorber.

c. Any other monitoring device that has been approved by the administrator in accordance with s. NR 465.07(1)(d)4.d.

3. The owner or operator of an affected source may not operate a capture or control device at a daily average value greater than or less than, as appropriate, the operating parameter values. The daily average value shall be calculated as the average of all values for a monitored parameter recorded during the operating day.

4. The owner or operator of an affected source that is complying through the use of a catalytic incinerator equipped with a fluidized catalyst bed shall maintain a constant pressure drop, measured monthly, across the catalyst bed.

5. An owner or operator using a control device not listed in s. NR 465.07(1)(d) shall submit, for the administrator's approval, a description of the device, test data verifying the performance of the device, and appropriate site-specific operating parameters that will be monitored to demonstrate continuous compliance with the standard.

(2) CONTACT ADHESIVES. The owner or operator of an affected source subject to the provisions of s. NR 465.04(1)(b) or (2)(b) shall demonstrate continuous compliance according to the following procedures as appropriate:

(a) If complying by using the methods in s. NR 465.06(1)(b), (c)1. or (2)(b)1., submit a compliance certification in accord with s. NR 465.11(3) which states that compliant contact adhesives, including foam adhesives, have been used each day in the semiannual reporting period, or should otherwise identify each day noncompliant contact or foam adhesives were used. Each day a noncompliant contact or foam adhesive is used is a single violation of the standard.

(b) If complying by using the methods in s. NR 465.06(1)(c)2. or (2)(b)2., install, calibrate, maintain and operate equipment

according to the manufacturer's specifications to monitor each site-specific operating parameter established in accordance with s. NR 465.07(2)(b)1. The owner or operator shall also submit the excess emissions and continuous monitoring system performance report and summary report required by ss. NR 465.11(4) and 460.09(5). The appropriate monitoring equipment and related requirements include the following:

1. For an incinerator, a temperature monitoring device equipped with a continuous recorder shall be used as follows:

a. Where a thermal incinerator is used, the temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

b. Where a catalytic incinerator equipped with a fixed catalyst bed is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

c. Where a catalytic incinerator equipped with a fluidized catalyst bed is used, the temperature monitoring device shall be installed in the gas stream immediately before the bed. In addition, a pressure monitoring device shall be installed to measure the pressure drop across the catalyst bed. The pressure drop shall be measured monthly at a constant flow rate.

2. For a carbon adsorber, one of the following shall be used:

a. An integrating stream flow monitoring device having an accuracy of $\pm 10\%$, capable of recording the total regeneration stream mass flow for each regeneration cycle; and a carbon bed temperature monitoring device, having an accuracy of $\pm 1\%$ of the temperature being monitored or ± 0.5 °C, whichever is greater, and capable of recording the carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle.

b. An organic compound monitoring device, equipped with a continuous recorder, to indicate the concentration level of organic compounds exiting the carbon adsorber.

c. Any other monitoring device that has been approved by the administrator in accordance with s. NR 465.07(1)(d)4.d.

3. The owner or operator of an affected source may not operate a capture or control device at a daily average value greater than or less than, as appropriate, the operating parameter values. The daily average value shall be calculated as the average of all values for a monitored parameter recorded during the operating day.

4. The owner or operator of an affected source that is complying through the use of a catalytic incinerator equipped with a fluidized catalyst bed shall maintain a constant pressure drop, measured monthly, across the catalyst bed.

5. An owner or operator using a control device not listed in

s. NR 465.07(1)(d) shall submit for the administrator's approval a description of the device, test data verifying the performance of the device, and appropriate site specific operating parameters that will be monitored to demonstrate continuous compliance with the standard.

(3) STRIPPABLE SPRAY BOOTH COATINGS. The owner or operator of an affected source subject to the provisions s. NR 465.04(1)(c) or (2)(c) shall demonstrate continuous compliance by submitting a compliance certification in accord with s. NR 465.11(3) which states that compliant strippable spray booth coatings have been used each day in the semiannual reporting period, or otherwise identifies each day noncompliant materials were used. Each day a noncompliant strippable booth coating is used is a single violation of the standard.

(4) WORK PRACTICE STANDARDS. The owner or operator of an affected source shall demonstrate continuous compliance with the work practice standards in s. NR 465.05 by submitting a compliance certification in accord with s. NR 465.11(3) which states that the work practice implementation plan is being followed, or otherwise identifies the provisions of the plan that have not been implemented and each day the provisions were not implemented. During any period of time that an owner or operator is required to implement the provisions of the plan, each failure to implement an obligation under the plan during any particular day is a

violation.

NR 465.09 Performance test methods. (1)(a) Except as provided in par. (c), the owner or operator of an affected source shall use Method 311 in 40 CFR part 63, Appendix A, incorporated by reference in s. NR 484.04(25), in conjunction with formulation data, to determine the VHAP content of liquid coatings. Formulation data shall be used to identify VHAP present in the coating. Method 311 shall then be used to quantify those VHAP identified through formulation data. Method 311 may not be used to quantify HAP such as styrene and formaldehyde that are emitted during the cure.

(b) Except as provided in par. (c), the owner or operator of an affected source shall use Method 24 in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04(13), to determine the solids content by weight and the density of coatings.

(c) If it is demonstrated to the satisfaction of the administrator that a coating does not release VOC or HAP byproducts during the cure, batch formulation information shall be accepted for determining the VHAP or VOC content of the coating. The owner or operator of an affected source may request approval from the administrator to use an alternative method for determining the VHAP content of the coating. In the event of any inconsistency between Method 24 or Method 311 test data for a

material and formulation data for the same material, the applicable test method shall govern unless, after consultation, the owner or operator can demonstrate to the satisfaction of the department that the formulation data are correct.

