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(FORM UPDATED: 08/11/2010)

WISCONSIN STATE LEGISLATURE ...
PUBLIC HEARING - COMMITTEE RECORDS

2009-10
(session year)

Joint
(Assembly, Senate or Joint)

Committee for Review of Administrative Rules ...

COMMITTEE NOTICES ...

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INFORMATION COLLECTED BY COMMITTEE FOR AND AGAINST PROPOSAL

- Appointments ... **Appt** (w/Record of Comm. Proceedings)
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  (**ab** = Assembly Bill) (**ar** = Assembly Resolution) (**ajr** = Assembly Joint Resolution)
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- Miscellaneous ... **Misc**

* Contents organized for archiving by: Stefanie Rose (LRB) (June 2012)

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:

Board Order Number:	AM-19-08
Clearinghouse Number:	CR08-102
Subject of Rules:	Application of reasonably available control technology to sources of volatile organic compound emissions in ozone non-attainment counties, and affecting small business.
Date of Transmittal:	March 30, 2009

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

Tom Steidl
DNR Bureau of Legal Services
LS/8, 101 South Webster

An electronic copy of the proposed rule submittal may be obtained by contacting Robert B. Eckdale at 266-2856 or robert.eckdale@wisconsin.gov

REPORT TO LEGISLATURE

NR 422, 423, 439 and 484, Wis. Adm. Code
Application of reasonably available control technology to sources of volatile organic compound emissions in ozone non-attainment counties, and affecting small business

Board Order Number AM-19-08
Clearinghouse Rule Number 08-102

BASIS AND PURPOSE OF THE PROPOSED RULE

The Department proposes these rules to meet the requirements of Section 182(b)(2) of the federal Clean Air Act. Section 182(b)(2) requires states with moderate ozone nonattainment areas to update existing volatile organic compound (VOC) Reasonably Available Control Technology (RACT) regulations within 1 year of US EPA issuing updated Control Techniques Guidelines (CTG). US EPA issued revised CTGs for four industrial source categories in September 2006 and three more in September 2007. The Department is basing the proposed rules on the revised CTGs. The rule revisions will be incorporated pursuant s. 285.11(6), Stats.

The proposed rules address updated requirements to the following VOC RACT categories.

- Paper Coating
- Metal Furniture Coating
- Large Appliance Coating
- Flat Wood Paneling Coating
- Flexible Package Printing
- Offset Lithographic Printing
- Industrial Cleaning Solvents

Summary of the Rules.

The Bureau of Air Management proposes to update VOC RACT rules based on revised US EPA CTG documents for the above-listed industrial categories. These proposed rules apply in Wisconsin's seven moderate ozone nonattainment counties (Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington and Waukesha). The current limitations previously established in Administrative Code remain in place for each of these RACT categories. The following is a short summary of each proposed rule's provisions, referenced by the proposed rule section.

NR 422.075: Paper Coating
This proposed rule applies VOC control to paper, film and foil coating lines, and solvent cleaning work practices associated with this source sector. Paper coating lines include lines coating film and foil substrates in a uniform manner. The proposed rule applies to a subset of facilities regulated under the more general NR 422.07 that established RACT for this printing sector. The proposed rule applies new limits based on mass of VOC per mass of coating solids applied to individual coating lines emitting 25 tons per year VOC (maximum theoretical emissions) from the coating applicators and drying ovens. The updated proposed rule establishes work practices to minimize VOC emissions from various activities, including cleaning and material handling, associated with the printing process. The work practices portion of the proposed rule applies to facilities emitting 3 tons of VOC on a 12 month rolling basis from all coating lines and related cleaning activities at the facility. The proposed rule requires coating line operations to achieve a 90% VOC control efficiency through the combination of installation of VOC control devices and/or use of compliant coatings based on VOC content. The proposed rule also addresses storage and disposal requirements, control requirements, recordkeeping, compliance testing, and certification testing.

NR 422.105, NR 422.115, NR 422.131: Metal Furniture, Large Appliance and Flatwood Panel Coating

These proposed rules apply VOC control to metal furniture coating, large appliance coating, flat wood panel coating and associated solvent cleaning work practices at facilities with emissions exceeding 3 tons of VOC on a 12 month rolling basis. The proposed rules require application of new coating limits by coating type based on mass of VOC per volume of coating as applied, excluding water and exempt specific coating operations The proposed rules also establish a companion control requirement to utilize specific application techniques along with solvent cleaning work practices. If a control device is used to achieve compliance with the coating VOC content limits, the proposed rules require a minimum 90% overall VOC control efficiency. The proposed rules also address storage and disposal requirements, control requirements, recordkeeping, compliance testing, and certification testing.

NR 422.141: Flexible Package Printing

This proposed rule applies VOC control to large flexible package printing presses, and associated solvent cleaning work practices. The proposed rule applies to individual large presses emitting 25 tons per year of VOC (maximum theoretical emissions) from inks, coatings and adhesives, combined, from the press dryer. Sources may choose to reduce VOC emissions from large individual presses by either installing control systems or accepting VOC content limits for inks, coatings and adhesives. The solvent cleaning work practices portion of the proposed rule applies to facilities emitting 3 tons of VOC on a 12 month rolling basis from all flexible package printing presses and related flexible package cleaning activities at the facility. The regulation addresses flexible package printing operations through the installation of VOC control devices, and storage and disposal requirements.

NR 422.143: Lithographic Printing

This proposed rule applies VOC control to lithographic printing presses emitting 25 tons per year of VOC (maximum theoretical emissions) from heatset inks from the press dryer. In accordance with the CTG, the proposed rule contains emission limitation exemptions for: up to 110 gallons of blanket or roller wash on a 12-consecutive month rolling basis, sheet-fed presses with a maximum sheet size of up to 11 inches by 17 inches, any lithographic press with a total fountain solution reservoir of less than one gallon, the printing of books on a heatset lithographic press, and heatset lithographic presses with a maximum web width of up to 22 inches. The proposed rule also contains VOC content limits for fountain solutions, and blanket or roller wash. The fountain solution and blanket or roller wash limits along with the solvent cleaning work practices portion of the proposed rule apply to facilities emitting 3 tons/year of uncontrolled VOC emissions from all lithographic printing presses and related lithographic cleaning activities at the facility. The proposed rule also addresses storage and disposal requirements, temperature monitoring requirements, control requirements, recordkeeping requirements, compliance testing, and certification testing requirements.

NR 423.037: Solvent Cleaning

This proposed rule applies VOC controls to industrial cleaning operations at facilities emitting 3 tons of VOC on a 12 month rolling basis from industrial cleaning operations. The proposed rule limits emissions by establishing solvent and solvent solution requirements, cleaning device and methods requirements, storage and disposal requirements, and recordkeeping requirements. Some industrial cleaning operations are regulated under industry specific RACT rules such as lithographic printers and large appliance manufacturers.

SUMMARY OF PUBLIC COMMENTS

Five organizations, Wisconsin Manufacturers and Commerce [WMC], Printing Industries of Wisconsin [PIW], Specialty Graphic Imaging Association [SGIA], U.S. EPA, and the Wisconsin Legislative Council Rules Clearinghouse commented on the proposed rule. Printing Industries of Wisconsin is an affiliate of Printing Industries of America, which is the world's largest graphic arts trade association, serving over 12,000 member companies comprised of printers and associated

industries serving the printing industries. Specialty Graphics Imaging Association is a trade group that represents entities engaged in the use of screen printing and wide format digital imaging devices.

All three industrial organizations were generally supportive of the proposed rule. WMC's comments focused on several non-rule related issues particularly addressing designation of ozone nonattainment areas in Southeastern Wisconsin. WMC encouraged the Department to move quickly on finalizing the VOC RACT rules and submitting a request to EPA to redesignate the ozone nonattainment areas in the State to attainment.

SGIA's comments focused on the industrial cleaning portions of the rule, particularly on screen reclamation. They were concerned about the potential duplication of control requirements between the existing industrial cleaning regulations and the proposed rule.

PIW provided numerous comments on the lithographic printing portion of the rule. Their comments had several main themes:

- Rule applicability threshold
- Exemptions from the rule
- Emission limits
- Consistency with EPA's Control Technology Guideline document
- Compliance averaging time.
- Streamlining the rule for clarity.

Aside from a few minor technical suggestions, EPA's comments focused on the following issues.

- Reporting and record keeping requirements.
- Work practices
- Solvent concentration limits

The Department adopted the general approach of attempting to be consistent with EPA's Control Technology Guidelines while prohibiting back-sliding on VOC control rules that were already in place. Keeping this general approach in mind, the Department made several changes to the proposed rules based on the comments. Among other minor changes the Department:

- Changed the applicability threshold for several printing and coating operations and solvent cleaning from daily to a 12 month rolling basis.
- Slightly modified work practice requirements for consistency within the coating categories.
- Changed several VOC content limits in the solvent cleaning portion of the rule.

Made several clarifying changes.

Specific comments and the Department's response, organized by commenter, are provided in the attached Response to Comments document.

MODIFICATIONS MADE

Modifications made by the Department are detailed in the attached Response to Comments document.

APPEARANCES AT THE PUBLIC HEARING

The Department held a public hearing on December 5, 2008 at the DNR Southeast Region Headquarters located at 2300 N Dr. Martin Luther King Jr. Drive in Milwaukee. The following appeared as indicated below.

In support: None

In Opposition: None

As interest may appear: Bob Fassbender, 10 E. Doty St., Suite 500, Madison, WI 53707
Brian Borofka, 333 W. Everett St., Milwaukee, WI 53201
James Meverden, 5159 N. Bay ridge Ave, Whitefish Bay, WI 53217

CHANGES TO RULE ANALYSIS AND FISCAL ESTIMATE

Modifications were made to the plain language analysis section to reflect the rule changes detailed in the Response to Comments document attached to this report.

The fiscal affect remains the same, and no changes were made.

RESPONSE TO LEGISLATIVE COUNCIL RULES CLEARINGHOUSE REPORT

All Clearinghouse comments that have not become moot have been accepted and the rule revised accordingly except for Clearinghouse comment 5.b. The Department believes that the proposed language referenced in comment 5.b. is clear and is not subject to conflicting interpretations.

