

pt 1
MAY 17 2001

State of Wisconsin
Department of Natural Resources

NOTICE TO PRESIDING OFFICERS OF PROPOSED RULEMAKING

Pursuant to s. 227.19, Stats., notice is hereby given that final draft rules are being submitted to the presiding officer of each house of the legislature. The rules being submitted are:

Natural Resources Board Order No. AM-37-00

Legislative Council Rules Clearinghouse Number 00-160

Subject of Rules Volatile organic compound emissions and national emission standards for hazardous air pollutants for wood furniture manufacturing

Date of Transmittal to Presiding Officers May 15, 2001

Send a copy of any correspondence or notices pertaining to this rule to:

**Carol Turner, Rules Coordinator
DNR Bureau of Legal Services
LS/5, 101 South Webster**

**Telephone: 266-1959
e-mail: turnec@dnr.state.wi.us**

An electronic copy of the proposed rule may be obtained by contacting Ms. Turner

REPORT TO LEGISLATURE

NR 422, 460, 465 and 484, Wis. Adm. Code
Volatile organic compound emissions and national emission standards for
hazardous air pollutants for wood furniture manufacturing

Board Order No. AM-37-01
Clearinghouse Rule No. 00-160

Statement of Need

Section 112 of the Clean Air Act, as amended in 1990, requires that the U.S. Environmental Protection Agency promulgate emission standards for all categories of major sources of hazardous air pollutants. On July 16, 1992, the EPA published the initial list of source categories slated for regulation. This list included the wood furniture manufacturing industry since it commonly uses organic hazardous air pollutants as components in coatings. The EPA promulgated the final national emission standards for hazardous air pollutants for the wood furniture manufacturing industry on December 7, 1995.

The wood furniture manufacturing NESHAP applies to both new and existing major hazardous air pollutant sources that are engaged in the manufacture of wood furniture or wood furniture components. The standards include hazardous air pollutant emission limits for finishing materials and contact adhesives. Work practices for inspection and maintenance, cleaning and washoff operations and application equipment for finishing materials are also included. Facilities may select from various options to comply with the emission limits including use of low hazardous air pollutant compliant materials, averaging and use of control equipment. Specific methods for demonstrating compliance are included as well as monitoring, recordkeeping and reporting requirements. All of these components are necessary to ensure and verify compliance.

Final compliance dates for existing sources have passed. New sources must comply upon start-up. If an affected source commits to certain hazardous air pollutant emission or material usage restrictions, only simplified recordkeeping requirements apply. Facilities are also provided with opportunity to become a synthetic minor source, and thereby avoid the need to comply with the standard, by obtaining and complying with a federally enforceable permit restricting potential hazardous air pollutant emissions.

Modifications as a Result of Public Hearing

No modifications were made as a result of the public hearing.

Appearances at the Public Hearing and Their Position

There were no appearances.

Response to Legislative Council Rules Clearinghouse Report

See attached memo

Final Regulatory Flexibility Analysis

In 1998, the Department notified the U.S. EPA that, based on notification reports received, 15 facilities were thought to be major hazardous air pollutant sources subject to the national emission standard for hazardous air pollutants. Two additional facilities subsequently notified the Department that they were affected sources. Of these 17 facilities, 4 have subsequently achieved synthetic minor source status for federal hazardous air pollutants by electing emission restrictions in their operation permits. Air emissions inventory data indicates that an additional 4 facilities reduced their 1998 federal hazardous air pollutant emissions to below the exemption levels provided in the standard. As long as these emission levels are maintained, these facilities will be subject only to limited recordkeeping requirements. None of the facilities which notified as an affected major source qualify as a small business.

As part of the federal rule promulgation process, the EPA is required under the Regulatory Flexibility Act to consider potential impacts of proposed regulations on small business entities. Because the EPA recognized the potential that this standard could affect small businesses, a small business work group was formed under the regulatory negotiation process used to develop the standard to specifically address small business issues. In evaluating options to comply with the standards, an effort was made to ensure that the compliance options would not impose a burden on small businesses. For example, the proposed standards do not mandate the use of control devices that can require a significant capital investment and impose an unfair burden on small businesses that may have trouble raising the required capital. Small businesses can meet the emission limits for finishing materials and adhesives through the use of compliant materials. In addition, the work group recommended, and the EPA developed a guide to implementing the national emission standard for hazardous air pollutants. This document guides owners and operators on how to determine if their source is affected and on how to comply with the standards. Example forms which can be used for reporting and recordkeeping are also included. This guidance document is available on the EPA's web site.

The Department worked with the Department of Commerce's Clean Air Assistance Program to develop and mail rule summary information to facilities in the wood furniture industry. With the Department's participation, the Clean Air Assistance Program also conducted seminars for small businesses in 1997 on the Department's air pollution control program. These seminars included sessions specific to the wood products industry and this national emission standard for hazardous air pollutants. In addition, an industry sector specialist position for wood products exists within the Department's Bureau of Cooperative Environmental Assistance. This position acts as the state expert on matters affecting the wood products industry and serves as a central contact point for industry members.

CORRESPONDENCE/MEMORANDUM

DATE: May 14, 2001

TO: Natural Resources Board Order AM-37-00 File

FROM: Robert B Eckdale - AM/7

SUBJECT: Response To Rules Clearinghouse Comments

The Wisconsin Legislative Council Rules Clearinghouse comments on NRB Order AM-37-00 (Clearinghouse rule 00-160) are referenced below along with the rule drafter's response. The Clearinghouse identified comments with lower case letters. Where a comment contains more than one element, bracketed numbers are used here to distinguish the elements. Corresponding numbering has been hand written on a copy of the Clearinghouse Comments which is attached.

2. Form, Style and Placement in Administrative Code

- a. Recommended change made.
- b. (1) The existing language is more explanatory than the recommended very abbreviated sentence, especially given that this is the first sentence in the rule. To eliminate redundancy, the term "affected source" was deleted.
 - (2) Recommended change made.
- c. To maintain consistency with the federal structure, no changes were made.
- d. Recommended change made.
- e. Section NR 465.055 was created and titled "Compliance dates".
- f. Recommended change made.
- g. All definitions were reviewed keeping in mind that the rule must be at least substantially equivalent to the federal rule on which it is based.
 - (1) Deleted as recommended.
 - (2) This term is used several times in ch. NR 465, often as part of a phrase such as "capture and control device", and is therefore retained.
 - (3) The meaning of this term is not obvious when contrasted against the term "washoff operations". Both definitions have been kept to ensure the intent of the federal rule is applied consistently.
 - (4) Both terms have been deleted as recommended.
 - (5) If this term is not defined here, the definition in s. NR 400.02(48) would apply in ch. NR 465. Since the ch. NR 400 definition does not mention the role of capture devices, the definition is retained here to ensure consistency with the federal rule.
 - (6) Both terms have been deleted as recommended. Wording from these definitions have been included where these terms appear in the rule to ensure clarity.
 - (7) This term has been deleted as recommended. For clarity, s. NR 465.05(3)(a) has been modified to refer to pumps, valves, flanges or other equipment.
 - (8) As defined, "finishing material" does not include adhesive. Without this definition it would not be clear that requirements applying to finishing materials do not apply to adhesives.
 - (9) This term is used in ch. NR 465, often as part of a phrase such as "cleaning, gluing and washoff operations". Definitions for all 3 terms are retained to ensure consistency with the federal rule.
 - (10) This term has been deleted as recommended.
- h. (1) The informational requirement language for a CPDS has been retained. However, references to

individual test methods used to obtain that information have been replaced by a single cite to s. NR 465.09(1).