(2) An owner or operator demonstrating compliance in accordance with s. NR 465.07(1)(d) or (2)(b) or 465.08(1)(d) or (2)(b), or complying with any of the other emission limits of s. NR 465.04 by operating a capture and control device, shall determine the overall control efficiency of the control system (R) as the product of the capture and control device efficiency, using the test methods in sub. (3) and the procedures in sub. (4).

(3) When an initial compliance demonstration is required by s. NR 465.07(1)(d) or (2)(b), the following test methods shall be used:

(a) Method 18 in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04(13), shall be used to determine the HAP concentration of gaseous air streams. The test shall consist of 3 separate runs, each lasting a minimum of 30 minutes.

(b) Method 1 or 1A in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04(13), shall be used for sample and velocity traverses.

(c) Method 2, 2A, 2C or 2D in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04(13), shall be used to measure velocity and volumetric flow rates.

(d) Method 3 in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04(13), shall be used to analyze the exhaust gases.

(e) Method 4 in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04(13), shall be used to measure the moisture in the stack gas.

(f) Methods 2, 2A, 2C, 2D, 3 and 4 in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04(13), shall be performed, as applicable, at least twice during each test period.

(4) An owner or operator of an affected source demonstrating compliance in accordance with s. NR 465.07(1)(d) or (2)(b) shall perform a gaseous emission test using the following procedures:

(a) Construct the overall HAP emission reduction system so that all volumetric flow rates and total HAP emissions can be accurately determined by the applicable test methods specified in sub.(3).

(b) Determine capture efficiency from the affected emission points by capturing, venting and measuring all HAP emissions from the affected emission points. The owner or operator shall isolate affected emission points located in an area with other nonaffected gaseous emission sources from all other gaseous emission points and shall determine capture efficiency according to the following procedures as appropriate:

1. For temporary total enclosures, capture efficiency shall be determined according to Method 204, and as applicable, Methods 204A through 204F, in 40 CFR part 51, Appendix M, incorporated by reference in s. NR 484.04(9).

2. For permanent total enclosures built around the affected emissions points, and where the building that houses the process is used as the enclosure, capture efficiency shall be assumed to be 100% when the requirements for a permanent total enclosure in Method 204, in 40 CFR part 51, Appendix M, incorporated by reference in s. NR 484.04(9), are satisfied. Notwithstanding par. (e), when a permanent total enclosure is confirmed through Method 204, a value of one shall be used for N when determining R under sub. (5), (6), (7) or (8).

3. Use any alternative protocol and test method provided they meet either the requirements of the data quality objective (DQO) approach or the lower confidence level (LCL) approach in 40 CFR part 63, Subpart KK, Appendix A, incorporated by reference in s. NR 484.04(24).

4. Shut down all nonaffected HAP emission points and continue to exhaust fugitive emissions from the affected emission points through any building ventilation system and other room exhausts such as drying ovens. All exhaust air shall be vented through stacks suitable for testing.

5. Use another methodology approved by the administrator

provided it complies with the criteria for acceptance under Method 301 in 40 CFR part 63, Appendix A, incorporated by reference in s. NR 484.04(25).

(c) Operate the control device with all affected emission points that will subsequently be delivered to the control device connected and operating at maximum production rate.

(d) Determine the efficiency (F) of the control device using the following equation:

$$F = \frac{\sum_{i=1}^n Q_{bi} C_{bi} - \sum_{j=1}^p Q_{aj} C_{aj}}{\sum_{i=1}^n Q_{bi} C_{bi}} \quad \text{(Equation 5)}$$

(e) Determine the efficiency (N) of the capture system using the following equation:

$$N = \frac{\sum_{i=1}^n Q_{di} C_{di}}{\sum_{i=1}^n Q_{di} C_{di} + \sum_{k=1}^p Q_{fk} C_{fk}} \quad \text{(Equation 6)}$$

(5) For an owner or operator complying with s. NR 465.04(1)(a) in accordance with s. NR 465.06(1)(a)3., compliance is demonstrated if the product of (F x N)(100) yields a value (R) such that the value of E_{ac} in Equation 2 in s. NR 465.06(1)(a)3. is

no greater than 1.0.

(6) For an owner or operator complying with s. NR 465.04(2)(a) in accordance with s. NR 465.06(2)(a)3., compliance is demonstrated if the product of $(F \times N)(100)$ yields a value (R) such that the value of E_{ac} in Equation 4 in s. NR 465.06(2)(a)3. is no greater than 0.8.

(7) For an owner or operator complying with s. NR 465.04(1)(b)2. in accordance with s. NR 465.06(1)(c)2., compliance is demonstrated if the product of $(F \times N)(100)$ yields a value (R) such that the value of G_{ac} in Equation 3 in s. NR 465.06(1)(c)2. is no greater than 1.0.

(8) For an owner or operator complying with s. NR 465.04(2)(b) in accordance with s. NR 465.06(2)(b)2., compliance is demonstrated if the product of $(F \times N)(100)$ yields a value (R) such that the value of G_{ac} in Equation 3 s. NR 465.06(1)(c)2. is no greater than 0.2.

NR 465.10 Recordkeeping requirements. (1) The owner or operator of an affected source shall fulfill all recordkeeping requirements of s. NR 460.09 according to the applicability criteria in s. NR 465.01(1)(e).

(2) The owner or operator of an affected source subject to the emission limits in s. NR 465.04 shall maintain records of the following as appropriate:

(a) A certified product data sheet for each finishing material, thinner, contact adhesive and strippable spray booth coating subject to the emission limits in s. NR 465.04.

(b) The VHAP content, in kg VHAP/kg solids (lb VHAP/lb solids), as applied, of each finishing material and contact adhesive subject to the emission limits in s. NR 465.04.

(c) The VOC content, in kg VOC/kg solids (lb VOC/lb solids), as applied, of each strippable spray booth coating subject to the emission limits in s. NR 465.04(1)(c) or (2)(c).