FINAL REGULATORY FLEXIBILITY ANALYSIS

The proposed regulations will have a minimal economic cost to individual small businesses because the major control requirements apply only to large facilities. Additionally, solvent cleaning work practices are considered standard industrial practice, therefore it is anticipated that most businesses affected by these proposed rules are already implementing the requirements. The Department has therefore concluded that the proposed rules will not have a significant economic impact on a substantial number of small businesses.

Department of Natural Resources Response to Comments on Proposed Revisions to NR 422, 423, 439 and 484, Wis. Adm. Code

Board Order Number AM-19-08

Comments from PIW

Comment: The structure of the rule for lithographic printing is confusing with conflicting requirements.

Response:
DNR's development of this rule addresses two competing requirements, the federal Clean Air Act (Act), which prohibits backsliding on emission control requirements in nonattainment areas, and state statute, which requires ozone control measures to conform to the Act. DNR wrote the rule to avoid applying new lithographic printing controls in Manitowoc and Kewaunee Counties, which are not required at this time. Additionally, DNR aimed to prevent backsliding for portions of the existing lithographic printing rules in NR 422.142 that are not covered by the new Control Techniques Guidance document (CTG) for lithographic printing published by the US EPA. The CTG is used by EPA as a basis for judging the approvability of state rules submitted as SIP revisions?

As a point of clarification, NR 422.142 applies to lithographic printing operations in 9 counties; Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington and Waukesha. Additional requirements for lithographic printing operations are found in the proposed NR 422. 143, but those additional requirements only apply in 7 counties; Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington and Waukesha.

Comment:
The DNR's proposed amendments result in two separate and distinct Wis. Adm. Code sections that establish different monthly and daily VOC emissions-based applicability criteria. Existing section NR 422.142(1)(a) establishes a maximum theoretical emissions-based applicability threshold of 1,666 pounds per month from all lithographic printing presses for any facility located in Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington, and Waukesha counties; proposed section NR 422.143(1)(a) would establish a significantly lower emissions-based applicability threshold of 15 pounds per day for all facilities in Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington, and Waukesha counties, but not facilities located in Kewaunee or Manitowoc counties.

The proposed amendments need to be revised and consolidated into a single rule to eliminate confusion over which standards apply to lithographic printing presses and to ensure printers and the DNR clearly understand the proposed new emissions-based applicability threshold is a substantially lower threshold than currently applied in Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington, and Waukesha counties.

Response:
The 15 lbs/day emissions threshold was changed to 3 tons on a 12 month rolling basis. The new threshold only triggers solvent cleaning requirements for facilities located within the 7 county area, consistent with the CTG, and therefore does not render the existing rule's general applicability threshold of 1,666 lbs/month mute for the 9 county area.

Comment:
The applicability criteria for lithographic presses in Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington, and Waukesha counties needs to be expressed as an annual actual emission limit, otherwise the rule will force all subject facilities to develop and maintain hourly or daily material consumption records in order to determine applicability. The variety, combinations, and consumption rate of inks alone would make this a costly and burdensome task.

Response:
DNR evaluated this comment, and made changes to the proposed rule not only for lithographic printing, but for the other RACT categories as well. DNR replaced the 15 lbs/day applicability thresholds in NR 422.075, NR 422.105, NR 422.115, NR 422.131, NR 422.141 and NR 422.143 with the phrase "emissions equal to or exceeding 3 tons on a 12 consecutive month rolling basis,."

Comment:
Proposed section NR 422.143(1)(a) establishes work practice requirements for any facility in Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington, and Waukesha counties where actual VOC emissions from lithographic printing presses "have ever been greater than 15 lbs/day." This amendment would subject facilities to the rule's requirements based on historical emissions, not actual VOC emissions. This retroactive application of an emissions threshold is not consistent with the US EPA's CTG for Offset Lithographic Printing, which established its applicability thresholds based on actual emissions.

Response:
DNR revised the proposed rule to replace the phrase "have ever been" with the phrase 'which exceed."

Comment:
Proposed section NR 422.143(1)(b) establishes emission limitations for an "owner or operator of any heatset web lithographic printing press at a facility in the county of Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington, or Waukesha." The emission limitations of proposed subsection (3) that are referenced in proposed section NR 422.143(1)(b), however, contain limitations for heatset web dryer exhaust as well as limitations for heatset web, non-heatset web, and sheet-fed web fountain solutions and cleaning materials. The US EPA's CTG for Offset Lithographic Printing is clear that the CTG's recommendations for fountain solutions and cleaning materials do not apply to "any" press or facility as proposed in section 422.143(1)(b). Page 3 of the CTG for Offset Lithographic Printing states:

> "In terms of applicability, we recommend that the control recommendations discussed in this CTG for cleaning materials and fountain solutions apply to any offset lithographic printing operation where the emissions associated with all aspects of that operation equal or exceed 6.8 kg/day (15 lb/day) actual emissions of VOC, or an equivalent level, before consideration of controls.

Response:
We take this to mean there was confusion in the applicability thresholds between NR 422.142 and proposed NR 422.143. DNR revised the applicability statement for the proposed rule NR 422.143 to clarify that fountain solution, blanket and roller wash, and work practice requirements are triggered at the emission threshold consistent with the CTG.

Comment:
Existing section 422.142(1)(b) contains emissions factors for calculating VOC emissions from lithographic printing presses. While PIW supports the inclusion of these factors in the rule, they should be placed in new section 422.142(7).

Response:
DNR created new emission calculation subsections in NR 422.142 and proposed NR 422.143 to address PIW's concerns.

Comment:
Proposed new subsection NR 422.143(2) identifies five rule exemptions that are consistent with the US EPA's CTG for Offset Lithographic Printing. To prevent confusion over which exemptions apply to lithographic printing presses and streamline the regulation, PIW recommends incorporating new section NR 422.143(2) into the DNR's existing lithographic RACT regulations

as amended section NR 422.142(2) and re-structuring existing subsections NR 422.142(2) through NR 422.142(6) to be subsections NR 422.142(3) through NR 422.142(7). PIW also recommended moving existing subsection NR 422.142(2)(c)(2.) into amended subsection NR 422.142(2)

Response:
To prevent backsliding, DNR will retain the rule structure as proposed in the hearing draft.

Comment:
The DNR does not support its claim that the proposed rules will not create a significant economic impact, especially for the small businesses that are prevalent in the lithographic printing industry. The DNR also does not provide any details on the whether they will perform a cost-effectiveness analysis for the add-on control and fountain solution control requirements of the rule or if the DNR will rely upon the cost-effectiveness analysis contained in the US EPA's CTG for Offset Lithographic Printing.

Response:
DNR will rely on the cost-effectiveness analysis provided in EPA's CTG.

Comment:
The DNR estimates that the total annual cost related to the proposed cleaning requirements is $1,485 per printing facility, approximately 1.75 times higher than the cost effectiveness for cleaning materials identified in Table 1 on Page 18 of the US EPA's CTG for Offset Lithographic Printing. The DNR does not explain how this higher cost-effectiveness does not represent a significant economic impact and should re-evaluate the technical feasibility of its proposal.

Response:
Based on the US EPA's CTG, DNR estimated that the cleaning requirements at facilities would cost $1,485 per facility, but most of the estimated 26 facilities are likely already complying with the rule requirements. DNR feels that for those facilities not already complying, the estimated $1,485 is not a substantial burden.

Comment:
The DNR should not rely upon the add-on control and fountain solution cost-effective analysis contained in the US EPA's 2006 CTG for Offset Lithographic Printing. US EPA did not conduct a new economic analysis of the impact of the draft CTG for Offset Lithographic Printing and as a result, the impact on small printers is not fully known or understood.

Response:
DNR will rely on the cost-effectiveness analysis provided in EPA's CTG.

Comment:
New section 422.143(3)(a) establishes dryer exhaust requirements that are not consistent with the US EPA's CTG for Offset Lithographic Printing and need to be revised to eliminate confusion over which standards apply to heatset web lithographic printing presses.

This requirement is not consistent with the US EPA CTG for Offset Lithographic Printing, which recommends add-on controls for heatset web presses that have emissions greater than 25 tpy of VOC emissions from ink oil.

Response:
The DNR's proposed language is consistent with the CTG. Proposed language reads as follows:

> "On and after May 1, 2010, no owner or operator of a heatset web lithographic printing press may operate, or cause, allow or permit the operation of a lithographic press that has maximum theoretical emissions of VOCs, from the dryer, equal to or greater than 25

tons per year from heatset inks, unless the owner or operator installs and operates an emission control device and meets the applicable emission limitation as follows..."

Comment:
As stated above in comment 1, the DNR's proposed amendments create two Wis. Adm. Code sections which provide different dryer exhaust requirements for heatset web lithographic presses in different counties. Existing section NR 422.142(2)(a)(1) establishes a 90% control device efficiency for heatset web presses in any facility located in Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington, and Waukesha counties; proposed section NR 422.143 (3)(a)(1) would establish a 95% control device efficiency for new devices in all facilities except those located in Kewaunee or Manitowoc counties. The proposed amendments need to be revised to eliminate confusion over which standards apply to lithographic printing presses and to reflect that only new presses or oxidizers installed in Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington, or Waukesha counties after May 1, 2010 are required to meet the 95% limit proposed by the DNR.

Response:
PIW's comment appears to have misinterpreted the proposed requirements in s. NR 422.143(3)(a)1. for VOC emission control for dryer exhaust. PIW state that the 95% control requirement should only apply to new presses or oxidizers installed in the 7- county area after May 1, 2010. The proposed rule, and the recommendation in the CTG, bases the required level of control (90% or 95%) on the first installation date of the control device only.

Comment:
Proposed new section NR 422.142(3)(a)(2) establishes a capture efficiency for calculating VOC emissions from heatset web lithographic printing presses. While PIW supports the inclusion of this factor in the rule, we recommend moving this section to PIW recommended section 422.142(7).

Response:
DNR will retain the structure of the rule proposed in the hearing draft.

Comment:
The proposed amendments should allow for the application of site-specific control limits in instances where the proposed limits are economically or technologically infeasible.

Response:
A variance procedure already exists in NR 436.05.