- (2) Recommended change made.
- (3) Changes made so that the referenced language is descriptive as opposed to substantive.
- (4) The referenced language has been reworded as examples.
- i. (1) Recommended change made.
- (2) Recommended change made.
- (3) The language is clear without the examples, so the referenced language was deleted.
- (4) The referenced language was deleted.
- j. The modifying terms "compliant" and "noncompliant" are clear without definition. The phrases "compliant coating" and "noncompliant coating" have therefore been deleted.
- k. This term is commonly use by EPA and, to be consistent with the federal rule, is retained.
- l. Recommended changes made.
- m. Recommended changes made.
- n. (1) In order to maintain consistency with the federal language, no changes were made.
- (2) In order to maintain consistency with the federal language, no changes were made.
- (3) Recommended change made
- o. Recommended changes made.
- p. In order to maintain consistency with the federal language, no changes were made.
- q. Recommended changes made.
- r. Recommended change made.
- s. Recommended changes made.
- t. (1) In order to maintain consistency with the federal language, no changes were made.
- (2) Although a reference to the appropriate standard could be used here, the standard is repeated to improve readability and eliminate the need to turn back to s. NR 465.04.
- u Recommended changes made.
- v. The recommended change with respect to s. NR 465.07(1)(d)4.e. was made.
- w. In order to maintain consistency with the federal language, no changes were made.
- x. Recommended change made.
- y. Recommended change made.
- z. Recommended change made in s. NR 465.09(4)(a).
- aa. (1) In order to maintain consistency with the federal language, no change was made.
- (2) Recommended deletion made.
- ab. The gap in numbering was intentional, no change was made.

4. Adequacy of References to Related Statutes, Rules and Forms

- a. Recommended change made.
- b. Recommended change made.

5. Clarity, Grammar, Punctuation and Use of Plain Language

- a. Recommended changes made.
- b. The federal rule does not establish criteria to judge success. Although no clarification was made to maintain consistency with the federal rule, it is assumed that presentation of the material is what is intended to be documented.
- c. Change made to address comment.
- d. (1) Recommended change made.
- (2) Recommended change made.
- (3) Recommended change made.
- (4) Since de minimis is used elsewhere in both state and federal rules no change was made.

- e. Recommended change made.
- f. No changes made. No standards apply to the cleaning of the excluded components.
- g. Language was added to address the Rules Clearinghouse questions.
- h. The provision to allow facilities using a control device to reduce emissions to adjust their usage based on the overall control efficiency of the control system is also provided in s. NR 465.05(12)(a)2. No changes were made.
- i. In order to maintain consistency with the federal language, no changes were made. The author does not believe additional formulae would provide additional clarity.

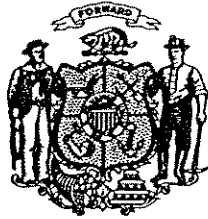
attach: Rules Clearinghouse Comments

WISCONSIN LEGISLATIVE COUNCIL STAFF

RULES CLEARINGHOUSE

Ronald Sklansky
Director
(608) 266-1946

Richard Sweet
Assistant Director
(608) 266-2982



Terry C. Anderson
Director
Legislative Council Staff
(608) 266-1304

One E. Main St., Ste. 401
P.O. Box 2536
Madison, WI 53701-2536
FAX: (608) 266-3830

CLEARINGHOUSE RULE 00-160

Comments

[NOTE: All citations to "Manual" in the comments below are to the Administrative Rules Procedures Manual, prepared by the Revisor of Statutes Bureau and the Legislative Council Staff, dated September 1998.]

2. Form, Style and Placement in Administrative Code

a. It is unclear from the rule where the department intends Appendix JJ of ch. NR 460 to be placed, relative to the other appendices to that chapter. The treatment clause of the SECTION creating the appendix could be written to indicate the department's intention, such as: "NR 460 Appendix JJ, to follow (or precede) Appendix __, is created to read:". The department may want to look also at the order in which the existing appendices are printed, since they are neither in alphabetical order nor in numerical sequence relative to the chapters to which they refer.

b. ⁽¹⁾Based on the definition of "affected source," the first sentence of s. NR 465.01 (1) (a) could be reduced to: "This chapter applies to affected sources." ⁽²⁾The second sentence of that paragraph should be broken out as a separate paragraph, since it establishes the treatment of incidental wood furniture manufacturers in the same manner that the following paragraphs establish the treatment of other subcategories of affected sources.

c. Section NR 465.01 (1) (b) should be reorganized to improve clarity and reduce duplication of language.

d. The last sentence of s. NR 465.01 (1) (b) 1. and similar sentences should be written in the active voice, i.e., "The owner or operator shall maintain" In the alternative, "for 5 years" could be inserted after "maintain" in the previous sentence.

e. Section NR 465.01 (1) (e) and (f) relate to compliance dates, rather than applicability. It would appear that they should be placed with the other provisions relating to compliance dates.

f. In s. NR 465.02 (intro.), "In this chapter:" should be inserted at the end.

g. The rule defines far more terms than appears to be necessary. The purpose of a definition is to inform the reader of the meaning of a word or term used in a rule where that meaning is not readily apparent to the reader. Thus, definitions should be limited to words and terms actually used in the rule whose meaning cannot be determined from context with the aid of a standard dictionary. In addition, to the extent possible, words or terms used once or twice in a rule should not be defined; usually, it is possible to replace these with descriptive language that avoids the need for a definition. With these observations in mind, the following are examples of unnecessary or inappropriate definitions, drawn from only the first half of s. NR 465.02. All the definitions in that section should be reviewed to determine whether they are necessary and appropriate.

(1) • "Baseline conditions" is not used in the rule and so should not be defined. "Baseline level" is used several times, but the context makes its meaning clear and so it does not need defining.

(2) • "Capture device" is used only once; the text of the rule should be modified to clarify the meaning without a definition.

(3) • "Cleaning operations" is used only three times, but its meaning is obvious and it is clear from the context that the rule applies to cleaning with hazardous air pollutant (HAP) solvents, not other kinds of cleaning. Thus, this definition is unnecessary.

(4) • "Coating application station" is not used in the rule and "coating operation" is used only in the definition of "coating application station." What is more, the definitions of the terms are just common sense meanings of the words. Clearly, these terms do not need to be defined.

(5) • The meaning of "control system" is obvious enough that a definition is not needed.

(6) • "Disposed offsite" and "recycled onsite" are both used only once; in addition, the definitions are entirely obvious. These terms do not need to be defined.

(7) • "Equipment leak" is not used in the rule and so should not be defined. "Leak" is used several times but, again, its meaning is obvious and so it does not need defining.

(8) • The definitions of "finishing material" and "finishing operation" do not add anything to the plain meaning of the terms and so should be omitted.

(9) • "Gluing operation" is not used in the rule and so should not be defined. "Gluing" is used in two other definitions but, again, its meaning is obvious and so it does not need defining.