(3) The owner or operator of an affected source following the compliance method in s. NR 465.06(1)(a)1. or (2)(a)1. shall maintain copies of the averaging calculation for each month following the compliance date, as well as the data on the quantity of coatings and thinners used that is necessary to support the calculation of E in Equation 1 in s. NR 465.06(1)(a)1.

(4) The owner or operator of an affected source following the compliance procedures of s. NR 465.07(1)(c)2. or 465.08(1)(c)2. shall maintain the records required by s. NR 465.10(2) as well as records of all of the following:

(a) Solvent and coating additions to the continuous coater reservoir.

(b) Viscosity measurements.

(c) Data demonstrating that viscosity is an appropriate parameter for demonstrating compliance.

(5) The owner or operator of an affected source subject to the work practice standards in s. NR 465.05 shall maintain onsite a work practice implementation plan and all records associated with fulfilling the requirements of that plan, including, but not limited to, all of the following:

(a) Records demonstrating that the operator training program required by s. NR 465.05(2) is in place.

(b) Records collected in accordance with the inspection and maintenance plan required by s. NR 465.05(3).

(c) Records associated with the cleaning solvent accounting system required by s. NR 465.05(4).

(d) Records associated with the limitation on the use of conventional air spray guns showing total finishing material usage and the percentage of finishing materials applied with conventional air spray guns for each semiannual period as required by s. NR 465.05(8)(e).

(e) Records associated with the formulation assessment plan required by s. NR 465.05(12).

(f) Copies of documentation such as logs developed to demonstrate that the other provisions of the work practice implementation plan are followed.

(6) The owner or operator of an affected source following the compliance method of s. NR 465.07(1)(d) or 465.08(1)(d) shall maintain copies of the calculations demonstrating that the overall

control efficiency (R) of the control system results in the value of E_{ac} required by Equation 2 in s. NR 465.06(1)(a)3. or Equation 4 in s. NR 465.06(2)(a)3., records of the operating parameter values, and copies of the semiannual compliance reports required by s. NR 465.11(4).

(7) The owner or operator of an affected source following the compliance method of s. NR 465.07(2)(b) or 465.08(2)(b) shall maintain copies of the calculations demonstrating that the overall control efficiency (R) of the control system results in the applicable value of G_{ac} calculated using Equation 3 in s. NR 465.06(1)(c)2., records of the operating parameter values, and copies of the semiannual compliance reports required by s. NR 465.11(4).

(8) The owner or operator of an affected source subject to the emission limits in s. NR 465.04 and following the compliance provisions of s. NR 465.07(1)(a) to (c), (2)(a), (3) or (4) or 465.08(1)(a) to (c), (2)(a), (3) or (4) shall maintain records of the compliance certifications submitted in accordance with s. NR 465.11(3) for each semiannual period following the compliance date.

(9) The owner or operator of an affected source shall maintain records of all other information submitted with the compliance status report required by ss. NR 460.08(8) and 465.11(2) and the semiannual reports required by s. NR 465.11(3).

(10) The owner or operator of an affected source shall maintain all records in accordance with the requirements of s. NR 460.09(2)(a).

NR 465.11 Reporting requirements. (1) The owner or operator of an affected source subject to this chapter shall fulfill all reporting requirements of ss. NR 460.06 to 460.09 according to the applicability criteria in s. NR 465.01(1)(e).

(2) The owner or operator of an affected source demonstrating compliance in accordance with s. NR 465.07(1)(a) to (c), (2)(a), (3) or (4) shall submit the compliance status report required by s. NR 460.08(8) no later than 60 days after the compliance date. The report shall include the information required by s. NR 465.07(1)(a) to (c), (2)(a), (3) or (4).

(3) The owner or operator of an affected source demonstrating compliance in accordance with s. NR 465.08(1)(a) to (c), (2)(a), (3) or (4) shall submit a report covering the previous 6 months of wood furniture manufacturing operations as follows:

(a) The first report shall be submitted no later than 30 calendar days after the end of the first 6-month period following the compliance date.

(b) Subsequent reports shall be submitted no later than 30 calendar days after the end of each 6-month period following the first report.

(c) The semiannual reports shall include the information required by s. NR 465.08(1) (a) to (c), (2) (a), (3) and (4), a compliance certification stating whether the affected source was in compliance or noncompliance, and, if the affected source was in noncompliance, the measures taken to bring the affected source into compliance. The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

(4) The owner or operator of an affected source demonstrating compliance in accordance with s. NR 465.08(1) (d) or (2) (b) shall submit the excess emissions and continuous monitoring system performance report and summary report required by s. NR 460.09(5). The report shall include the monitored operating parameter values required by s. NR 465.08(1) (d) or (2) (b). If the source experiences excess emissions, the report shall be submitted quarterly for at least one year after the excess emissions occur and until a request to reduce reporting frequency is approved, as indicated in s. NR 460.09(5) (c) 1.c. If no excess emissions occur, the report shall be submitted semiannually.

(5) The owner or operator of an affected source required to provide a written notification under s. NR 465.05(12) (b) shall include in the notification one or more statements that explains the reasons for the usage increase. The notification shall be submitted no later than 30 calendar days after the end of the

annual period in which the usage increase occurred.