Comment:
The DNR proposes to modify the term "blanket or roller wash" as defined in NR 422.02(12) to include other cleaning solvents or solutions used to remove ink, oil, and debris from outside the press area or immediately around the press. While PIW supports the intent of the modified definition, the use of the term "blanket or roller wash" to describe other cleaning solvents used on-press is misleading and may cause confusion regarding the requirements of the standard as they apply to blanket wash, roller wash, and other cleaning solutions. It should be deleted and replaced with "cleaning solutions."

The proposed amendments need to use the term "cleaning solutions" as the operative term for the rule to make it clear the rule's VOC content and vapor pressure limitations apply to a cleaning solutions in general and not just blanket and roller washes.

The EPA's expansion of the cleaning material requirements to all cleaning solutions in 2006 resulted in a change in the VOC content limitations from 30% by weight to 70% by weight. It is critical the proposed amendments are consistent with this recommendation since this change was made to accommodate the VOC content of all cleaning solutions used in lithographic printing, not

just blanket and roller wash. As the modified definition for "blanket or roller wash" also affects existing VOC content limit requirements for cleaning materials, the proposed amendments need to revise both the existing and the proposed cleaning solution control requirements to reflect EPA's 70% VOC content and 10 mm Hg VOC composite vapor pressure recommendations. This would establish the same cleaning solution requirements for all presses covered by the lithographic RACT rule and eliminate the need for new section NR 422.143(3)(c).

Response:
Due to backsliding concerns DNR will retain the limit in the proposed rule.

To avoid any unintended consequences with using the term "cleaning solutions," DNR did not adopt PIW's suggestion to change the terminology for "blanket and roller wash." However, DNR did change the definition of blanket and roller wash, which should address PIW's concerns.

Comment:
Existing section NR 422.142(2)(c)(2.) permits the use of cleaning materials that do not meet the control requirements provided the quantity of such materials used in any 12 consecutive months does not exceed 110 gallons for facilities that do not print on plastic or 165 gallons for facilities that do print on plastic. PIW recommends moving this section to a newly created section in NR 422,142(2).

Response:
DNR will retain the language in the proposed hearing draft.

Comment:
To streamline the regulation, PIW recommends incorporating new section NR 422.143(4) into the cleaning solution requirements of existing section NR 422.142(2)(c) and adding new section NR 442.142(2)(c)(2.)(b.) to require used shop towels be kept in closed containers.

Response:
DNR will retain the language in the proposed hearing draft. The proposed language in s. NR 42.143(4) requires the storage of used shop towels in closed containers.

Comment:
The DNR's proposed modification to the term "blanket or roller wash" as defined NR 422.02(12) would render the VOC content and composite partial vapor pressure cleaning solution limitations of amended section NR 422.142(4)(c)1. the operative requirements for cleaning materials used on subject lithographic presses. Existing industrial cleaning operations section NR 423.035(2) contains exemptions for lithographic printing operations regulated under NR 422.142(2)(c) and for cleaning operations in graphic arts pre-press areas. Neither chapters NR 422 nor NR 423 define or provide a reference definition for the term "graphic arts." The DNR needs [to] reflect the re-structuring of section NR 422.142(2)(c) as recommended in comment 5 above and exempt lithographic pre-press areas from the industrial cleaning operation rule's requirements.

The DNR also needs to delete the word "lithographic" from the lithographic and letterpress printing components contained in sic [proposed rule] and provide a specific exception for lithographic printing from the ultraviolet ink application equipment limit in ... Table 1 VOC Content Limits for Solvents and Solvent Solutions Used in Industrial Cleaning Operations in order to reflect the modified definition of "blanker or roller wash."

Response:
The term "graphic arts" as defined in s. NR 400.02(74), which includes lithography, applies to chs. NR 422 and NR 423.

Cleaning operations associated with lithographic printing are exempt from s. NR 423.037. DNR modified exemption language in NR 423.037 to clarify this exemption

Comment:
The DNR also needs to exempt lithographic pre-press areas from the proposed new industrial cleaning operation requirements in NR 423.037. The DNR also needs to delete the word "lithographic" from the lithographic and letterpress printing components contained in sic [proposed rule] and provide a specific exception for lithographic printing from the ultraviolet ink application equipment limit in ... Table 1 VOC Content Limits for Solvents and Solvent Solutions Used in Industrial Cleaning Operations of proposed new section NR 422.037 in order to reflect the modified definition of "blanker or roller wash."

Response:
Cleaning operations associated with lithographic printing are exempt from s. NR 423.037. DNR modified the exemption language in NR 423.037 to clarify this exemption.

Comment:
Proposed new section NR 422.143(6)(a)1. requires records of control device monitoring data in accordance with NR 439.055, which requires temperature monitoring in both the primary chamber and afterburner of an incinerator. This dual monitoring requirement is unnecessary as only the oxidizer operating temperature is needed to determine normal operations. Also, the term "incinerator" should be replaced with "oxidizer" as it is more accurate. The proposed amendments also need to include temperature monitoring requirements for catalytic oxidizer systems. It is not necessary to measure the temperature difference across the catalyst bed in these systems as this temperature difference is not indicative of normal operation. While this may be a common monitoring requirement for other industries, it is one that does not provide meaningful data on a consistent basis. The primary reason is due to the large variations in coverage experienced on a per job and daily basis. The coverage will dictate the amount of ink that will be required to be used to produce a job and since ink accounts for more than 95% of stack VOC emissions, the temperature rise across the catalytic bed will continuously fluctuate and the fluctuations can be very dramatic. The printing industry has had extensive discussions with US EPA on this issue and US EPA has accepted the fact that the change in temperature does not provide meaningful results. This is the reason why this requirement does not appear in the CTG for Offset Lithographic Printing or any of US EPA's recent guidance documents or Maximum Available Control Technology rules for printing operations. The rule should only require the temperature in a catalytic oxidizer system to be monitored upstream of the catalyst bed. Page D-18 of the US EPA's TSD for Title V Permitting of Printing Facilities states: "Typically, the temperature at the inlet to the catalyst chamber (bed) is used to monitor and control the oxidizer operation. Most catalytic oxidation systems are set up to measure both the inlet and outlet temperatures of the catalyst chamber. While the differential temperature across the catalyst does provide an indication of catalyst activity, it does not provide a quantifiable indication of the efficiency of the system for operations subject to variable VOC loading, as in some elements of the printing/flexible packaging industry. The primary purpose of the outlet temperature measurement is for protection of the catalyst from overheating. Inlet operating temperatures are based on catalyst manufacturer's recommendations and are proven through compliance emissions testing."

Therefore, new section NR 422.143(6)(a) should be deleted, existing paragraph 422.142(4) renumbered to be NR 422.142(5), and section NR 422.142(5)(a) revised to read:
(a) The owner or operator of a heatset web lithographic printing press that is subject to the VOC control device requirements of sub. (3)(a) of this rule shall:
1. Install, calibrate, maintain, and operate temperature monitoring and recording equipment which shall:
a. For catalytic oxidizer control systems, the temperature monitoring and recording equipment shall monitor the gas temperature upstream of the catalyst bed at least once every fifteen minutes by an analog or digital recording device. The catalyst bed material shall be inspected annually for general catalyst condition and any signs of potential catalyst depletion. The permittee shall also collect a representative sample of the catalyst from the oxidizer, per manufacturer's recommendations, and have it tested to evaluate the catalyst's capability to continue to function

at or above the required control efficiency. An evaluation of the catalyst bed material shall be conducted whenever the results of the inspection indicate signs of potential catalyst depletion or poor catalyst condition based on manufacturer's recommendations, but not less than once per year.
b. For thermal and regenerative oxidizer control systems, the temperature monitoring and recording equipment shall monitor and record the oxidize operating temperature at least once every fifteen minutes.
c. The temperature to be monitored by subd. (1)(a) and (1)(b) above shall be established during testing required to demonstrate compliance with the emission standard in section (3)(a) of this rule. The temperature shall be computed as the time-weighted average of the temperature values recorded during the test. The facility must maintain the oxidizer at a 3- hour average temperature no less than 50°F below the average temperature observed during the most recent stack test to demonstrate continuous compliance. Temperature monitoring is required only when a connected press is operational.

Response:
Most of PIWs proposed revisions are already contained in our current rule language under NR 422.142(4)(a)1., NR 439.055(1)(d), NR 439.055(2)(a) and NR 439.055(2)(b). Our proposed language under NR 422.143(6)(a)1. is similar to the existing NR 422.142(4)(a)) aside from the NR 439.055 reference. This reference is automatically included in any permit required to monitor a control device.

To limit any unintended consequences with the proposed rule, the Department did not change the term "incinerator" to "oxidizer."

A 3-hour temperature average is utilized in a test to demonstrate compliance with permit limits.

Comment:
For cleaning solution requirements, the proposed amendments need to reflect the use of the term "cleaning solutions" instead of "blanket and roller wash" and incorporate the US EPA's recommendations for VOC composite partial vapor pressure limitations.

Response:
DNR changed the definition of blanket and roller wash to reflect the concept presented in PIW's comment.

Comment:
Existing section NR 422.142(5)(c) and (5)(d) specify Method 24 and ASTM D2879-97 as the test methods for determining the VOC content of lithographic inks, fountain solutions, and cleaning solvents and the VOC component vapor pressure of cleaning solutions, respectively. Proposed section NR 422.143 also lists Method 24 (NR 422.143(7)(c)) as the compliance test method for VOC content, but does not provide a method to determine the VOC composite partial vapor pressure of cleaning solutions. In addition, the rule needs to allow the use of a material balance calculation to demonstrate compliance with the VOC content and composite partial vapor pressure limits of the rule. Some small presses do not require diluting fountain solution mixtures or cleaning solutions with water. In these instances where no dilution occurs, the as-applied VOC content of the non-diluted solution would be readily available from the product's supplier or Material Safety Data Sheet (MSDS). Thus, the proposed amendments also need to permit the use of supplier provided Method 24 data to demonstrate compliance.

Response:
It has been the DNR's policy to allow manufacturer supplied MSDS or formulation data to be used to establish material VOC content. However, when a test is required by the DNR, the results of the test outweigh any VOC content determination based on MSDS or formulation data.

ASTM D2879-97 was specified in s. NR 422.142(5)(d) because the limit was on an individual VOC component basis. The proposed rule changes that to a VOC composite partial vapor pressure, and creates a definition for that term. The definition includes 2 equations for calculating the composite pressure. DNR assumes that these equations would be adequate to determine the composite pressure.