(10) "Janitorial maintenance" is not used in the rule and so should not be defined. "Janitorial or facility grounds maintenance" is used twice but, again, its meaning is obvious and so it does not need defining.

h. Definitions should not include substantive requirements; instead, these provisions should be incorporated into the text of the rule. Examples of substantive provisions that should be moved from definitions to the text of the rule include: (1) all of the definition of "certified product data sheet" except for s. 465.02 (11) (intro.); (2) the material following the semicolon in the definition of "coating solids"; (3) the second sentence of the definition of "contact adhesive"; and (4) the second and third sentences of the definition of "continuous coater."

i. Similarly, explanatory material should not be included in definitions; this material should be placed in a note following the definition. Examples of explanatory material that should be moved from definitions to notes include the second and third sentences of the definition of "conventional air spray" in ss. NR 422.02 (19m) and 465.02 (23) and the second sentence of the definition of "washcoat." In addition, explanatory material should not be included in substantive provisions. Examples of explanatory material that should be moved from substantive provisions to notes include the examples provided in s. NR 465.01 (1) (g) ("e.g., incinerators, carbon adsorbers, etc.," "e.g., product recovery" and the last three sentences) and the phrase "for example, all VOC and HAP present in the coating solvent" in s. NR 465.09 (1). [See s. 1.09, Manual.]

j. The rule defines the term "compliant coating," which is used several times in the rule. However, since the word "compliant" is also used to modify a number of other nouns, it would be more appropriate to define "compliant." A possible definition would be: "Compliant," when referring to a finishing material, contact adhesive or strippable spray booth material, means meeting the requirements of s. NR 465.04." The same applies to "noncompliant."

k. The term "continuous compliance" appears to be intended to distinguish between initial compliance (on the initial compliance date) and compliance thereafter. "Continuous" seems to be the wrong word to describe this, especially since compliance (at least in some cases) is based on monthly averages and is not necessarily continuous. Better terms would be "continuing compliance," "on-going compliance" or, simply, "compliance."

l. "Normally closed container" is an awkward term, where "closed container" would suffice. Of course, a closed container must be opened to add materials to it or remove materials from it, but what matters, for example in s. NR 465.05 (7), is that the container is closed during storage. Furthermore, there would be no need to define "closed container."

(1) m. The second sentence of the definition of "sealer" should read: "'Sealer' does not include special purpose" The second sentence of the definition of "stain" should read: "'Stain' includes nongrain raising stains" Note the omission of the phrase, "but is not limited to"; this is implied by the word "includes."

n. Many of the symbols defined in s. NR 465.03 are meaningless out of the context of the formulae in which they are used. While it might add some length to the rule, it would seem more helpful to define the terms of formulae according to the convention of listing them

immediately after the formulae in which they are used. ⁽²⁾ Also, the rule is inconsistent in its explanation of the subscripts for some of the symbols used in formulae. For example, the "j" in "C_{aj}" and the "i" in "C_{bi}" are explained, but not the "a" or "b." Also, there is no explanation of the subscripts of the terms "M_c" in Equation 1, "E_{bc}" or "E_{ac}" in Equations 2 and 4 or "G_{bc}" or "G_{ac}" in Equation 3. ⁽³⁾ In addition, if the format of s. NR 465.03 is used, the terms being defined should be placed in quotes, as is done for other definitions.

o. The rule is inconsistent in the format it uses to apply requirements to affected sources. The format "Each owner or operator of an affected source . . ." is used, for example, in s. NR 465.04 (1) (intro.), works for affirmative requirements, but not as well for prohibitions--see, for example, s. NR 465.05 (6). Instead, the format used in s. NR 465.06 (1) (a) is suggested: "The owner or operator of an affected source . . ." Also, the format "Owners or operators of an affected source . . ." used in s. NR 465.07 (1) (intro), should not be used. In s. NR 465.05 (8) (f) (intro.), the rule drops the reference to an owner or operator altogether. In s. NR 465.04 (2) (intro.), the phrase "subject to this chapter" should be omitted.

p. The rule is confusing as to how and where it establishes volatile organic compound emission limits for affected sources. Section NR 465.04 is titled "Emission limits", but it specifies only some of the specific limits while referring to Table 2 for others. Table 2, on the other hand, appears to be a summary of the various limits, not the authoritative statement of the standards. In some ways, the most complete statement of the limits themselves appears to be in s. NR 465.06, Compliance methods and procedures. One approach to clarifying these provisions would be to: (1) provide a complete statement of the standards in text in s. NR 465.04; (2) leave Table 2 as it is, as a summary, but place it directly following s. NR 465.04; and (3) to the extent possible, replace the repetitions of specific standards in s. NR 465.06 with cross-references to the standards in s. NR 465.04.

q. On several occasions, the rule uses a term and then interjects an explanation of the term. These generally are terms that do not warrant definition, in which case the term should be omitted and the explanation used in its place. For example, the second and third sentences of s. NR 465.05 (2) should read: "Personnel hired on or after the compliance date shall be trained upon hiring. Personnel hired before the compliance date shall be trained within 6 months of the compliance date." (Also, in the first sentence of that section, the words "new and existing" should be omitted.) In another example, s. NR 465.05 (8) (c) should read: "When the spray gun is aimed and triggered automatically." Also, in s. NR 465.05 (6), the phrase "unless the spray booth is being refurbished" should be omitted from the first sentence; the second sentence should begin: "If the spray booth coating or other protective material is being replaced, . . ."

r. The last sentence of s. NR 465.05 (8) (f) (intro.) should be rewritten as follows: "The owner or operator shall use one or both of the following criteria to support a claim that no other spray application technology is technically or economically feasible:".

s. The format of the introductory provisions used in s. NR 465.06 should be revised. For example, sub. (1) (a) (intro.) refers to existing affected sources that are subject to s. NR 465.04 (1) (a), while all such sources are subject to that section. In addition, it requires these sources to comply, but does not say with what they must comply. This should be rewritten as follows: "The owner or operator of an existing affected source shall comply with s. NR 465.04

(1) (a) using any of the following methods:”. The same format should be used for sub. (2) (a) (intro.) and (b) (intro.); sub. (1) (b) and (c) (intro.) should be modified by adding “with s. NR 465.04 (1) (b) 1.” and “with s. NR 465.04 (1) (b) 2.” after “comply” in the respective provisions. The same format should be used for s. NR 465.08 (4).

t. ⁽¹⁾ Section NR 465.06 (1) (a) 2. (intro.) should read: “Demonstrate one or more of the following, as appropriate:”. Each of the following subdivision paragraphs should begin with the word “That.” ⁽²⁾ As was suggested earlier, the text of the subdivision paragraphs could be replaced with a reference to the appropriate standard in s. NR 465.04.

u. The format used in s. NR 465.07 should be revised along the lines of the format used in s. NR 465.08 (1) (a) and (b). For example, sub. (1) (b) should read: “If complying by using the methods in s. NR 465.06 (1) (a) 2. or (2) (a) 2., state in the initial compliance report under s. 465.11 (2) that” Similar modifications should be made, as appropriate, throughout this section.

v. The procedures cross-referenced in s. NR 465.07 (1) (d) 4. e. are only one sentence, which could easily be repeated in this section, rather than making the reader find it in another section. Similarly, the cross-reference in s. NR 465.10 (10) could be eliminated, aiding the reader by reproducing three sentences.

w. There is a large amount of duplicated language in s. NR 465.07 and especially in s. NR 465.08. These sections should be reorganized in a way that eliminates this extensive duplication.

x. In s. NR 465.08 (3), “should” should be replaced with “shall.”

y. It appears that s. NR 465.09 (1) should be broken into three paragraphs, without an introduction. Paragraph (a) should start as follows: “Except as provided in par. (c), the owner or operator of an affected source shall use Method 311” Paragraph (b) should start as follows: “Except as provided in par. (c), the owner or operator of an affected source shall use Method 24” Paragraph (c) would consist of the last two sentences of the subsection.

z. The cross-reference in s. NR 465.09 (4) should be to sub. (3), since it is an internal cross-reference and it includes all paragraphs of that subsection.

aa. ⁽¹⁾ Sections NR 465.11 (2) and (3) should be collapsed into one subsection to avoid duplication of language. ⁽²⁾ Section NR 465.11 (3) (d) appears unnecessary.

ab. By creating s. NR 484.11 (10) and Table 6I, the department is leaving a gap in the numbering within that section. Is this intentional?