Table 1

List of Volatile Hazardous Air Pollutants

Chemical Name	CAS Number
Acetaldehyde	75070
Acetamide	60355
Acetonitrile	75058
Acetophenone	98862
2-Acetylaminofluorine	53963
Acrolein	107028
Acrylamide	79061
Acrylic acid	79107
Acrylonitrile	107131
Allyl chloride	107051
4-Aminobiphenyl	92671
Aniline	62533
o-Anisidine	90040
Benzene	71432
Benzidine	92875
Benzotrichloride	98077
Benzyl chloride	100447
Biphenyl	92524
Bis(2-ethylhexyl) phthalate (DEHP)	117817
Bis(chloromethyl) ether	542881
Bromoform	75252
1,3-Butadiene	106990

Carbon disulfide	75150
Carbon tetrachloride	56235
Carbonyl sulfide	463581
Catechol	120809
Chloroacetic acid	79118
2-Chloroacetophenone	532274
Chlorobenzene	108907
Chloroform	67663
Chloromethyl methyl ether	107302
Chloroprene	126998
Cresols (isomers and mixture)	1319773
o-Cresol	95487
m-Cresol	108394
p-Cresol	106445
Cumene	98828
2,4-D (2,4-Dichlorophenoxyacetic acid, including salts and esters)	94757
DDE (1,1-Dichloro-2,2-bis(p-chlorophenyl) ethylene)	72559
Diazomethane	334883
Dibenzofuran	132649
1,2-Dibromo-3-chloropropane	96128
Dibutylphthalate	84742
1,4-Dichlorobenzene	106467
3,3'-Dichlorobenzidine	91941
Dichloroethyl ether (Bis(2-chloroethyl) ether)	111444
1,3-Dichloropropene	542756
Diethanolamine	111422

N,N-Dimethylaniline	121697
Diethyl sulfate	64675
3,3'-Dimethoxybenzidine	119904
4-Dimethylaminoazobenzene	60117
3,3'-Dimethylbenzidine	119937
Dimethylcarbamoyl chloride	79447
N,N-Dimethylformamide	68122
1,1-Dimethylhydrazine	57147
Dimethyl phthalate	131113
Dimethyl sulfate	77781
4,6-Dinitro-o-cresol, and salts	534521
2,4-Dinitrophenol	51285
2,4-Dinitrotoluene	121142
1,4-Dioxane (1,4-Diethyleneoxide)	123911
1,2-Diphenylhydrazine	122667
Epichlorohydrin	
(1-Chloro-2,3-epoxypropane)	106898
1,2-Epoxybutane	106887
Ethyl acrylate	140885
Ethylbenzene	100414
Ethyl carbamate (Urethane)	51796
Ethyl chloride (Chloroethane)	75003
Ethylene dibromide (Dibromoethane)	106934
Ethylene dichloride (1,2-Dichloroethane)	107062
Ethylene glycol	107211
Ethylene oxide	75218
Ethylenethiourea	96457
Ethylidene dichloride (1,1-Dichloroethane)	75343
Formaldehyde	50000

Glycol ethers^a

Hexachlorobenzene	118741
Hexachloro-1,3-butadiene	87683
Hexachloroethane	67721
Hexamethylene-1,6-diisocyanate	822060
Hexamethylphosphoramide	680319
Hexane	110543
Hydrazine	302012
Hydroquinone	123319
Isophorone	78591
Maleic anhydride	108316
Methanol	67561
Methyl bromide (Bromomethane)	74839
Methyl chloride (Chloromethane)	74873
Methyl chloroform (1,1,1-Trichloroethane)	71556
Methyl ethyl ketone (2-Butanone)	78933
Methylhydrazine	60344
Methyl iodide (Iodomethane)	74884
Methyl isobutyl ketone (Hexone)	108101
Methyl isocyanate	624839
Methyl methacrylate	80626
Methyl tert-butyl ether	1634044
4,4'-Methylene bis(2-chloroaniline)	101144
Methylene chloride (Dichloromethane)	75092
4,4'-Methylenediphenyl diisocyanate (MDI)	101688
4,4'-Methylenedianiline	101779
Naphthalene	91203
Nitrobenzene	98953
4-Nitrobiphenyl	92933

4-Nitrophenol	100027
2-Nitropropane	79469
N-Nitroso-N-methylurea	684935
N-Nitrosodimethylamine	62759
N-Nitrosomorpholine	59892
Phenol	108952
p-Phenylenediamine	106503
Phosgene	75445
Phthalic anhydride	85449
Polychlorinated biphenyls (Aroclors)	1336363
Polycyclic Organic Matter ^b	
1,3-Propane sultone	1120714
β-Propiolactone	57578
Propionaldehyde	123386
Propoxur (Baygon)	114261
Propylene dichloride (1,2-Dichloropropane)	78875
Propylene oxide	75569
1,2-Propylenimine (2-Methyl aziridine)	75558
Quinone	106514
Styrene	100425
Styrene oxide	96093
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746016
1,1,2,2-Tetrachloroethane	79345
Tetrachloroethylene (Perchloroethylene)	127184
Toluene	108883
2,4-Toluenediamine	95807
Toluene-2,4-diisocyanate	584849
o-Toluidine	95534
1,2,4-Trichlorobenzene	120821

1,1,2-Trichloroethane	79005
Trichloroethylene	79016
2,4,5-Trichlorophenol	95954
2,4,6-Trichlorophenol	88062
Triethylamine	121448
Trifluralin	1582098
2,2,4-Trimethylpentane	540841
Vinyl acetate	108054
Vinyl bromide	593602
Vinyl chloride	75014
Vinylidene chloride (1,1-Dichloroethylene)	75354
Xylenes (isomers and mixture)	1330207
o-Xylene	95476
m-Xylene	108383
p-Xylene	106423

^aIncludes mono- and di-ethers of ethylene glycol, diethylene glycols and triethylene glycol; $R-(OCH_2CH_2)_n-OR'$ where:

$n = 1, 2$ or 3

$R =$ alkyl or aryl groups

$R' = R, H,$ or groups which, when removed, yield glycol ethers with the structure: $R-(OCH_2CH_2)_n-OH$. Polymers are excluded from the glycol category.

^bIncludes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to $100^\circ C$.