Comment:
Comments related to emission calculation.
A. Ink Oil Retention
Heatset Inks – We recommend using a 20 percent VOC retention factor for petroleum ink oils and a 100 percent retention factor for vegetable ink oils in heatset inks. The VOC emissions, before consideration of any control, from a heatset ink would therefore be 80 percent of the petroleum ink oil content. The petroleum ink oil content of a heatset ink can be determined from formulation data (e.g., technical data sheet or material safety data sheet). We believe that a Method 24 test of a heatset ink will volatilize the petroleum ink oils and will not volatilize the vegetable ink oils.

Sheet-fed and coldset web inks - We recommend using a 95 percent VOC retention factor for petroleum ink oils and a 100 percent retention factor for vegetable ink oils in sheet-fed and coldset web inks. The VOC emissions from a sheet-fed or coldset web ink would therefore be 5 percent of the petroleum ink oil content. The petroleum ink oil content of a sheet-fed or coldset web ink can be determined from formulation data (e.g., technical data sheet or material safety data sheet). We believe that an EPA Method 24 test of a sheet-fed or coldset web ink will volatilize the petroleum ink oils and will not volatilize the vegetable ink oils. The ASTM method D6419 (Standard Test Method for
Volatile Content of Sheet-Fed and Coldset Web Offset Printing Inks) is a more precise method for determining the volatile (petroleum ink oil) content of sheet-fed and coldest web inks than ASTM D2369 which is referenced in EPA Method 24.

B. Retention of Low VOC Composite Vapor Pressure Cleaning Materials in Shop Towels We recommend using a 50 percent VOC retention factor for low VOC composite vapor pressure cleaning materials in shop towels where (1) VOC composite vapor pressure of the cleaning material is less than 10 mm Hg at 20 °C, and (2) cleaning materials and used shop towels are kept in closed containers.

C. Carryover of VOC from Automatic Blanket Wash and Fountain Solution to Offset Lithographic Heatset Dryers
We recommend using a 40 percent VOC carryover (capture) factor for automatic blanket washing when the VOC composite vapor pressure of the cleaning material is less than 10mm Hg at 20°C. We recommend using a 70 percent VOC carryover (capture) factor for alcohol substitutes in fountain solution.

D. Capture of Petroleum Ink Oil in Heatset Dryers
For heatset web offset lithographic presses and heatset web letterpress presses, we believe capture efficiency for VOC (petroleum ink oils) from oil based paste inks and oilbased paste varnishes (coatings) can be demonstrated by showing that the dryer is operating at negative pressure relative to the surrounding pressroom. We recommend that as long as the dryer is operated at negative pressure, the capture efficiency for VOC from the heatset lithographic inks and varnishes (coatings) formulated with low volatility ink oils can be assumed to be 100 percent of the VOC (ink oils) volatilized in the dryer. We do not recommend conducting a capture efficiency test in this situation. Conventional heatset lithographic inks and varnishes are paste-type materials. The VOC in these materials are oils with high boiling points, which volatilize only within the dryer. Some ink oils, nominally 20 percent, are not volatilized and remain in the substrate. If other types (e.g., fluid type) of coating materials are used on a heatset lithographic press or a heatset letterpress press, we recommend that capture efficiency testing be conducted for the VOC from these other materials if the printer wants to take into account the effect that the dryer controls have on VOC emissions from these other types of coatings. The most common

other types of coatings materials used on heatset presses are waterbased or radiation (ultra-violet light or electron beam) cured materials which generate minimal VOC emissions." PIW recommends inserting new section 422.142(7) to the proposed amendments. The recommended section will clarify the methodology for estimating actual emissions in the lithographic printing industry, saving administrative time and costs for both the DNR and the lithographic printing industry.

The recommended section should read as follows:
(7) Retention Factors and Capture Efficiencies (a) For purposes of determining VOC emissions from offset lithographic printing operations, the following retention factors and capture efficiencies shall be used:
1. A portion of the VOC contained in inks and cleaning solution is retained in the printed web or in the shop towels used for cleaning. The following retention factors shall be used:
a. A 20% VOC retention factor shall be used for heatset inks printed on absorptive substrates, meaning 80% of the VOC in the ink is emitted during the printing process and is available for capture and control by an add-on pollution control device.
b. A 95% VOC retention factor shall be used for sheet-fed and non-heatset web inks printed on absorptive substrates, meaning 5% of the VOC in the ink is emitted during the printing process.
c. A 50% VOC retention factor shall be used for cleaning solution VOC in shop towels for cleaning solutions with a VOC composite vapor pressure of no more than 10 mm of mercury (Hg) at 20°C (68°F) if the contaminated shop towels are kept in closed containers, meaning 50% of the VOC used on the shop towels is emitted during the cleaning process.
2. A portion of the VOC contained in inks, fountain solutions, and automatic blanket washes on heatset presses is captured in the press dryer for control by add-on pollution control devices. The following capture efficiencies are to be used:
a. A 100% VOC carry over efficiency shall be used for inks. All the VOC in the ink that is not retained is assumed to be volatilized in the press dryer. Capture efficiency testing for heatset dryers is not required if it is demonstrated that pressure in the dryer is negative relative to the surrounding press room and the airflow is into the dryer.
b. A 70% VOC carry over efficiency shall be used for fountain solutions containing alcohol substitutes.
c. A 40% VOC carry over efficiency shall to be used for automatic blanket wash solutions with a VOC composite vapor pressure of no more than 10 mm of mercury (Hg) at 20°C (68°F).

Response:
DNR created new emission calculation subsections in NR 422.142 and proposed NR 422.143 to address PIW's concerns.

Comments:
PIW recommends adding or amending the following definitions in NR 422.02 in order to clarify the applicability and compliance requirements of the rulemaking in regards to the lithographic printing industry:
Alcohol - Any of the following compounds, when used as a fountain solution additive for offset lithographic printing: ethanol, n-propanol, and isopropanol.
Alcohol Substitutes – Non-alcohol additives that contain VOCs and are used in the fountain solution. Some additives are used to reduce the surface tension of water; others are added to prevent piling (ink build-up).
Cleaning Material – With respect to a surface coating operation or graphic arts operation, a liquid solvent or solution used to clean the operating surfaces of a printing press and its parts. For purposes of this standard, cleaning solutions include, but are not limited to blanket wash, roller wash, metering roller cleaner, plate cleaner, impression cylinder washes, rubber rejuvenators, and other cleaners used for cleaning a press, press parts, or to remove dried ink or coating from areas around the press.
Dampening System - Equipment used to deliver the fountain solution to the lithographic plate.
Fountain Solution - A mixture of water and other volatile and non-volatile chemicals and additives used in lithographic printing operations that maintains the quality of the printing plate including

preventing debris build up (e.g., spray power, paper fiber, coating particles, dried ink particles, and other materials), and increases viscosity and reduces the surface tension of the water so that it spreads easily across the printing plate surface. The fountain solution wets the non-image area so that the ink is maintained within the image areas. Non-volatile additives include mineral salts and hydrophilic gums. Alcohol and alcohol substitutes are the most common VOC additives used to reduce the surface tension of the fountain solution.
Fountain Solution Batch – A supply of fountain solution that is prepared and used without alteration until completely used or removed from the printing process. For the purposes of this rule, this term may apply to solutions prepared in either discrete batches or solutions that are continuously blended with automatic mixing units.
Fountain Solution Reservoir - The collection tank that accepts fountain solution re-circulated from printing unit(s). In some cases, the tanks are equipped with cooling coils for refrigeration of the fountain solution.
Heatset - A lithographic printing process where the printing inks are set by the evaporation of the ink oils in a heatset dryer.
Heatset Dryer - A hot air dryer used in heatset lithography to heat the printed substrate and to promote the evaporation of ink oils.
Inking System - A series of rollers used to meter ink onto the lithographic plate. The system can include agitators, pumps, totes, and other types of ink containers.
Lithographic printing or lithographic printing operation - A planographic printing process where the image and non-image areas are chemically differentiated; the image area is oil receptive and the non-image area is water receptive. This method differs from other printing methods, where the image is typically printed from a raised or recessed surface.
A lithographic printing operation includes, but is not limited to, a heatset web lithographic printing operation, a coldset web offset lithographic printing operation, and a sheet-fed offset lithographic printing operation.
Non-heatset Lithographic Printing - A lithographic printing process where the printing inks are set by absorption and/or oxidation of the ink oil, not by evaporation of the ink oils in a dryer. Use of an infrared heater or printing conducted using ultraviolet-cured or electron beam-cured inks is considered non-heatset.
Offset Lithography- A printing process that transfers the ink film from the lithographic plate to an intermediary surface (blanket), which, in turn, transfers the ink film to the substrate.
Press - A printing production assembly composed of one or more units used to produce a printed substrate including any associated coating, spray powder application, heatset web dryer, ultraviolet or electron beam curing units, or infrared heating units.
Sheet-fed Lithographic Printing- means a non-heatset lithographic printing process where individual sheets of substrate are fed into the press sequentially.
Unit - The smallest complete printing component, composed of inking and dampening systems, of a printing press.
VOC Composite Partial Vapor Pressure - The sum of the partial pressure of the compounds defined as VOCs.

Response:
A number of the suggested definitions are not used in the proposed rule or are already defined and therefore, are not included in the proposed rule. Only definitions of "Fountain Solution Reservoir" and "VOC Composite Partial Vapor Pressure" were added.

Comments from WMC

Comment:
WMC made several comments unrelated to the proposed rule as follows:

- That the DNR should submit these rules to US EPA without delay.
- The nonattainment area boundaries are flawed due to the use of the Chiwaukee Prairie monitor as the design site for the Milwaukee metro area.

- The DNR must seek to re-designate the ozone nonattainment areas to attainment as quickly as possible.
- State laws require that air quality standards may not be more stringent than the federal standards.