4. Adequacy of References to Related Statutes, Rules and Forms

a. To aid the reader, the second sentence of s. NR 465.05 (1) should end with a reference to the provision establishing the compliance dates.

b. Section NR 465.05 (12) (b) (intro.) should read: "If . . . the VHAP identified under par. (a) 1. exceeds the baseline level established under par. (a) 2.,"

5. Clarity, Grammar, Punctuation and Use of Plain Language

a. In s. NR 465.01 (1) (a), the phrase, "The owner or operator of a source that meets the definition for" should be omitted. Also, the cross-reference in that section should read "s. NR 465.02 (33)."

b. In s. NR 465.05 (2) (d), what successful completion is to be documented, presentation of the material by the employer or mastery of the material by the employees?

c. How does s. NR 465.05 (3) (a) and (b) relate to each other? Paragraph (b) requires an inspection schedule but does not say what kind of inspection is required; par. (a) requires visual inspection and specifies the minimal schedule. These need clarification, presumably by expanding par. (b).

d. ⁽¹⁾In s. NR 465.05 (5), the comma following "Table 3" should be omitted and the word "which" should be replaced by the word "that." ⁽²⁾In s. NR 465.05 (12) (a) 3., the phrase "by the affected source" should be omitted and the word "which" should be replaced by the word "that." ⁽³⁾In s. NR 465.05 (12) (d), the word "which" should be replaced by the word "that" and a period should be placed at the end of the second sentence. ⁽⁴⁾Also, Latin terms should be avoided in rules. [See s. 1.01 (1), Manual.] Can "minimal" be substituted for "de minimis" in s. NR 465.05 (12) (d) and elsewhere?

e. In s. 465.05 (5) and elsewhere in the rule, "an" should be used before "MSDS."

f. Section NR 465.05 (6) excludes the cleaning of certain components from the standards--what standards, if any, apply to the cleaning of these components?

g. Section NR 465.05 (12) (a) 2. requires baselines based on 1994, 1995 and 1996 activities. Is it known that all affected sources will have the data necessary to establish these baselines? How does a facility that was not in operation prior to 1997 establish a baseline?

h. The second sentence of s. NR 465.05 (12) (b) 2. is unclear. Presumably, it means that the source may adjust its *calculation* of usage. However, does this authorization apply only to *de minimis* usage, or should this sentence be moved to the introduction of the paragraph so that it applies to all cases where annual usage exceeds baseline usage, or to another provision of the rule so that it applies even more broadly?

i. In s. NR 465.09 (5), would it be clearer to write a new formula for calculating E_{ac} , rather than requiring the reader to rewrite Equation 2 for this purpose? The same applies to the following subsections.

ORDER OF THE STATE OF WISCONSIN
NATURAL RESOURCES BOARD
RENUMBERING, AMENDING AND CREATING RULES

The Wisconsin Natural Resources Board proposes an order to renumber NR 484.03(1) to (4) and 484.11(7); to amend NR 422.125(4) (intro.), 484.04(9) and (24), 484.05(1) and 484.06(intro.); and to create NR 422.02(19s), NR 460 Appendix JJ, ch. NR 465, 484.03(1), 484.06(5) and 484.11(7) and (10), relating to volatile organic compound emissions and national emission standards for hazardous air pollutants for wood furniture manufacturing.

AM-37-00

Analysis Prepared by the Department of Natural Resources

Authorizing statutes: ss. 227.11(2)(a), 285.11(1) and 285.27(2), Stats.

Statutes interpreted: s. 285.27(2), Stats.

This proposed order will incorporate into state rules existing national emission standards for hazardous air pollutants (NESHAP) for wood furniture manufacturing operations. These standards took effect on December 7, 1995, and are intended to protect public health by requiring the control of emissions of hazardous air pollutants (HAP) to the level attainable by implementing the maximum achievable control technology. Sources affected are new and existing facilities which are involved in the manufacture of wood furniture or wood furniture components, and which have the potential to emit more than 10 tons per year of a single HAP or more than 25 tons per year of any combination of HAP. The standards include emission limitations for finishing materials and contact adhesives used by the wood furniture industry, as well as work practices for areas such as inspection and maintenance procedures, solvent cleaning and washoff operations and application equipment for finishing materials. Flexible compliance options are provided, including averaging and pollution prevention methods allowing sources to substitute non-toxic solvents for toxic ones. The standards include provisions exempting facilities based on low actual HAP emissions and low use of finishing materials, adhesives and solvents for cleaning and washoff.

In addition, this proposed order makes a change to existing volatile organic compound (VOC) control rules for this same industry. The change is proposed in order to make state VOC application equipment requirements consistent with, and no more restrictive than, the U.S. EPA guidance for this industry.

The consent of the Attorney General and the Revisor of Statutes will be requested for the incorporation by reference of a number of new test methods in ch. NR 484.

SECTION 1. NR 422.02(19s) is created to read:

NR 422.02(19s) "Conventional air spray" means a spray coating method in which the coating is atomized by mixing it with

compressed air and applied at an air pressure greater than 10 psig at the point of atomization.

Note: Airless and air assisted airless spray technologies are not conventional air spray because the coating is not atomized by mixing it with compressed air. Electrostatic spray technology is also not considered conventional air spray because an electrostatic charge is employed to attract the coating to the work piece.

SECTION 2. NR 422.125(4)(intro.) is amended to read:

NR 422.125(4)(intro.) After September 1, 1996, an owner or operator of a wood furniture manufacturing facility ~~shall only apply finishing materials using electrostatic application, flow coating, dip coating, a low pressure spray method, paint brush, hand roller or roll coater with the following exceptions~~ may use conventional air spray to apply finishing materials only under any of the following conditions:

SECTION 3. NR 460 Appendix JJ, to precede Appendix KK, is created to read:

Chapter NR 460

Appendix JJ

General Provisions Applicable to Chapter NR 465

The general provisions of this chapter listed under the column heading "Reference" apply to sources subject to ch. NR 465 only if a Yes appears in the same row under the column heading "Applies to Chapter NR 465?". Certain provisions in other chapters which

correspond to federal provisions in 40 CFR part 63 Subpart A are also included in the Reference column.