Table 2

Summary of Emission Limits and Compliance Demonstration Methods

Emission Point	Existing Source	New Source
(1) Finishing Operations:		
(a) Achieve a monthly weighted average VHAP content across all finishing materials (maximum kg VHAP/kg solids [lb VHAP/lb solids], as applied).	1.0	0.8
(b) Use compliant finishing materials (maximum kg VHAP/kg solids [lb VHAP/lb solids], as applied):		
1. Stains	^a 1.0	^a 1.0
2. Sealers	^a 1.0	^a 0.8
3. Topcoats	^a 1.0	^a 0.8
4. Washcoats	^b 1.0	^b 0.8
5. Basecoats	^b 1.0	^b 0.8
6. Enamels	^b 1.0	^b 0.8
(c) Use a control device.	^c 1.0	^c 0.8
(d) Use any combination of (a), (b) and (c).	1.0	0.8
(2) Cleaning Operation. Use compliant strippable spray booth coatings (maximum kg VOC/kg solids [lb VOC/lb solids], as applied)	0.8	0.8
(3) Contact Adhesives:		
(a) Use compliant contact adhesives (maximum kg		

VHAP/kg solids [lb VHAP/lb solids], as applied):

1. For aerosol adhesive, and for contact adhesives applied to nonporous substrates.	^d NA	^c NA
2. For foam adhesives used in products that meet flammability requirements.	1.8	0.2
3. For all other contact adhesives.	1.0	0.2
(b) Use a control device	^e 1.0	^e 0.2

^a Any thinner used onsite shall contain no more than 10.0% VHAP by weight.

^b Any thinner used onsite shall contain no more than 10.0% VHAP by weight if the finishing material is purchased premade, that is, if it is not formulated onsite by thinning other finishing materials, i.e., thinning a sealer to use as a washcoat. If formulated onsite, these shall be formulated using compliant finishing materials, i.e., those that meet the limits specified in this table, and thinners containing no more than 3.0% VHAP by weight.

^c The control device shall be operated at an efficiency that is equivalent to no greater than 1.0 pound (or 0.8 pounds) of VHAP being emitted from the affected emission source per pound of solids used.

^d There is no limit on the VHAP content of these adhesives.

^e The control device shall be operated at an efficiency that is equivalent to no greater than 1.0 pounds (or 0.2 pounds) of VHAP being emitted from the affected emission source per pound of solids used.

Table 3

Pollutants Excluded From Use in Cleaning and Washoff Solvents

Chemical Name	CAS Number
Acetaldehyde	75070
Acetamide	60355
2-Acetylaminoflourine	53963
Acrylamide	79061
Acrylonitrile	107131
4-Aminobiphenyl	92671
Aniline	62533
o-Anisidine	90040
Antimony trioxide	1309644
Arsenic and inorganic arsenic compounds	7440382
Benz(c)acridine	225514
Benzene	71432
Benzidine	92875
Benzo(a)anthracene	56553
Benzo(b)fluoranthene	205992
Benzo(a)pyrene	50328
Beryllium compounds	7440417
Beryllium salts	
Bis(chloromethyl)ether	542881
Bis(2-ethylhexyl)phthalate (DEHP)	117817
Bromoform	75252
1,3-Butadiene	106990
Cadmium compounds	

Captan	133062
Carbon tetrachloride	56235
Chlordane	57749
Chlorobenzilate	510156
Chloroform	67663
Chromium compounds (hexavalent)	
Chrysene	218019
Coke oven emissions	
DDE (1,1-Dichloro-2,2-bis(p-chlorophenyl) ethylene)	72559
Dibenz (ah) anthracene	53703
1,2:7,8-Dibenzopyrene	189559
1,2-Dibromo-3-chloropropane	96128
1,4-Dichlorobenzene (p)	106467
3,3'-Dichlorobenzidine	53963
Dichloroethyl ether (Bis(2-chloroethyl) ether)	111444
1,3-Dichloropropene	542756
Dichlorvos	62737
Diethyl sulfate	64675
3,3'-Dimethoxybenzidine	119904
Dimethyl aminoazobenzene	60117
7,12-Dimethylbenz (a) anthracene	57976
3,3'-Dimethyl benzidine	119937
Dimethyl carbamoyl chloride	79447
Dimethyl formamide	68122
1,1-Dimethyl hydrazine	57147
2,4-Dinitrotoluene	121142
1,4-Dioxane (1,4-Diethyleneoxide)	123911
1,2-Diphenylhydrazine	122667

Epichlorohydrin	106898
Ethyl acrylate	140885
Ethyl carbamate (Urethane)	51796
Ethylene dibromide (1,2-Dibromoethane)	106934
Ethylene dichloride (1,2-Dichloroethane)	107062
Ethylene oxide	75218
Ethylene thiourea	96457
Formaldehyde	50000
Heptachlor	76448
Hexachlorobenzene	118741
Hexamethylphosphoramide	680319
Hydrazine	302012
Indeno(1,2,3-cd)pyrene	193395
Lindane (Hexachlorocyclohexane, gamma)	58899
Methyl hydrazine	60344
Methylene chloride (Dichloromethane)	75092
4,4'-Methylenedianiline	101779
Nickel refinery dust	
Nickel subsulfide	12035722
2-Nitropropane	79469
N-Nitrosodimethylamine	62759
N-Nitrosoc-N-methylurea	684935
N-Nitrosomorpholine	59892
Pentachlorophenol	87865
Polychlorinated biphenyls (Aroclors)	1336363
1,3-Propane sultone	1120714
Propoxur	114261
Propylene dichloride (1,2-Dichloropropane)	78875
Propylene oxide	75569

1,2-Propylenimine (2-Methyl aziridine)	75558
Selenium sulfide (mono- and di-)	7488564
Styrene oxide	96093
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746016
2,4-Toluene diamine	95807
o-Toluidine	95534
Toxaphene (Chlorinated camphene)	8001352
2,4,6-Trichlorophenol	88062
Vinyl bromide (Bromoethene)	593602
Vinyl chloride	75014