Response:
- DNR is working to adopt the rules as quickly as possible.
- The RACT rules are required in moderate ozone nonattainment areas. The proposed rules are only effective in those areas. The issue of the Chiwaukee Prairie monitor should be addressed in the context of designating ozone nonattainment areas for 2008 8-hour standard.
- DNR is working as quickly as possible to develop a re-designation request that EPA will find complete.
- WMC's comment on the air quality standards is irrelevant, since the statute clearly addresses standards promulgated under Section 109 of the Clean Air Act. RACT rules are not air quality standards and are required under Section 182 of the Clean Air Act.

Comment:
DNR is applying RACT rules to counties that are in attainment with the standard.

Response:
The proposed rules only apply in the 7 counties designated as moderate ozone nonattainment areas.

Comment:
Change NR 422.04(1) to allow monthly averaging for compliance rather than daily averaging.

Response:
WMC proposes to make a change to a rule that is not germane to the proposed rule. Additionally, a relaxation of this rule is not allowed under the anti-backsliding provisions of the federal Clean Air Act.

Comments form SGIA

Comment:
Regulation of solvent usage under NR 422.145(2)(d) and NR 423.037 will result in conflicting regulatory language and duplicative requirements for screen reclamation for all screen printing facilities operating in the counties of Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington and Waukesha.

Response:
When screen reclamation is regulated under NR 422.145(2)(d), it isn't regulated under s. NR 423.037. Screen reclamation isn't ever regulated under both NR 422.145(2)(d) and NR 423.037. NR 423.037 is constructed to implement all recommended exclusions from US EPA's Control Techniques Guidelines (CTG) for industrial cleaning solvents and to avoid any potential backsliding. The regulatory language and reporting requirements remain essentially unchanged in NR 423.037.

Comment:
"In 2010, the new industrial solvent cleaning requirements will apply to all facilities with emissions from industrial solvent cleaning operations of 15 pounds or more per day. This will result in duplicative regulatory requirements for all screen printing facilities operating in the counties of Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington and Waukesha. Due to this duplication, we disagree with the DNR's assertion that there will be minimal economic impact on the small business community. Facilities subject to both regulations will be required to keep two

distinct set of records, as well as incur duplicative, and often, contradictory, permitting requirements."

Response:
In proposed NR 423.037, the threshold of 15 lb/day of actual uncontrolled emissions is drawn directly from EPA's CTG for industrial cleaning solvents. Note that this threshold has been changed to the annual equivalent of 3 tons per year of actual uncontrolled emissions in response to a previous comment. If cleaning operations at screen printing facilities are not regulated under NR 422.145(2)(d), they may be regulated under NR 423. This structure has not changed by the addition of NR 423.037.

The screen printing VOC content limits in Table 1 that appear in NR 423.037 are the same as the limits that exist in NR 423.035. These are the limits that were negotiated between the DNR, Serigraph Inc. and Specialty Graphic Imaging Association (SGIA) during the development of NR 423.035. These limits were established as reasonable through these negotiations.

Comment:
SGIA recommends that NR 422.145(2)(d), screen reclamation, be repealed when NR 423.037 becomes effective.

Response:
The proposed rule does not apply to NR 422.145(2)(d). Therefore, repeal of NR 422.145(2)(d) would constitute back-sliding and is not allowed under the federal Clean Air Act.

Comment:
SGIA recommended that the following definition be added to NR 423.02:

> Screen reclamation - means the removal of the stencil or of residual ink or coating from the screen mesh or fabric after excess ink or coating has been removed from the screen or fabric."

Response:
The term "screen reclamation" is not used in ch. NR 423. Consequently, the addition of this definition to ch. NR 423 would not provide any clarification.

Comments from EPA

Comment
EPA made the follow comment related to the printing and coating sections of the proposed rule: "Wisconsin's draft work practices appear less effective and do not match up with the cleaning material work practices in the CTG."

Response:
The CTG's developed by EPA for the source categories addressed by this rule are not consistent with regard to the recommended work practice requirements. The Department compared the CTGs for the coating categories and revised the rule to include consistent work practices in each coating category that reflect reasonable and appropriate requirements.

Comment:
EPA indicated that there were no specific record keeping requirements in NR 439.04(3) to determine whether the 3 tons on a 12 consecutive month rolling basis is exceeded.

Response:
The Department disagrees with this comment. NR 439.04(3) requires sources to keep adequate records to support each exemption claim. If a source wants to claim an exemption from emission limits, the Department expects that the source would keep the necessary records to support their

claim. The Department feels it is not necessary to specify those record keeping requirements in the proposed rule.

Comment:
EPA suggested a minor language change on the metal furniture, large appliance and flatwood panel portions of the proposed rule The phrase "related cleaning activities" is more specific than and should replace "the associated activities."

Response:
The Department did not make the minor language change, since the proposed rule language was more comprehensive than EPA's suggested change.

Comment:
EPA suggested a table of compliance alternatives be added to the proposed rule.

Response:
The Department did not add the compliance alternatives table. Those alterative compliance measures are already covered in our existing rules.

Comment:
EPA indicates that the applicability statement for lithographic printing should be expanded to include letterpress printing.

Response:
The Department has previously sent a negative declaration to EPA indicating that there are no letterpress printers in the affected area that are major sources. Since EPA accepted that negative declaration, it is not necessary to establish RACT for letterpress printing by rule. The Department therefore did not make the suggested change.

Comment:
EPA made the following detailed comments related to lithographic printing:

1. The first sentence in (a) should be expanded to "...including related lithographic cleaning and fountain solution activities..."
2. (c) & (d) - The exemptions for the printing of books on a heatset lithographic press and heatset lithographic presses with a maximum web width of 22 inches should only be from the add-on control requirements of (3)(a).
3. (a) & (b) - should be "...20 ppmv as hexane on a dry basis."

Response:
The Department revised the rule to address EPA comments in 1 and 2 above. DNR did not change the rule for measurement of VOC in 3 above, since the Department believes the proposed rule accurately describes the measurement of VOC from these processes.

Comment:
EPA commented that the basis for the exemptions in the solvent cleaning portion of the proposed rule must be justified, especially those limits that exceed 0.42 lb/gal of VOC.

Response:
The VOC content limits exceeding the generally recommended CTG VOC content limit of 0.42 lb/gal can be broken into two categories: those matching South Coast Air Quality Management District (SCAQMD)'s Rule 1171 (Solvent Cleaning Operations) VOC content limits and those established through negotiation with industry during the development of the first solvent cleaning RACT rule (NR 423.035). Some of the non-water based limits drawn from SCAQMD were not current with latest version of SCAQMD's Rule 1171 amended on 2/1/08. The Department revised the VOC content limits for the following source categories:

- "Electrical apparatus components and electronic components" (s. NR 423.037(3)(a)2. and s. NR 423.037(3)(b)2.),
- "Cleaning of coatings application equipment or adhesives application equipment...General" (s. NR423.037(3)(c)1.),
- "Rotogravure printing - publication" (s. NR423.037(3)(d)3.) and
- "Ultraviolet ink application equipment..." (s. NR423.037(3)(d)6.)

The Department set realistic and achievable VOC content limits in NR423.035 through lengthy negotiations with industry. The following limits were set in such a manner:

- "Laminated wood products" (s. NR 423.037(3)(a)3),
- "Screen printing" (s. NR 423.037(3)(a)5., s. NR 423.037(3)(b)4. and s. NR423.037(3)(d)5.),
- "Architectural coatings" (s. NR 423.037(3)(c)2.),
- "Ultraviolet coatings" (s. NR 423.037(3)(c)3.),
- "Flexographic printing - excluding packaging" (s. NR 423.037(3)(d)2.b.) and
- "Letterpress printing" (s. NR 423.037(3)(d)4.a.)

The Department believes that no further rule changes are needed to address source categories where VOC content limits were negotiated with affected sources. The Department will provide further justification for the exemptions to EPA when the rule is submitted for their approval.

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

The Wisconsin Natural Resources Board adopts an order to **amend** NR 422.02(12), (13), (77), (90m) and (102), 422.07(title), 422.10(title), 422.11(title), 422.13(title), 422.142(title), 423.035(title), (1)(a) and (b), (2)(intro.), (b)(intro.) and 4., (e), (g), (3)(intro.), (6)(a) and (b) and (9)(a), 439.06(3)(j), 484.04(16), (19) and (20), 484.10(9), (12), (14), (21), (32), (36) and (56) and 484.11(4) and to **create** NR 422.02(12s), (21g), (26m), (34g), (34r), (37m), (40m), (53i), (54s), (57m), (80m), (87v), (87x) and (107m), 422.075, 422.105, 422.115, 422.131, 422.141, 422.142(1m), 422.143, 423.02(5m) and (9t) and 423.037 relating to the application of reasonably available control technology emission limitations to sources of volatile organic compounds in ozone non-attainment counties, and affecting small business.

AM-19-08

Analysis Prepared by the Department of Natural Resources

1. Statute interpreted: Section 285.11(1) and (6), Stats. The State Implementation Plan developed under s. 285.11(6), Stats., is revised.

2. Statutory authority: Section 285.11(6), Stats.

3. Explanation of agency authority: The Department has the authority to develop, revise and implement comprehensive plans for the prevention, abatement and control of air pollution. These plans, which may include rules and/or control strategies, must conform to the Federal Clean Air Act. Measures beyond those required by the Clean Air Act may be included, provided the Governor determines that additional measures are needed based on the recommendations of the Natural Resources Board or a Department head that promulgates a rule or establishes a control strategy. However, measures beyond those required by the Clean Air Act must meet at least one of the following criteria:

a. The measures are part an interstate ozone implementation agreement signed by the governors of Wisconsin and Illinois.

b. The measures are necessary to comply with the air pollution percentage reductions specified for reasonable further progress in the Clean Air Act.

4. Related statute or rule: Several of the proposed rule revisions correspond to the source categories covered under the existing VOC rule provisions. The following is a list of the proposed rules and source categories followed [in brackets] by the corresponding existing rule provision:

NR 422.075: paper coating [422.07].

NR 422.105: furniture metal coating [422.10].

NR 422.115: large appliance coating [422.11].

NR 422.131: flatwood panel coating [422.13].

NR 422.141: graphic arts [422.14].

NR 422.143: lithographic printing [422.142].

NR 423.037: industrial cleaning operations [423.035].