Reference	Applies to Chapter NR 465?	Comment
NR 2.19 and 2.195	Yes	
NR 406	Yes	
NR 407.04(1)(b)3.	Yes	
NR 460.02	Yes	Additional definitions in s. NR 465.02.
NR 460.03	Yes	Additional symbols in s. NR 465.03.
NR 460.04	Yes	
NR 460.05(1)	Yes	
NR 460.05(2)(a) to (c)	Yes	
NR 460.05(2)(d)	No	
NR 460.05(2)(e) and (f)	Yes	
NR 460.05(3)(a)	Yes	
NR 460.05(3)(b)	No	
NR 460.03(3)(c)	Yes	
NR 460.05(4)	Yes	Section NR 460.05(4)(c) applies only to affected sources using a control device to comply.
NR 460.05(5)	Yes	Affected sources complying through the procedures specified in s. NR 465.06(1)(a)1. and 2., (b), (c)1., (2)(a)1. and 2. and (2)(b) are subject to the emission standards at all times, including periods of startup, shutdown and malfunction
NR 460.05(6)	No	
NR 460.05(7)(a), (b) and (c)1.	Yes	

NR 460.05(7)(c)2.	No	
NR 460.05(7)(d) to (L)	Yes	
NR 460.06	Yes	Applies only to affected sources using a control device to comply.
NR 460.07	Yes	Applies only to affected sources using a control device to comply.
NR 460.08(1) to (5)	Yes	Section NR 460.08(5) applies only to affected sources using a control device to comply.
NR 460.08(6)	No	
NR 460.08(7) to (10)	Yes	Section NR 460.08(7) and (8)(b)2. apply only to affected sources using a control device to comply.
NR 460.09(1) to (3) and (4)(a) and (b)	Yes	Section NR 460.09(2)(b) and (4)(b) apply only to affected sources using a control device to comply.
NR 460.09(4)(c)	No	
NR 460.09(4)(d) and (e)	Yes	Section NR 460.09(4)(e) applies only to affected sources using a control device to comply.
NR 460.09(5)	Yes	Applies only to affected sources using a control device to comply.
NR 460.09(6)	Yes	
NR 460.10	No	
NR 484.04	Yes	

SECTION 4. Chapter NR 465 is created to read:

CHAPTER 465

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

FOR WOOD FURNITURE MANUFACTURING OPERATIONS

NR 465.01 Applicability; purpose. (1) APPLICABILITY. (a) This chapter applies to each facility that is engaged, either in part or in whole, in the manufacture of wood furniture or wood furniture components and that is located at a plant site that is a major source of hazardous air pollutants.

(b) An incidental wood furniture manufacturer shall maintain purchase or usage records demonstrating the source meets the criteria specified in s. NR 465.02(33), but the source is not subject to any other provisions of this chapter.

(c) A source that qualifies as an area source under this paragraph is not subject to any provisions of this chapter other than those in this paragraph. For subds. 1. and 2., finishing materials, adhesives, cleaning solvents and washoff solvents used for wood furniture or wood furniture component manufacturing operations shall account for at least 90% of annual HAP emissions at the plant site, and if the plant site has HAP emissions that do not originate from the listed materials, the owner or operator shall keep any records necessary to demonstrate that the 90% criterion is being met. A source that initially relies on the limits and criteria specified in subd. 1., 2. or 3. to become an area source, but subsequently exceeds the relevant limit, without first obtaining and complying with other limits that keep its potential to emit hazardous air pollutants below major source levels, becomes a major source and shall comply thereafter with

all applicable provisions of this chapter starting on the applicable compliance date in s. NR 465.055. Nothing in this paragraph is intended to preclude a source from limiting its potential to emit through other appropriate mechanisms. A source qualifies as an area source for the purposes of this chapter if the criteria in one of the following subdivisions are met:

1. The owner or operator of the source uses no more than a total of 250 gallons per month, for every month, of coating, adhesive, cleaning material and washoff materials at the source, including materials used for source categories other than wood furniture, but excluding materials used in routine janitorial or facility grounds maintenance, personal uses by employees or other persons, the use of products for the purpose of maintaining motor vehicles operated by the facility, the use of toxic chemicals contained in intake water used for processing or noncontact cooling and intake air used either as compressed air or for combustion. The owner or operator shall maintain records for 5 years of the total gallons of coating, adhesive, cleaning material and washoff material used each month, and upon request submit the records to the department.

2. The owner or operator of the source uses no more than 3,000 gallons per rolling 12-month period, for every 12-month period, of coating, adhesive, cleaning material and washoff material at the source, including materials used for source

categories other than wood furniture, but excluding materials used in routine janitorial or facility grounds maintenance, personal uses by employees or other persons, the use of products for the purpose of maintaining motor vehicles operated by the facility, the use of toxic chemicals contained in intake water used for processing or noncontact cooling and intake air used either as compressed air or for combustion. The owner or operator of the source shall maintain records of the total gallons of coating, adhesive, cleaning material and washoff material used each month and the total gallons used each previous month, and upon request submit the records to the department. The owner or operator shall keep monthly records beginning no less than one year before the compliance date specified in s. NR 465.055 and maintain the records for 5 years.

3. The source emits no more than 4.5 Mg (5 tons) of any one HAP per rolling 12-month period and no more than 11.4 Mg (12.5 tons) of any combination of HAP per rolling 12-month period, and at least 90% of the plantwide HAP emissions per rolling 12-month period are associated with the manufacture of wood furniture or wood furniture components. The owner or operator shall maintain records for 5 years that demonstrate that annual emissions do not exceed these levels, including monthly usage records and certified product data sheets for all finishing material, adhesive, cleaning material and washoff material, and any other records necessary to

document emissions from source categories other than wood furniture. The owner or operator shall submit the records to the department upon request.

(d) This chapter does not apply to research or laboratory equipment for which the primary purpose is to conduct research and development into new processes and products, where the equipment is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for commercial sale in commerce, except in a de minimis manner.

(e) The owner or operator of an affected source shall comply with the requirements of ch. NR 460, according to the applicability of ch. NR 460 to the sources, as identified in ch. NR 460 Appendix JJ.

(f) Reconstructed affected sources are subject to the requirements for new affected sources. The costs associated with the purchase and installation of air pollution control equipment are not considered in determining whether the facility has been reconstructed, unless the control equipment is part of the process. Additionally, the costs of retrofitting and replacement of equipment that is installed specifically to comply with this chapter are not considered reconstruction costs.

Note: An example of when control equipment is part of a process is where the equipment is used to recover product or raw material. An example of costs for equipment replacement which would not be considered reconstruction costs is the replacement of

storage tanks, mix equipment and transfer lines to accommodate conversion to waterborne coatings where the purpose of the conversion is to comply with this chapter.

(2) PURPOSE. This chapter is adopted under ss. 285.27(2) and 285.65, Stats., to establish emission standards for hazardous air pollutants for wood furniture and wood furniture component manufacturing operations.

Note: This chapter is based on the federal regulations contained in 40 CFR part 63 Subpart JJ, created Dec. 7, 1995, as last revised on Dec. 28, 1998.

NR 465.02 Definitions. For terms not defined in this section, the definitions contained in chs. NR 400 and 460 apply to the terms used in this chapter, with definitions in ch. NR 460 taking priority over definitions in ch. NR 400. If this section defines a term which is also defined in ch. NR 400 or 460, the definition in this section applies in this chapter. In this chapter:

(1) "Adhesive" means any chemical substance that is applied for the purpose of bonding 2 surfaces together other than by mechanical means. Products used on humans and animals, adhesive tape, contact paper or any other product with an adhesive incorporated onto or in an inert substrate are not considered adhesives under this chapter.

(2) "Aerosol adhesive" means an adhesive that is dispensed from a pressurized container as a suspension of fine solid or liquid particles in gas.

(3) "Affected source" means a wood furniture manufacturing

facility that is engaged, either in part or in whole, in the manufacture of wood furniture or wood furniture components and that is located at a plant site that is a major source of hazardous air pollutants.

(4) "Alternative method" means any method of sampling and analyzing for an air pollutant that is not a reference or equivalent method but has been demonstrated to the administrator's satisfaction to, in specific cases, produce results adequate for a determination of compliance.