Table 4

List of VHAP of Potential Concern Identified by Industry

Chemical Name	CAS Number	de minimis (tons/yr)
Diethanolamine	111422	5.0
Dimethyl formamide	68122	1.0
2-Ethoxyethyl acetate	111159	10.0
Formaldehyde	50000	0.2
Isophorone	78591	0.7
2-Methoxyethanol	109864	10.0
Methylene chloride	75092	4.0
2-Nitropropane	79469	1.0
Phenol	108952	0.1
Styrene monomer	100425	1.0

Table 5

Table 5
 List of Chemicals of Potential Concern

Chemical Name	CAS Number	de minimis (tons/yr)*
Acetaldehyde	75070	0.9
Acetamide	60355	1.0
Acetophenone	98862	1.0
2-Acetylaminoflourine	53963	0.0005
Acrolein	107028	0.04
Acrylamide	79061	0.002
Acrylonitrile	107131	0.03
Allyl chloride	107051	1.0
4-Aminobipheny	192671	1.0
Aniline	62533	0.1
o-Anisidine	90040	1.0
Benz(c)acridine	225514	0.01
Benzene	71432	0.2
Benzidine	92875	0.00003
Benzo(a)anthracene	56553	0.01
Benzo(b)fluoranthene	205992	0.01
Benzo(a)pyrene	50328	0.001
Benzotrichloride	98077	0.0006
Benzyl chloride	100447	0.04
Bis(chloromethyl) ether	542881	0.00003
Bis(2-ethylhexyl) phthalate (DEHP)	117817	0.5

Bromoform	75252	2.0
1,3-Butadiene	106990	0.007
Captan	133062	2.0
Carbon disulfide	75150	1.0
Carbon tetrachloride	56235	0.1
Carbonyl sulfide	463581	5.0
Catechol	120809	5.0
Chloramben	133904	1.0
Chlordane	57749	0.005
Chloroacetic acid	79118	0.1
2-Chloroacetophenone	532274	0.06
Chlorobenzilate	510156	0.04
Chloroform	67663	0.09
Chloromethyl methyl ether	107302	0.1
Chloroprene	126998	1.0
Chrysene	218019	0.01
Cobalt carbonyl	10210681	0.1
m-Cresol	108394	1.0
o-Cresol	95487	1.0
p-Cresol	106445	1.0
Cresols/Cresylic acid (isomers and mixture)	1319773	1.0
DDE (1,1-Dichloro-2,2-bis(p-chlorophenyl) ethylene	72559	0.01
Diazomethane	334883	1.0
Dibenz(ah)anthracene	53703	0.01
Dibenzofurans	132649	5.0
1,2:7,8-Dibenzopyrene	189559	0.01
1,2-Dibromo-3-chloropropane	96128	0.001

1,4-Dichlorobenzene(p)	106467	0.3
3,3'-Dichlorobenzidine	91941	0.02
Dichloroethyl ether	111444	0.006
(Bis(2-chloroethyl)ether)		
1,3-Dichloropropene	542756	1.0
Dichlorvos	62737	0.02
Diethanolamine	111422	5.0
Diethyl sulfate	64675	1.0
3,3'-Dimethoxybenzidine	119904	0.01
Dimethyl aminoazobenzene	60117	1.0
N,N-Dimethylaniline	121697	1.0
7,12-Dimethylbenz(a)anthracene	57976	0.01
3,3'-Dimethyl benzidine	119937	0.001
Dimethyl carbamoyl chloride	79447	0.002
Dimethyl formamide	68122	1.0
1,1-Dimethyl hydrazine	57147	0.0008
Dimethyl sulfate	77781	0.1
4,6-Dinitro-o-cresol, and salts	534521	0.1
2,4-Dinitrophenol	51285	1.0
2,4-Dinitrotoluene	121142	0.002
1,4-Dioxane (1,4-Diethyleneoxide)	123911	0.6
1,2-Diphenylhydrazine	122667	0.009
Epichlorohydrin	106898	2.0
1,2-Epoxybutane	106887	1.0
Ethyl acrylate	140885	0.1
Ethyl carbamate (Urethane)	51796	0.08
Ethylene dibromide (1,2-Dibromoethane)	106934	0.01
Ethylene dichloride (1,2-Dichloroethane)	107062	0.08

Ethylene imine	151564	0.0003
Ethylene oxide	75218	0.09
Ethylene thiourea	96457	0.06
Ethylidene dichloride (1,1-Dichloroethane)	75343	1.0
Fluomine	62207765	0.1
Formaldehyde	50000	0.2
Glycol ethers ^a		5.0
Heptachlor	76448	0.002
Hexachlorobenzene	118741	0.004
Hexachlorobutadiene	87683	0.09
Hexachlorocyclopentadiene	77474	0.1
Hexachloroethane	67721	0.5
Hexamethylene-1,6-diisocyanate	822060	5.0
Hexamethylphosphoramide	680319	0.01
Hydroquinone	123319	1.0
Indeno(1,2,3-cd)pyrene	193395	0.01
Isophorone	78591	0.07
Lindane (Hexachlorocyclohexane, gamma)	58899	0.005
Maleic anhydride	108316	1.0
Mercury, (acetato-o)phenyl- (Phenylmercuric Acetate)	62384	0.01
2-Methoxy ethanol	109864	10.0
Methyl bromide (Bromomethane)	74839	10.0
Methyl chloride (Chloromethane)	74873	1.0
Methylcyclopentadienyl manganese	12108133	0.1
4,4'-Methylene bis(2-chloroaniline)	101144	0.02
Methylene chloride (Dichloromethane)	75092	4.0
4,4'-Methylenedianiline	101779	1.0