5. Plain language analysis:

Under Sec. 182(b)(2) of the Clean Air Act (CAA), the Department is required to update its VOC Reasonably Available Control Technology (RACT) regulations when EPA issues updated Control Techniques Guidelines (CTG) for RACT categories. These rules apply in Wisconsin's seven moderate ozone nonattainment counties (Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington and Waukesha). More specific information is provided below.

NR 422.075:

This rule applies VOC control to paper, film and foil coating lines, and solvent cleaning work practices. The rule applies new limits based on mass of VOC per mass of coating solids applied to individual coating lines emitting 25 tons per year VOC (maximum theoretical emissions) from the coating applicators and drying ovens. Paper coating lines include lines coating film and foil substrates in a uniform manner. The solvent cleaning work practices portion of the rule applies to facilities with VOC emissions equal to or greater than 3 tons on a 12 consecutive month rolling basis from all coating lines and related coating cleaning activities at the facility. The rule requires coating line operations to achieve a 90% VOC control efficiency through installation of VOC control devices and/or use of compliant coatings based on VOC content. The rule also addresses storage and disposal requirements, control requirements, recordkeeping, compliance testing, and certification testing. Requirements in NR 422.07 continue to apply to facilities currently covered by that section.

NR 422.105, NR 422.115, NR 422.131:

These rules apply VOC control to metal furniture coating, large appliance coating, flat wood panel coating and associated solvent cleaning work practices. The rules require application of new coating limits by coating type based on mass of VOC per volume of non-water coating as applied, exempt specific coating operations, establish a companion control requirement to utilize specific application techniques, and specify solvent cleaning work practices. The rules apply to facilities with VOC emissions equal to or exceeding 3 tons on a 12 consecutive month rolling basis. The rules require coating line operations to achieve a 90% VOC control efficiency through installation of VOC control devices and/or use of compliant coatings based on VOC content. The rules also address storage and disposal requirements, control requirements, recordkeeping, compliance testing, and certification testing. Requirements in NR 422.10, NR 422.11, NR 422.13 continue to apply to facilities currently covered by those sections.

NR 422.141:

This rule applies VOC control to large flexible package printing presses, and associated solvent cleaning work practices. The rule applies to individual large presses emitting 25 tons per year of VOC (maximum theoretical emissions) from inks, coatings and adhesives, combined, from the press dryer. Sources may choose to reduce VOC emissions from large individual presses by either installing control systems or accepting VOC content limits for inks, coatings and adhesives. The solvent cleaning work practices portion of the rule applies to facilities with VOC emissions equal to or exceeding 3 tons on a 12 consecutive month rolling basis from all flexible package printing presses and related flexible package cleaning activities at the facility. The regulation addresses flexible package printing operations through the installation of VOC control devices, and storage and disposal requirements. Requirements in NR 422.14 continue to apply to facilities currently covered by that section.

NR 422.143:

This rule applies VOC control to lithographic printing presses emitting 25 tons per year of VOC (maximum theoretical emissions) from heatset inks from the press dryer. The rule contains emission limitation exemptions for: up to 110 gallons of blanket or roller wash on a 12-consecutive month rolling basis, sheet-fed presses with a maximum sheet size of up to 11 inches by 17 inches, any lithographic press with a total fountain solution reservoir of less than one gallon, the printing of books on a heatset lithographic press, and heatset lithographic presses with a maximum web width of up to 22 inches. The rule also contains fountain solution VOC content limits for heatset, non-heatset, sheet-fed presses, and blanket or roller wash. The solvent cleaning work practices portion of the rule applies to facilities with VOC emissions

equal to or exceeding 3 tons on a 12 consecutive month rolling basis from all lithographic printing presses and related lithographic cleaning activities at the facility. The rule also addresses storage and disposal requirements, temperature monitoring requirements, control requirements, recordkeeping requirements, compliance testing, and certification testing requirements. Requirements in NR 422.142 continue to apply to facilities currently covered by that section.

NR 423.037:

This rule applies VOC controls to industrial cleaning operations at facilities with VOC emissions equal to or exceeding 3 tons on a 12 consecutive month rolling basis from industrial cleaning operations. The rule limits emissions by establishing solvent and solvent solution requirements, cleaning device and methods requirements, storage and disposal requirements, and recordkeeping requirements. Some industrial cleaning operations are regulated under industry specific RACT rules such as lithographic printers and large appliance manufacturers. Requirements in NR 423.035 continue to apply to facilities currently covered by that section.

6. Summary of, and comparison with, existing or proposed federal regulation:

The Clean Air Act requires the Department to update existing VOC RACT rules when EPA issues an updated CTG. The rules for paper, film and foil coating, flat wood panel coating, furniture metal coating, large appliance coating, flexible package printing, lithographic printing, and industrial cleaning operations are based directly on the EPA CTGs. The rules regulate VOC emissions from individual printing and coating lines with emissions above specified thresholds as well as regulating VOC cleaning solvent work practices.

7. Comparison with similar rules in adjacent states (Illinois, Iowa, Michigan and Minnesota):

Illinois and Michigan are in the same position as Wisconsin regarding potentially deficient VOC RACT rules and they need to update their rules to reflect recently updated CTGs. Both states had previously adopted VOC RACT for the categories of sources subject to this rulemaking where such sources existed in their ozone nonattainment areas. Neither state has issued proposed new or updated regulations, but both are on a schedule to incorporate the required VOC RACT updates within their ozone SIPs. Minnesota and Iowa do not have designated ozone nonattainment areas and are not deficient in regard to VOC RACT.

8. Summary of factual data and analytical methodologies used and how any related findings support the regulatory approach chosen:

The new paper, film and foil coating rule, the new furniture metal coating rule, and the new large appliance coating rule are based on the 2007 EPA CTGs for these categories. The new flexible package printing rule, the new lithographic printing rule, the new flatwood panel coating rule and the new industrial cleaning operations rule are based on the 2006 EPA CTGs for these source categories. All the recommended control measures in the CTGs are incorporated into the new rules. Retention of existing RACT limitations for these categories prevents backsliding. Some industrial cleaning operations will be regulated under industry specific RACT rules for lithographic printing; flexible package printing; flat wood paneling coatings; paper film and foil coatings; large appliance coatings; and metal furniture coatings.

9. Analysis and supporting documents used to determine the effect on small business or in preparation of an economic impact report:

NR 422.075:

The control requirements for individual large paper, film and foil coating lines will not impact small businesses. EPA established the number of affected facilities by surveys with consideration of state emission reporting and inventory estimates. Estimated cost per unit VOC reduced is provided by EPA in the CTG document.

An economic impact report was not requested.

NR 422.105: NR 422.115: NR 422.131:

The control requirements for large metal furniture coating lines, large appliance coating lines and flatwood panel coating lines will not impact small businesses as these activities are already regulated for the facility threshold scale proposed. The coating activities and limits and control requirements reflect current industry coating types and application practices. EPA established the number of affected facilities by surveys with consideration of state emission reporting and inventory estimates. Estimated cost per unit VOC reduced is provided by EPA in the CTG document.

An economic impact report was not requested.

NR 422.141: NR 422.143:

The control requirements for individual large printing flexible package printing presses and large lithographic packaging printing presses will not impact small businesses, since these large presses are not used by small businesses.

The solvent cleaning work practices are considered standard industrial practice. Most, if not all, facilities already perform good solvent cleaning work practices. The proposed rule establishes those standard work practices as requirements.

An economic impact report was not requested.

NR 423:037:

The control requirements for industrial cleaning operations will not impact small businesses. The many solvent cleaning work practices are considered standard industrial practice. Most, if not all, facilities already perform good solvent cleaning work practices.

An economic impact report has not been requested.

10. Effect on small business:
These regulations will have a minimal economic cost to individual small businesses, because the major control requirements apply only to large facilities. Additionally, solvent cleaning work practices are considered standard industrial practice, therefore it is anticipated that most businesses affected by these rules are already implementing the requirements. More specific cost estimates are provided below.

NR 422.075:

Through industry surveys EPA has estimated that no more than 7 facilities may be regulated in the large paper, foil and film coating category (inclusive of fabric and vinyl coaters regulated under NR 422.08 in Wisconsin nonattainment counties. A smaller number meet the 25 ton/coating line regulatory threshold. EPA estimated the national average cost of this RACT control as $1180/ton VOC ($2005).

NR 422.105:

EPA estimated through prior survey work accomplished as background for the federal NESHAP that only143 facilities operate within ozone nonattainment areas nationwide. Comparative statistics suggest less than a dozen furniture metal coating facilities operate in Wisconsin's nonattainment area. EPA estimated the national average cost of this coating RACT control as $1670/ton VOC ($2005) with the incremental cost of the new coating limits and application practice requirements as $200/ton ($2005).

NR 422.115:

For large appliance coating, EPA estimated the national average cost of this coating RACT control at $500/ton VOC ($2006).

NR 422.131:

Through industry surveys, EPA has estimated that only 1 facility is likely to be regulated for flatwood panel coating in Wisconsin nonattainment counties. EPA estimated the national average cost of this coating RACT control as $1900/ton VOC ($2005) for interior and tileboard panels and $2600/ton VOC ($2005) for exterior siding.

NR422.141: NR 422.143:

EPA estimates that the total annual cost related to the cleaning requirements per small lithographic and flexible package printing facilities is approximately $1,485 (2005 dollars).

11. Agency contact person: Larry Bruss - larry.bruss@wisconsin.gov 608-264-7543

The consent of the Attorney General will be requested for the incorporation by reference of new test standards in ch. NR 484.

SECTION 1. NR 422.02(12) is amended to read:

NR 422.02 (12) "Blanket or roller wash" means any cleaning solvent or solution used to remove excess inks, oils and debris from ~~the blanket roller or inking~~ lithographic printing press equipment, including rollers ~~on a lithographic press~~ , plates, and cylinders. Cleaning solvent or solution used as a rubber rejuvenator or to remove excess inks, oils and debris from the outside of the press or areas immediately around the press is also considered to be blanket or roller wash.

SECTION 2. NR 422.02(12s) is created to read:

NR 422.02(12s) "Class I hardboard panel" means a panel that meets the specifications of ANSI A135.4-2004, incorporated by reference in s. NR 484.11(4)(a).