(5) "As applied" means the HAP and solids content of the coating or contact adhesive that is actually used for coating or gluing the substrate. It includes the contribution of materials used for in-house dilution of the coating or contact adhesive.

(6) "Basecoat" means a coat of colored material, usually opaque, that is applied before graining inks, glazing coats or other opaque finishing materials, and is usually topcoated for protection.

(7) "Capture device" means a hood, enclosed room, floor sweep or other means of collecting solvent emissions or other pollutants into a duct so that the pollutant can be directed to a pollution control device such as an incinerator or carbon adsorber.

(8) "Capture efficiency" means the fraction of all organic vapors generated by a process that are directed to a control device.

(9) "Certified product data sheet" or "CPDS" means documentation furnished by coating or adhesive suppliers or an outside laboratory and measured in accord with s. NR 465.09(1) that provides all of the following:

(a) The VHAP content of a finishing material, contact adhesive or solvent, by percent by weight, for each VHAP present in concentrations greater than or equal to 1.0% by weight, or 0.1% for VHAP that are carcinogens as defined by 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).

(b) The solids content of a finishing material or contact adhesive by percent by weight.

(c) The density of the finishing material, adhesive or solvent.

Note: Because the optimum analytical conditions under Method 311, used pursuant to s. NR 465.09(1), vary by coating, the coating or adhesive supplier may also choose to include on the CPDS the optimum analytical conditions for analysis of the coating, adhesive or solvent using EPA Method 311. Information may include, but not be limited to, separation column, oven temperature, carrier gas, injection port temperature, extraction solvent and internal standard.

(10) "Cleaning operations" means operations in which organic HAP solvent is used to remove coating materials or adhesives from equipment used in wood furniture manufacturing operations.

(11) "Coating" means a protective, decorative or functional film applied in a thin layer to a surface. Coating materials

include paints, topcoats, varnishes, sealers, stains, washcoats, basecoats, enamels, inks and temporary protective coatings. Adhesives and aerosol spray used for touch-up and repair are not considered coatings under this chapter.

(12) "Coating solids" or "solids" means the part of the coating which remains after the coating is dried or cured.

(13) "Contact adhesive" means an adhesive that is applied to 2 substrates, dried and then mated under only enough pressure to provide sufficient contact so that the resulting bond is immediate and sufficiently strong to hold pieces together without further clamping, pressure or airing.

(14) "Continuous coater" means a finishing system that continuously applies finishing materials onto furniture parts moving along a conveyor. Examples of application methods that can be used with a continuous coater include spraying, curtain coating, roll coating, dip coating and flow coating.

(15) "Continuous compliance" means that the affected source is meeting the emission limitations and other requirements of the rule at all times and is fulfilling all monitoring and recordkeeping provisions of the rule in order to demonstrate compliance.

(16) "Control device" means any equipment that reduces the quantity of a pollutant that is emitted to the air.

Note: The device may destroy or secure the pollutant for subsequent recovery.

(17) "Control device efficiency" means the ratio of the

amount of the pollutant reduced by a control device and the amount of the pollutant introduced to the control device.

(18) "Control system" means the combination of capture and control devices used to reduce emissions to the atmosphere.

(19) "Conventional air spray" means a spray coating method in which the coating is atomized by mixing it with compressed air and applied at an air pressure greater than 10 psig at the point of atomization.

Note: Airless and air assisted airless spray technologies are not conventional air spray because the coating is not atomized by mixing it with compressed air. Electrostatic spray technology is also not considered conventional air spray because an electrostatic charge is employed to attract the coating to the workpiece.

(20) "Day" means a period of 24 consecutive hours beginning at midnight local time, or beginning at a time consistent with a facility's operating schedule.

(21) "Enamel" means a coat of colored material, usually opaque, that is applied as a protective topcoat over a basecoat, primer or previously applied enamel coats. In some cases, another finishing material may be applied as a topcoat over the enamel.

(22) "Existing", when used to modify affected source, area source or source, means construction or reconstruction which is commenced before December 6, 1994.

(23) "Finishing material" means a coating used in the wood furniture industry. "Finishing material" includes stains, basecoats, washcoats, enamels, sealers and topcoats.

(24) "Finishing operation" means those operations in which a finishing material is applied to a substrate and is subsequently air-dried, cured in an oven or cured by radiation.

(25) "Foam adhesive" means a contact adhesive used for gluing foam to fabric, foam to foam and fabric to wood.

(26) "Gluing operations" means those operations in which adhesives are used to join components, for example, to apply a laminate to a wood substrate or foam to fabric.

(27) "Incidental wood furniture manufacturer" means a major source that is primarily engaged in the manufacture of products other than wood furniture or wood furniture components and that uses no more than 100 gallons per month of finishing material and no more than 100 gallons per month of adhesives in the manufacture of wood furniture or wood furniture components.

(28) "Material safety data sheet" or "MSDS" means the documentation required for hazardous chemicals by 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), for a solvent, cleaning material, contact adhesive, coating or other material that identifies select reportable hazardous ingredients of the material, safety and health considerations, and handling procedures.

(29) "New", when used to modify affected source, area source or source, means construction or reconstruction which is commenced

on or after December 6, 1994.

(30) "Nonporous substrate" means a surface that is impermeable to liquids. Examples include metal, rigid plastic, flexible vinyl and rubber.

(31) "Operating parameter value" means a minimum or maximum value established for a control device or process parameter that, if achieved by itself or in combination with one or more other operating parameter values, determines that an owner or operator has complied with an applicable emission limit.

(32) "Organic HAP solvent" means a HAP that is a volatile organic liquid used for dissolving or dispersing constituents in a coating or contact adhesive, adjusting the viscosity of a coating or contact adhesive, or cleaning equipment. When used in a coating or contact adhesive, the organic HAP solvent evaporates during drying and does not become a part of the dried film.

(33) "Overall control efficiency" means the efficiency of a control system, calculated as the product of the capture and control device efficiencies, expressed as a percentage.

(34) "Sealer" means a finishing material used to seal the pores of a wood substrate before additional coats of finishing material are applied. "Sealer" does not include special purpose finishing materials that are used in some finishing systems to optimize aesthetics.

(35) "Stain" means any color coat having a solids content by

weight of no more than 8.0% that is applied in single or multiple coats directly to the substrate. "Stain" includes nongrain raising stains, equalizer stains, prestains, sap stains, body stains, no-wipe stains, penetrating stains and toners.

(36) "Storage containers" means vessels or tanks, including mix equipment, used to hold finishing, gluing, cleaning or washoff materials.

(37) "Strippable spray booth coating" means a coating that meets all of the following:

(a) Is applied to a spray booth wall to provide a protective film to receive overspray during finishing operations.

(b) Is subsequently peeled off and disposed.

(c) Reduces or eliminates the need to use organic HAP solvents to clean spray booth walls.

(38) "Thinner" means a volatile liquid that is used to dilute coatings or contact adhesives to reduce viscosity, color strength and solids, or to modify drying conditions.

(39) "Topcoat" means the last film-building finishing material that is applied in a finishing system.

(40) "Touchup and repair" means the application of finishing materials to cover minor finishing imperfections.

(41) "VHAP" means any volatile hazardous air pollutant listed in Table 1.

(42) "VHAP of potential concern" means any VHAP from the list

in Table 5.