Methylene diphenyl diisocyanate	101688	0.1
Methyl hydrazine	60344	0.006
Methyl iodide (Iodomethane)	74884	1.0
Methyl isocyanate	624839	0.1
Nickel carbonyl	13463393	0.1
Nitrobenzene	98953	1.0
4-Nitrobiphenyl	92933	1.0
4-Nitrophenol	100027	5.0
2-Nitropropane	79469	1.0
N-Nitrosodimethylamine	62759	0.0001
N-Nitroso-N-methylurea	684935	0.00002
N-Nitrosomorpholine	59892	1.0
Parathion	56382	0.1
Pentachloronitrobenzene (Quintobenzene)	82688	0.03
Pentachlorophenol	87865	0.07
Phenol	108952	0.1
Phthalic anhydride	85449	5.0
Polychlorinated biphenyls (Aroclors)	1336363	0.0009
Polycyclic organic matter ^b		0.01
1,3-Propane sultone	1120714	0.003
β -Propiolactone	57578	0.1
Propionaldehyde	123386	5.0
Propoxur	114261	2.0
Propylene dichloride (1,2-Dichloropropane)	78875	0.1
Propylene oxide	75569	0.5
1,2-Propylenimine (2-Methy aziridine)	75558	10.0003
Quinoline	91225	0.0006
Quinone	106514	5.0

Styrene	100425	1.0
Styrene oxide	96093	1.0
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746016	0.00000006
1,1,2,2-Tetrachloroethane	79345	0.03
Tetrachloroethylene (Perchloroethylene)	127184	4.0
Tetraethyl lead	78002	0.01
Tetramethyl lead	75741	0.01
2,4-Toluene diamine	95807	0.002
2,4-Toluene diisocyanate	584849	0.1
o-Toluidine	95534	0.4
Toxaphene (Chlorinated camphene)	8001352	0.006
1,1,2-Trichloroethane	79005	0.1
Trichloroethylene	79016	1.0
2,4,5-Trichlorophenol	95954	1.0
2,4,6-Trichlorophenol	88062	0.6
Trifluralin	1582098	0.9
2,2,4-Trimethylpentane	540841	5.0
Vinyl acetate	108054	1.0
Vinyl bromide (Bromoethene)	593602	0.06
Vinyl chloride	75014	0.02
Vinylidene chloride (1,1-Dichloroethylene)	75354	0.04

These values are based on the de minimis levels provided in the proposed rulemaking, as published in the Federal Register on March 14, 1995 (60 FR 13664), pursuant to section 112(g) of the act using a 70-year lifetime exposure duration for all VHAP. Default assumptions and the de minimis values based on inhalation reference doses (RfC) are not changed by this adjustment.

^a Except for ethylene glycol butyl ether, ethylene glycol ethyl ether (2-ethoxy ethanol), ethylene glycol hexyl ether, ethylene glycol methyl ether (2-

ethoxyethanol), ethylene glycol phenyl ether, ethylene glycol propyl ether, ethylene glycol mono-2-ethylhexyl ether, diethylene glycol butyl ether, diethylene glycol ethyl ether, diethylene glycol methyl ether, diethylene glycol hexyl ether, diethylene glycol phenyl ether, diethylene glycol propyl ether, triethylene glycol butyl ether, triethylene glycol ethyl ether, triethylene glycol methyl ether, triethylene glycol propyl ether, ethylene glycol butyl ether acetate, ethylene glycol ethyl ether acetate, and diethylene glycol ethyl ether acetate.

^b Except for benzo(b)fluoranthene, benzo(a)anthracene, benzo(a)pyrene, 7,12-dimethylbenz(a)anthracene, benz(c)acridine, chrysene, dibenz(ah)anthracene, 1,2:7,8-dibenzopyrene, indeno(1,2,3-cd)pyrene, but including dioxins and furans.

SECTION 5. NR 484.03(1) to (4) are renumbered 484.03(2) to (5).

SECTION 6. NR 484.03(1) is created to read:

NR 484.03

(1)	29 CFR part 1910 subpart Z	Toxic and Hazardous Substances	NR 465
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SECTION 7. NR 484.04(9) and (24) are amended to read:

NR 484.04

(9)	40 CFR part 51 Appendix M	Recommended Test Methods for State Implementation Plans	NR 439 <u>NR 465.09(4)</u> <u>(b)1. and 2.</u> NR 466.09(5)
(24)	40 CFR part 63, Subpart KK, Appendix A	Data Quality Objective and Lower Confidence Limit Approaches for Alternative Capture Efficiency Protocols and Test Methods	NR 439.06(3) (am) <u>NR 465.09(4) (b)3.</u> NR 466.09(6)

SECTION 8. NR 484.05(1) is amended to read:

NR 484.05	Standard Industrial	NR 400.02(74)
(1) NTIS Order	Classification	NR 400.02(86)
No. PB 87-	Manual, 1987	NR 400.02(91)
100012		NR 400.02(149)
		NR 405.02(8)
		NR 407.02(4) (intro.)
		NR 407.05(4) (b)
		NR 408.02(5)
		NR 410.02(4)
		NR 421.02(3)
		NR 421.02(17)
		NR 422.02(112)
		NR 422.095(1)
		NR 422.15(1) (intro.)
		NR 438.02(1)
		<u>NR 465.02(51)</u>

SECTION 9. NR 484.06(intro.) is amended to read:

NR 484.06(intro.) The following materials from other government organizations listed in the first column of Tables 4A to 4D 4E are incorporated by reference for the corresponding sections of chs. NR 400 to 439 and 445 to 499 in the third column of Tables 4A to 4D 4E.

SECTION 10. NR 484.06(5) is created to read:

NR 484.06(5) The following are documents from the State of California, Department of Consumer Affairs, Bureau of Home Furnishings and Thermal Insulation.

Note: Copies may be downloaded for personal use from the following Internet address: <http://www.dca.ca.gov/bhfti/bulletin.htm>.