SECTION 3. NR 422.02(13) is amended to read:

NR 422.02(13) "Class II hardboard paneling finish" means a finish that meets the specifications of ~~ANSI/AHA A135.5-1988 as approved by the American National Standards Institute. This standard is~~ ANSI A135.5-2004, incorporated by reference in s. NR 484.11(4)(b).

SECTION 4. NR 422.02(21g), (26m), (34g), (34r), (37m), (40m), (53i), (54s) and (57m) are created to read:

NR 422.02(21g) "Electric-insulating and thermal-conducting coating" means a coating that displays an electrical insulation of at least 1000 volts DC per mil on a flat test plate and an average thermal conductivity of at least 0.27 BTU per hour-foot-degree-Fahrenheit.

(26m) "Extreme high-gloss coating" means a coating that, when tested using ASTM D523-89, incorporated by reference in s. NR 484.10(9), shows a reflectance of 75 or more on a 60-degree glossmeter.

(34g) "Flexible packaging press" means a printing press that performs either packaging flexographic printing or packaging rotogravure printing.

(34r) "Flexible packaging printing" means the performance of packaging flexographic printing or packaging rotogravure printing.

(37m) "Fountain solution reservoir" means the collection tank that accepts fountain solution recirculated from printing units.

(40m) "Heat-resistant coating" means a coating that must withstand a temperature of at least 400°F during normal use.

(53i) "Metallic coating" means a coating which contains more than 5 grams of metal particles per liter of coating, as applied.

(54s) "Multi-component coating" means a coating requiring the addition of a separate reactive resin, commonly known as a catalyst or hardener, before application to form an acceptable dry film.

(57m) "One-component coating" means a coating that is ready for application as it comes out of its container to form an acceptable dry film. A thinner, if added to reduce the viscosity, is not considered a component.

SECTION 5. NR 422.02(77) is amended to read:

NR 422.02(77) "Roll coating" means the application of a coating material to a substrate by means of ~~hard rubber or steel rolls~~ rollers.

SECTION 6. NR 422.02(80m), (87v) and (87x) are created to read:

NR 422.02(80m) "Safety-indicating coating" means a coating which changes physical characteristics, such as color, to indicate unsafe conditions.

(87v) "Solar-absorbent coating" means a coating which has as its prime purpose the absorption of solar radiation.

(87x) "Solid-film lubricant" means a very thin coating consisting of a binder system containing as its chief pigment material one or more of molybdenum disulfide, graphite, polytetrafluoroethylene (PTFE) or other solids that act as a dry lubricant between faying surfaces.

SECTION 7. NR 422.02(90m) and (102) are amended to read:

NR 422.02(90m) "Stencil coating" means a an ink or coating that is applied onto or over a stencil ~~on a plastic part~~ at a thickness of one mil or less of ink or coating solids. Stencil coatings are most frequently letters, numbers or decorative designs.

(102)"Touch-up and repair coating" means a coating applied ~~by brush, air-brush or hand held non-refillable aerosol cans~~ to repair minor surface damage and imperfections, after normal coating operations have been completed.

SECTION 8. NR 422.02(107m) is created to read:

NR 422.02107m) "VOC composite partial vapor pressure" has the meaning given in s. NR 423.02(11g).

SECTION 9. NR 422.07 (title) is amended to read:

NR 422.07(title) **Paper coating – part 1.**

SECTION 10. NR 422.075 is created to read:

NR 422.075 **Paper coating – part 2.** (1) APPLICABILITY. (a) Subsection (3) applies to the owner or operator of a paper coating line located at a facility in the county of Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha if VOC emissions from all paper coating lines and related

paper coating cleaning activities at the facility, before consideration of controls, equal or exceed 3 tons on a 12 consecutive month rolling basis.

(b) Subsection (2) applies to the owner or operator of a facility located in the counties of Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington and Waukesha that operates a paper coating line, that has maximum theoretical emissions of VOCs equal to or greater than 25 tons per year from coatings.

(2) EMISSION LIMITATIONS. (a) On and after May 1, 2010, no owner or operator may cause, allow or permit the emission of any VOCs from an individual paper coating line in excess of either of the following emission limitations:

1. 0.2 kg VOC/kg solids (0.2 lb VOC/lb solids) applied for pressure sensitive tape and label coating.

2. 0.4 kg VOC/kg solids (0.4 lb VOC/lb solids) applied for paper, film and foil coating.

(b) Notwithstanding s. NR 422.04(4), an owner or operator using a control device to achieve compliance with par. (a) as allowed under s. NR 422.04(2)(c), shall achieve a minimum overall VOC control efficiency of 90%.

(3) WORK PRACTICES. On and after 3 months after the effective date of this section ... [LRB insert date], the owner or operator of a facility subject to this subsection shall employ work practices to minimize VOC emissions from mixing operations, storage tanks and other containers, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices shall include all of the following, at a minimum:

(a) Store all VOC-containing coatings, thinners, coating related waste materials, cleaning materials, and shop towels used for cleaning in closed containers.

(b) Close mixing vessels used for VOC-containing coatings and other materials except when in direct use.

(c) Convey VOC-containing coatings, thinners, and cleaning materials in closed containers or pipes.

(d) Minimize spills of VOC-containing coating, thinners, and cleaning materials.

(e) Minimize emissions of VOC during cleaning of coating application, storage, mixing, and conveying equipment.

(f) Clean-up spills of any VOC-containing material immediately.

SECTION 11. NR 422.10 (title) is amended to read:

NR 422.10(title) **Furniture metal coating – part 1.**

SECTION 12. NR 422.105 is created to read:

NR 422.105 **Furniture metal coating – part 2.** (1) APPLICABILITY. This section applies to facilities which are located in the county of Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha and have VOC emissions, before consideration of controls, equal to or exceeding 3 tons on a 12 consecutive month rolling basis from the application of coatings, including any related cleaning activities, to metal furniture. For purposes of this section, coatings include paints, sealants, caulks, inks, adhesives or maskants, but do not include metal protection oils, acids and bases.

(2) EXEMPTIONS. The following coating types are exempt from the emission limitations in sub. (3):

(a) Stencil coatings.

(b) Safety-indicating coatings.

(c) Solid-film lubricants.

(d) Electric-insulating and thermal-conducting coatings.

(e) Touch-up and repair coatings.

(f) Hand-held aerosol can coatings.

(3) EMISSION LIMITATIONS. On and after May 1, 2010, no owner or operator may cause, allow or permit the emission of any VOCs in excess of limits listed in Table 2A. Notwithstanding s. NR 422.04(4), an owner or operator using a control device to achieve compliance with this subsection as allowed under s. NR 422.04(2)(c), shall achieve a minimum overall VOC control efficiency of 90%.

Table 2A

VOC Content Limitations For Coatings Used In Furniture Metal Coating
[Kilograms/liter (pounds/gallon) of coating, excluding water, as applied]

Coating Type	Maximum VOC Content	
	Cured coating	Air-dried coating
1. General, one-component coating	0.275 (2.3)	0.275 (2.3)
2. General, multi-component coating	0.275 (2.3)	0.340 (2.8)
3. Extreme high-gloss coating	0.360 (3.0)	0.340 (2.8)
4. Extreme performance coating	0.360 (3.0)	0.420 (3.5)
5. Heat-resistant coating	0.360 (3.0)	0.420 (3.5)
6. Metallic coating	0.420 (3.5)	0.420 (3.5)
7. Pretreatment coating	0.420 (3.5)	0.420 (3.5)
8. Solar-absorbent coating	0.360 (3.0)	0.420 (3.5)

(4) APPLICATION EQUIPMENT AND METHODS. No owner or operator of a furniture metal coating line subject to sub. (3) may apply coatings unless one of the following types of high transfer efficiency application equipment is used in accordance with the manufacturer's recommendations:

(a) Electrostatic application.

(b) Low-pressure spray method.

(c) Flow coating.

(d) Roll coating.

(e) Dip coating, including electrodeposition.

(f) A coating application method demonstrated to the department to be capable of achieving a transfer efficiency equivalent to or better than that achieved by low-pressure spray method, and for which written approval of the department has been obtained.

(5) WORK PRACTICES. On and after 3 months after the effective date of this section ... [LRB insert date], the owner or operator of a furniture metal surface coating facility shall employ work practices to minimize VOC emissions from mixing operations, storage tanks and other containers, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices shall include all of the following, at a minimum:

(a) Store all VOC-containing coatings, thinners, coating related waste materials, cleaning materials, and shop towels used for cleaning in closed containers.

(b) Close mixing vessels used for VOC-containing coatings and other materials except when in direct use.

(c) Convey VOC-containing coatings, thinners, and cleaning materials in closed containers or pipes.

(d) Minimize spills of VOC-containing coating, thinners, and cleaning materials.

(e) Minimize emissions of VOC during cleaning of coating application, storage, mixing, and conveying equipment.

(f) Clean-up spills of any VOC-containing material immediately.

SECTION 13. NR 422.11(title) is amended to read:

NR 422.11(title) **Surface coating of large appliances – part 1.**

SECTION 14. NR 422.115 is created to read:

NR 422.115 **Surface coating of large appliance – part 2.** (1) APPLICABILITY. This section applies to facilities which are located in the county of Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha and have VOC emissions, before consideration of controls, equal to or exceeding 3 tons on a 12 consecutive month rolling basis from large appliance surface coating, including any related cleaning activities. For purposes of this section, coatings include paints, sealants, caulks, inks, adhesives, and maskants, but do not include metal protection oils, acids and bases.

(2) EXEMPTIONS. The following coating types are exempt from the emission limitations in sub. (3):

(a) Stencil coatings.

(b) Safety-indicating coatings.

(c) Solid-film lubricants.

(d) Electric-insulating and thermal-conducting coatings.

(e) Touch-up and repair coatings.

(f) Hand-held aerosol can coatings.

(3) EMISSION LIMITATIONS. On and after May 1, 2010, no owner or operator may cause, allow or permit the emission of any VOCs in excess of limits listed in Table 2B. Notwithstanding s. NR

422.04(4), an owner or operator using a control device to achieve compliance with this subsection as allowed under s. NR 422.04(2)(c), shall achieve a minimum overall VOC control efficiency of 90%.