(43) "Washcoat" means a transparent special purpose finishing material having a solids content by weight of 12.0% by weight or less.

Note: Washcoats are applied over initial stains to protect, to control color and to stiffen the wood fibers in order to aid sanding.

(44) "Washoff operations" means those operations in which organic HAP solvent is used to remove coating from wood furniture or a wood furniture component.

(45) "Wood furniture" means any product made of wood, a wood product such as rattan or wicker, or an engineered wood product such as particleboard that is manufactured under any of the following standard industrial classification codes, as described in the standard industrial classification manual, 1987, incorporated by reference in s. NR 484.05(1): 2434, 2511, 2512, 2517, 2519, 2521, 2531, 2541, 2599 or 5712.

(46) "Wood furniture component" means any part that is used in the manufacture of wood furniture. Examples include drawer sides, cabinet doors, seat cushions and laminated tops.

(47) "Wood furniture manufacturing operations" means the finishing, gluing, cleaning and washoff operations associated with the production of wood furniture or wood furniture components.

NR 465.03 Symbols. The symbols used in this chapter have the following meanings:

(1) "ac" means after the control system is installed and operated.

(2) " A_k " is the area of each natural draft opening k in a total enclosure, in square meters.

(3) "bc" means before control.

(4) " C_{aj} " is the concentration of VHAP in gas stream j exiting the control device, in parts per million by volume.

(5) " C_{bi} " is the concentration of VHAP in gas stream i entering the control device, in parts per million by volume.

(6) " C_c " is the VHAP content of a finishing material c in kilograms of VHAP per kilogram of coating solids (kg VHAP/kg solids), as supplied. Also given in pounds of VHAP per pound of coating solids (lb VHAP/lb solids).

(7) " C_{di} " is the concentration of VHAP in gas stream i entering the control device from the affected source, in parts per million by volume.

(8) " C_{fk} " is the concentration of VHAP in uncontrolled gas stream k emitted directly to the atmosphere from the affected source, in parts per million by volume.

(9) "E" is the emission limit achieved by an emission point or a set of emission points, in kg VHAP/kg solids (lb VHAP/lb solids).

(10) "F" is the control device efficiency, expressed as a fraction.

(11) "FV" is the average inward face velocity across all natural draft openings in a total enclosure, in meters per hour.

(12) "G" is the VHAP content of a contact adhesive, in kg VHAP/kg solids (lb VHAP/lb solids), as applied.

(13) "M_c" is the mass of solids in finishing material c used monthly, kg solids/month (lb solids/month).

(14) "N" is the capture efficiency, expressed as a fraction.

(15) "Q_{aj}" is the volumetric flow rate of gas stream j exiting the control device, in dry standard cubic meters per hour.

(16) "Q_{bi}" is the volumetric flow rate of gas stream i entering the control device, in dry standard cubic meters per hour.

(17) "Q_{di}" is the volumetric flow rate of gas stream i entering the control device from the emission point, in dry standard cubic meters per hour.

(18) "Q_{fk}" is the volumetric flow rate of uncontrolled gas stream k emitted directly to the atmosphere from the emission point, in dry standard cubic meters per hour.

(19) "Q_{in i}" is the volumetric flow rate of gas stream i entering the total enclosure through a forced makeup air duct, in standard cubic meters per hour, wet basis.

(20) "Q_{out j}" is the volumetric flow rate of gas stream j exiting the total enclosure through an exhaust duct or hood, in standard cubic meters per hour, wet basis.

(21) "R" is the overall efficiency of the control system, expressed as a percentage.

(22) "S" is the VHAP content of a solvent, expressed as a weight fraction, added to finishing materials.

(23) "W" is the amount of solvent, in kilograms (pounds), added to finishing materials during the monthly averaging period.

NR 465.04 Emission limits. (1) The owner or operator of an existing affected source shall do all of the following:

(a) Limit VHAP emissions from finishing operations to no more than the emission limitations for existing sources presented in Table 2, using any of the compliance methods in s. NR 465.06(1)(a). To determine VHAP emissions from a finishing material containing formaldehyde or styrene, the owner or operator of the affected source shall use the methods presented in s. NR 465.05(12)(a)2. for determining styrene and formaldehyde usage.

(b) Limit VHAP emissions from contact adhesives to no more than the following as appropriate:

1. 1.8 kg VHAP/kg solids (1.8 lb VHAP/lb solids), as applied, for foam adhesives used in products that meet the upholstered seating flammability requirements of California technical bulletin 116, 117 or 133, incorporated by reference in s. NR 484.06(5), the business and institutional furniture manufacturers association's BIFMA X5.7-1991, incorporated by reference in s. NR 484.11(7),

upholstered furniture action council flammability test methods, incorporated by reference in s. NR 484.11(10), or any similar requirements from local, state or federal fire regulatory agencies.

2. 1.0 kg VHAP/kg solids (1.0 lb VHAP/lb solids), as applied, for all other contact adhesives, including foam adhesives used in products that do not meet the standards in subd. 1., but excluding aerosol adhesives and excluding contact adhesives applied to nonporous substrates.

(c) Limit HAP emissions from strippable spray booth coatings by using coatings that contain no more than 0.8 kg VOC/kg solids (0.8 lb VOC/lb solids), as applied.

(2) The owner or operator of a new affected source shall do all of the following:

(a) Limit VHAP emissions from finishing operations to no more than the emission limitations for new sources presented in Table 2 using any of the compliance methods in s. NR 465.06(2)(a). To determine VHAP emissions from a finishing material containing formaldehyde or styrene, the owner or operator of the affected source shall use the methods presented in s. NR 465.05(12)(a)2. for determining styrene and formaldehyde usage.

(b) Limit VHAP emissions from contact adhesives, excluding aerosol adhesives and excluding contact adhesives applied to nonporous substrates, to no more than 0.2 kg VHAP/kg solids (0.2

lb VHAP/lb solids), as applied, using either of the compliance methods in s. NR 465.06(2)(b).

(c) Limit HAP emissions from strippable spray booth coatings by using coatings that contain no more than 0.8 kg VOC/kg solids (0.8 lb VOC/lb solids), as applied.

NR 465.05 Work practice standards. (1) **WORK PRACTICE IMPLEMENTATION PLAN.** The owner or operator of an affected source shall prepare and maintain a written work practice implementation plan that defines environmentally desirable work practices for each wood furniture manufacturing operation and addresses each of the work practice standards in subs. (2) to (12). The plan shall be developed no more than 60 days after the applicable compliance date in s. NR 465.055. The written work practice implementation plan shall be available for inspection by the department upon request. If the department determines that the work practice implementation plan does not adequately address each of the topics specified in subs. (2) to (12), or that the plan does not include sufficient mechanisms for ensuring that the work practice standards are being implemented, the department may require that the owner or operator of the affected source modify the plan. Revisions or modifications to the plan do not require a revision of a permit issued under ch. NR 407.

(2) **OPERATOR TRAINING COURSE.** The owner or operator of an

affected source shall train all personnel, including contract personnel, who are involved in finishing, gluing, cleaning or washoff operations, use of manufacturing equipment or implementation of the requirements of this chapter. Personnel hired on or after the compliance date of the standard shall be trained upon hiring. Personnel hired before the compliance date shall be trained within 6 months of the compliance date of the standard. All personnel shall be given refresher training annually. The owner or operator of an affected source shall maintain a copy of the training program with the work practice implementation plan. The training program shall include, at a minimum, all of the following:

(a) A list of all current personnel by name and job description that are required to be trained.