Those without access to a computer can obtain printed copies from:

State of California
Department of Consumer Affairs
Bureau of Home Furnishings and Thermal Insulation
3485 Orange Grove Avenue
North Highlands CA 95660-5595
(916) 920-6951

Table 4E

State of California Document Reference

Document Number	Title	Incorporated by Reference For
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(a) Technical Bulletin 116	Requirements, Test Procedure and Apparatus for Testing the Flame Retardance of Upholstered Furniture	NR 465.04(1)(b)1.
(b) Technical Bulletin 117	Requirements, Test Procedure and Apparatus for Testing the Flame Retardance of Resilient Filling Materials Used in Upholstered Furniture	NR 465.04(1)(b)1.
(c) Technical Bulletin 133	Flammability Test Procedure for Seating Furniture for Use in Public Occupancies	NR 465.04(1)(b)1.

SECTION 11. NR 484.11(7) and Table 6G are renumbered 484.11(8) and Table 6H.

SECTION 12. NR 484.11(7) is created to read:

NR 484.11(7) The following is a document from The Business and Institutional Furniture Manufacturer's Association (BIFMA).

Note: Copies may be purchased for personal use from:

BIFMA International
2680 Horizon Drive SE, Suite A-1
Grand Rapids MI 49546-7500
E-mail: email@bifma.org
Phone: (616) 285-3963
Fax: (616) 285-3765

Table 6G
BIFMA Document Reference

Document Number	Title	Incorporated by Reference For
BIFMA X5.7-1991	Voluntary Upholstered Furniture Flammability Standard for Non-residential, Non-live-in Occupancies	NR 465.04(1)(b)1.

SECTION 13. NR 484.11(10) is created to read:

NR 484.11(10) The following are documents from the Upholstered Furniture Action Council (UFAC).

Note: Copies may be purchased for personal use from:

Upholstered Furniture Action Council

Box 2436

High Point, NC 27261

Phone: (336) 885-5065

Fax: (336) 885-5072

Table 6J
UFAC Document Reference

Document Number	Title	Incorporated by Reference For
(a) DMTM--1990	Decking Materials Test Method--1990	NR 465.04(1)(b)1.
(b) WCTM--1990	Welt Cord Test Method--1990	NR 465.04(1)(b)1.
(c) IFTM--1990	Interior Fabrics Test Method--1990	NR 465.04(1)(b)1.
(d) F/PCTM--1990, PT A	Filling/Padding Component Test Method--1990 Part A - For Slab or Garnetted Materials	NR 465.04(1)(b)1.
(e) F/PCTM--	Filling/Padding	NR 465.04(1)(b)1.

1990, PT B	Component Test Method-- 1990 Part B - For Fibrous or Particulate Materials	
(f) PTM--1990	Barrier Test Method-- 1990	NR 465.04(1)(b)1.
(g) FCTM--1990	Fabric Classification Test Method--1990	NR 465.04(1)(b)1.
(h) DTTM--1993	Standard Test Methods for Decorative Trims, Edging, and Brush Fringes--1993	NR 465.04(1)(b)1.

The foregoing rule was approved and adopted by the State of Wisconsin Natural Resources Board on April 25, 2001.

The rule shall take effect the first day of the month following publication in the Wisconsin administrative register as provided in s. 227.22(2)(intro.), Stats.

Dated at Madison, Wisconsin _____.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By _____
Darrell Bazzell, Secretary

(SEAL)

LRB or Bill No./Adm. Rule No.
ch. NR 465
Amendment No. if Applicable

FISCAL ESTIMATE
DOA-2048 N(R10/94)

ORIGINAL UPDATED
 CORRECTED SUPPLEMENTAL

Subject Adoption of national emission standards for hazardous air pollutants for wood furniture manufacturing operations.

Fiscal Effect

State: No State Fiscal Effect

Check columns below only if bill makes a direct appropriation or affects a sum sufficient appropriation.

- Increase Existing Appropriation Increase Existing Revenues
- Decrease Existing Appropriation Decrease Existing Revenues
- Create New Appropriation

- Increase Costs - May be possible to Absorb Within Agency's Budget Yes No
- Decrease Costs

Local: No local government costs

- 1. Increase Costs
 Permissive Mandatory
- 2. Decrease Costs
 Permissive Mandatory

- 3. Increase Revenues
 Permissive Mandatory
- 4. Decrease Revenues
 Permissive Mandatory

5. Types of Local Governmental Units Affected:
- Towns Villages Cities
 - Counties Others _____
 - School Districts WTCS Districts

Fund Sources Affected

- GPR FED PRO PRS SEG SEG-S

Affected Ch. 20 Appropriations

Assumptions Used in Arriving at Fiscal Estimate

SUMMARY OF RULE - The proposed rules incorporate into Wisconsin Administrative Code, existing national emission standards for hazardous air pollutants (NESHAP) for wood furniture manufacturing operations. This NESHAP became final when published in the Federal Register on December 7, 1995, under section 112(d) of the Clean Air Act, as amended in 1990. This federal standard applies to both new and existing major hazardous air pollutant (HAP) sources which are engaged in the manufacture of wood furniture or wood furniture components. Finishing materials and contact adhesives used in this industry are a significant source of HAP emissions. Affected sources are required to control HAP emissions using the maximum achievable control technology (MACT). Flexible compliance options are provided, including pollution prevention methods which allow affected facilities to eliminate or reduce the use of toxic chemicals by substituting non-toxic chemicals. Section 285.27(2), Stats., requires that the Department promulgate NESHAPs by rule.

FISCAL IMPACT - The Department is already responsible for implementing this NESHAP, and does so through the operation permit program under ch. N 407, Wis. Adm. Code. Incorporating this NESHAP into Wisconsin Administrative Code does not impose additional costs on the Department.

Local governments have no role in implementing this standard and therefore will not incur any costs as a result of this proposed rule action.

Long-Range Fiscal Implications

None

Agency/Prepared by: (Name & Phone No.)

Department of Natural Resources
Robert B. Eckdale (606/266-2856)

Authorized Signature/Telephone No.

Joe Polasek
Joe Polasek (608/266-2794)

Date

9-26-00