(b) An outline of the subjects to be covered in the initial and refresher training for each position or group of personnel.

(c) Lesson plans for courses to be given at the initial and the annual refresher training that include, at a minimum, appropriate application techniques, appropriate cleaning and washoff procedures, appropriate equipment setup and adjustment to minimize finishing material usage and overspray and appropriate management of cleanup wastes.

(d) A description of the methods to be used to demonstrate and document that personnel have successfully completed the

initial and refresher training.

(3) INSPECTION AND MAINTENANCE PLAN. The owner or operator of an affected source shall prepare and maintain, with the work practice implementation plan, a written leak inspection and maintenance plan for all pumps, valves, flanges and other equipment used to transfer or apply coatings, adhesives or organic HAP solvents that specifies all of the following:

(a) An inspection schedule which specifies a minimum visual inspection frequency of once per month.

(b) Methods for documenting the date and results of each inspection and any repairs that were made.

(c) The timeframe between identifying the leak and making the repair, which adheres, at a minimum, to the following schedule:

1. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

2. Final repairs shall be made within 15 calendar days after the leak is detected, unless the leaking equipment is to be replaced by a new purchase, in which case repairs shall be completed within 3 months.

(4) CLEANING AND WASHOFF SOLVENT ACCOUNTING SYSTEM. The owner or operator of an affected source shall develop an organic HAP solvent accounting form to record all of the following:

(a) The quantity and type of organic HAP solvent used each month for washoff and cleaning operations.

(b) The number of pieces washed off, and the reason for the washoff.

(c) The quantity of spent organic HAP solvent generated from each washoff and cleaning operation each month, and whether it is reused onsite in a process other than cleaning or washoff or disposed of outside of the facility boundaries.

(5) CHEMICAL COMPOSITION OF CLEANING AND WASHOFF SOLVENTS. The owner or operator of an affected source may not use solvents for cleaning or washoff operations that contain any of the pollutants listed in Table 3 in concentrations 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).

(6) SPRAY BOOTH CLEANING. The owner or operator of an affected source may not use compounds containing more than 8.0% by weight of VOC for cleaning spray booth components other than conveyors, continuous coaters and their enclosures, or metal or plastic filters. If the spray booth coating or other protective material used to cover the booth is being replaced, the owner or operator may not use more than 1.0 gallon of organic HAP solvent per booth to prepare the surface of the booth prior to applying the booth coating.

(7) STORAGE REQUIREMENTS. The owner or operator of an affected source shall store finishing, gluing, cleaning and

washoff materials in closed containers.

(8) APPLICATION EQUIPMENT REQUIREMENTS. The owner or operator of an affected source may use conventional air spray guns to apply finishing materials only under any of the following circumstances:

(a) To apply finishing materials that have a VOC content no greater than 1.0 kg VOC/kg solids (1.0 lb VOC/lb solids), as applied.

(b) For touchup and repair under any of the following conditions:

1. The touchup and repair occurs after completion of the finishing operation.

2. The touchup and repair occurs after the application of stain and before the application of any other type of finishing material, and the materials used for touchup and repair are applied from a container that has a volume of no more than 2.0 gallons.

(c) When the spray gun is aimed and triggered automatically.

(d) When emissions from the finishing application station are directed to a control device.

(e) When the cumulative total usage of finishing materials applied with conventional air spray guns is no more than 5.0% of the total gallons of finishing material used during that semiannual period.

(f) When the conventional air gun is used to apply stain on a part for which it is technically or economically infeasible to use any other spray application technology. The owner or operator of an affected source shall demonstrate technical or economic infeasibility by submitting to the department a videotape, a technical report or other documentation that supports the affected source's claim of technical or economic infeasibility. The owner or operator shall use one or both of the following criteria to support a claim that no other spray application technology is technically or economically feasible:

1. The production speed is too high or the part shape is too complex for one operator to coat the part and the application station is not large enough to accommodate an additional operator.

2. The excessively large vertical spray area of the part makes it difficult to avoid sagging or runs in the stain.

(9) LINE CLEANING. The owner or operator of an affected source shall pump or drain all organic HAP solvent used for line cleaning into a container which shall be kept covered except when actively adding solvent to or removing solvent from the container.

(10) GUN CLEANING. The owner or operator of an affected source shall collect all organic HAP solvent used to clean spray guns into a container which shall be kept covered except when actively adding solvent to or removing solvent from the container.

(11) WASHOFF OPERATIONS. The owner or operator of an

affected source shall control emissions from washoff operations by doing both of the following:

(a) Equipping any tank used for washoff operations with a cover and keeping the cover closed whenever the tank is not being used.

(b) Minimizing dripping by tilting or rotating the part to drain as much solvent as possible.

(12) FORMULATION ASSESSMENT PLAN FOR FINISHING OPERATIONS.

(a) The owner or operator of an affected source shall prepare and maintain with the work practice implementation plan a formulation assessment plan that does all of the following:

1. Identifies VHAP from the list presented in Table 4 that are being used in finishing operations by the affected source.

2. Establishes a baseline level of usage by the affected source for each VHAP identified in subd. 1. The baseline usage level shall be the highest annual usage from 1994, 1995 or 1996, for each VHAP identified in subd. 1., or from another year approved by the department if annual usage data for those years is not available or if the affected source was not in operation during those years. For formaldehyde, the baseline level of usage shall be based on the amount of free formaldehyde present in the finishing material when it is applied. For styrene, the baseline level of usage shall be an estimate of unreacted styrene, which shall be calculated by multiplying the amount of styrene monomer

in the finishing material, when it is applied, by a factor of 0.16. For sources using a control device to reduce emissions, an adjusted usage may be calculated based on the overall control efficiency of the control system.

3. Tracks the annual usage of each VHAP identified in subd. 1. 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).

(b) If, after November 1998, the annual usage of the VHAP identified under par. (a)1. exceeds the baseline level established under par. (a)2., the owner or operator of the affected source shall provide a written notification to the department that describes the amount of the increase and explains the reasons for exceedance of the baseline level. Any of the following explanations relieve the owner or operator from further action, unless the affected source is not in compliance with any state regulations or requirements for that VHAP:

1. The exceedance is no more than 15.0% above the baseline level.

2. Usage of the VHAP is below the de minimis level presented in Table 4 for that VHAP. For sources using a control device to reduce emissions, an adjusted usage based on the overall control efficiency of the control system may be calculated and used to

demonstrate that the source does not exceed the de minimis level in Table 4.

3. The affected source is in compliance with ch. NR 400 to 499 for the VHAP.

4. The source of the pollutant is a finishing material with a VOC content of no more than 1.0 kg VOC/kg solids (1.0 lb VOC/lb solids), as applied.

(c) If none of the explanations in par. (b) are the reason for the increase, the owner or operator shall confer with the department to discuss the reason for the increase and whether there are practical and reasonable technology-based solutions for reducing the usage. The evaluation of whether a technology is reasonable and practical shall be based on cost, quality and marketability of the product, whether the technology is being used successfully by other wood furniture manufacturing operations, or other criteria mutually agreed upon by the department and owner or operator. If there are no practical and reasonable solutions, the owner or operator need take no further action. If there are solutions, the owner or operator shall develop a plan to reduce usage of the pollutant to the extent feasible. The plan shall address the approach to be used to reduce emissions, a timetable for implementing the plan and a schedule for submitting notification of progress.

(d) If, after November 1998, the owner or operator of an

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