Table 2B

VOC Content Limitations For Coatings Used In Large Appliance Coating
[Kilograms/liter (pounds/gallon) of coating, excluding water, as applied]

Coating Type	Maximum VOC Content	
	Cured coating	Air-dried coating
1. General, one-component coating	0.275 (2.3)	0.275 (2.3)
2. General, multi-component coating	0.275 (2.3)	0.340 (2.8)
3. Extreme high-gloss coating	0.360 (3.0)	0.340 (2.8)
4. Extreme performance coating	0.360 (3.0)	0.420 (3.5)
5. Heat-resistant coating	0.360 (3.0)	0.420 (3.5)
6. Metallic coating	0.420 (3.5)	0.420 (3.5)
7. Pretreatment coating	0.420 (3.5)	0.420 (3.5)
8. Solar-absorbent coating	0.360 (3.0)	0.420 (3.5)

(4) APPLICATION EQUIPMENT AND METHODS. No owner or operator of a large appliance surface coating line subject to sub. (3) may apply coatings unless one of the following types of high transfer efficiency application equipment is used in accordance with the manufacturer's recommendations:

(a) Electrostatic application equipment.

(b) Low-pressure spray method application equipment.

(c) Flow coating.

(d) Roll coating.

(e) Dip coating, including electrodeposition.

(f) Any other coating application method demonstrated to the department to be capable of achieving a transfer efficiency equivalent to or better than that achieved by low-pressure spray method, and for which written approval of the department has been obtained.

(5) WORK PRACTICES. On and after 3 months after the effective date of this section ... [LRB insert date], the owner or operator of a large appliance surface coating facility shall employ work practices to minimize VOC emissions from mixing operations, storage tanks and other containers, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices shall include all of the following, at a minimum:

(a) Store all VOC-containing coatings, thinners, coating related waste materials, cleaning materials, and shop towels used for cleaning in closed containers.

(b) Close mixing vessels used for VOC-containing coatings and other materials except when in direct use.

(c) Convey VOC-containing coatings, thinners, and cleaning materials in closed containers or pipes.

(d) Minimize spills of VOC-containing coating, thinners, and cleaning materials.

(e) Minimize emissions of VOC during cleaning of coating application, storage, mixing, and conveying equipment.

(f) Clean-up spills of any VOC-containing material immediately.

SECTION 15. NR 422.13(title) is amended to read:

NR 422.13 **Flat wood panel coating – part 1.**

SECTION 16. NR 422.131 is created to read:

NR 422.131 **Flat wood panel coating – part 2.** (1) APPLICABILITY. This section applies to facilities which are located in the county of Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha and have VOC emissions, before consideration of controls, equal to or exceeding 3 tons on a 12 consecutive month rolling basis from the application of coatings, inks and adhesives, including any related cleaning activities, to wood and wood containing panel products that are any interior panel, exterior panel including siding, or class I hardboard panel.

(2) EMISSION LIMITATIONS. On and after May 1, 2010, no owner or operator of a facility subject to this section may cause, allow or permit the emission of any VOCs from a process line applying any ink, coating or adhesive in excess of 0.25 kilograms per liter material (2.1 pounds per gallon) excluding water. Notwithstanding s. NR 422.04(4), an owner or operator using a control device to achieve compliance with this subsection as allowed under s. NR 422.04(2)(c), shall achieve a minimum overall VOC control efficiency of 90%.

(3) WORK PRACTICES. On and after 3 months after the effective date of this section ... [LRB insert date], an owner or operator of a flatwood panel coating facility shall employ work practices to minimize VOC emissions from mixing operations, storage tanks and other containers, and handling

operations for coatings, thinners, cleaning materials, and waste materials. Work practices shall include all of the following, at a minimum:

(a) Store all VOC-containing coatings, thinners, coating related waste materials, cleaning materials, and shop towels used for cleaning in closed containers.

(b) Close mixing vessels used for VOC-containing coatings and other materials except when in direct use.

(c) Convey VOC-containing coatings, thinners, and cleaning materials in closed containers or pipes.

(d) Minimize spills of VOC-containing coating, thinners, and cleaning materials.

(e) Minimize emissions of VOC during cleaning of coating application, storage, mixing, and conveying equipment.

(f) Clean-up spills of any VOC-containing material immediately.

SECTION 17. NR 422.141 is created to read:

NR 422.141 **Flexible package printing.** (1) APPLICABILITY. (a) Subsection (3) applies to the owner or operator of a flexible packaging press located in the county of Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha if VOC emissions from all flexible packaging printing presses and related flexible packaging cleaning activities at the facility, before consideration of controls, equal or exceed 3 tons on a 12 consecutive month rolling basis. When determining the VOC emissions for applicability under this paragraph, the VOC emissions from the cleaning of electronic components of a flexible packaging press, pre-press and post-press cleaning operations and the use of janitorial supplies used to clean around a flexible packaging press are excluded. In addition, the VOC emissions from solvents used in cold cleaners are excluded for applicability purposes.

(b) Subsection (2) applies to the owner or operator of a facility located in the county of Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha that operates a flexible packaging press that has maximum theoretical emissions of VOC equal to or greater than 25 tons per year from inks, coatings and adhesives combined, from the press dryer. For a flexible packaging press subject to sub. (2) and also to s. NR 422.14(2), compliance with sub. (2) shall satisfy compliance with s. NR 422.14(2).

(2) EMISSION LIMITATIONS. On and after May 1, 2010, no owner or operator of a flexible packaging press subject to this subsection may operate, or cause, allow or permit the operation of the press unless the owner or operator does one of the following:

(a) Installs and operates a vapor recovery system, incinerator or catalytic oxidation system to control VOC emissions. The overall VOC emission reduction efficiency of any capture system and control device, as measured across the entire control system, shall be at least:

1. 65% by weight for a flexible packaging press that was first installed prior to March 14, 1995 and that is controlled by a control device that was installed prior to the effective date of this paragraph ... [LRB insert date]. VOC emissions from an incinerator or catalytic oxidation system shall be measured as carbon.

2. 70% by weight for a flexible packaging press that was first installed prior to March 14, 1995 and that is controlled by a control device that was first installed on or after the effective date of this paragraph ... [LRB insert date]. VOC emissions from either an incinerator or catalytic oxidation system shall be measured as carbon.

3. 75% by weight for a flexible packaging press that was first installed on or after March 14, 1995 and that is controlled by a control device that was first installed prior to the effective date of this paragraph ... [LRB insert date]. VOC emissions from an incinerator or catalytic oxidation system shall be measured as carbon.

4. 80% by weight of VOCs for a flexible packaging press that was first installed on or after March 14, 1995 and that is controlled by a control device that was first installed on or after the effective date of this paragraph ... [LRB insert date]. VOC emissions from an incinerator or catalytic oxidation system shall be measured as carbon.

Note: With regard to use of the phrase "first installed" in this paragraph, the first installation date for a piece of equipment does not change if the equipment is later moved to a new location. For example, if a brand new press first installed in 1992 is moved to a new location in 1998, the first installation date is still 1992.

(b) Uses inks, coatings and adhesives that do not exceed one of the following VOC content limits:

1. 0.8 kg VOC/kg solids (0.8 lb VOC /lb solids) applied.

2. 0.16 kg VOC/kg material (0.16 lb VOC/lb material) applied.

(3) WORK PRACTICES: On and after 3 months after the effective date of this section ... [LRB insert date], the owner or operator of a flexible packaging press subject to this subsection shall store all solvents, solvent solutions, and any applicator moistened with solvents or solvent solutions that are used in cleaning operations related to flexible packaging printing in covered non-absorbent, non-leaking containers, except when filling or emptying the container and shall convey VOC-containing cleaning material in closed containers or pipes.

SECTION 18. NR 422.142(title) is amended to read:

NR 422.142(title) **Lithographic printing – part 1.**

SECTION 19. NR 422.142(1m) is created to read:

NR 422.142(1m) RETENTION FACTORS AND CAPTURE EFFICIENCIES. For purposes of determining VOC emissions from offset lithographic printing operations, the following retention factors and capture efficiencies may be used:

(a) A 20% VOC retention factor for heatset inks printed on absorptive substrates, meaning 80% of the VOC in the ink is emitted during the printing process and is available for capture and control by an add-on pollution control device.

(b) A 95% VOC retention factor for sheet-fed and non-heatset web inks printed on absorptive substrates, meaning 5% of the VOC in the ink is emitted during the printing process.

(c) A 50% VOC retention factor for cleaning solution in shop towels where the composite partial vapor pressure of the VOC in the cleaning solution is less than 10 mm of Hg at 20°C (68°F) and the cleaning solution and contaminated shop towels are kept in closed containers, meaning 50% of the VOC used on the shop towels is emitted during the cleaning process.

(d) A 100% VOC capture efficiency for inks. All the VOC in the ink that is not retained is assumed to be volatilized in the press dryer. Capture efficiency testing for heatset dryers is not required if it is demonstrated that pressure in the dryer is negative relative to the surrounding press room and the airflow is into the dryer.

(e) A 70% VOC capture efficiency for fountain solutions containing alcohol substitutes.

(f) A 40% VOC capture efficiency for automatic blanket or roller wash where the VOC composite partial vapor pressure of the blanket or roller wash is less than 10 mm of Hg at 20°C (68°F).

SECTION 20. NR 422.143 is created to read:

NR 422.143 **Lithographic printing - part 2.** (1) APPLICABILITY. (a) Subsections (3)(b) and (c) and (4) apply to the owner or operator of a printing facility that operates a lithographic printing press in the county of Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha if actual VOC emissions from all lithographic printing presses, including related lithographic cleaning activities and fountain solution use at the facility, before consideration of controls, equal or exceed 3 tons on a 12 consecutive month rolling basis. When determining the VOC emissions for applicability under this paragraph, the VOC emissions from the cleaning of electronic components of a lithographic printing press, pre-press and post-press cleaning operations and the use of janitorial supplies used to clean around a lithographic printing press are excluded. The VOC emissions from solvents used in cold cleaners are excluded for applicability purposes.

Note: Janitorial supplies are cleaners, such as detergent-based products, used to clean the floor or for other general cleaning purposes, for example, areas not contaminated with spilled ink.

(b) Subsection (3)(a) applies to the owner or operator of any heatset web lithographic printing press at a printing facility in the county of Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha.

(1m) RETENTION FACTORS AND CAPTURE EFFICIENCIES. For purposes of determining VOC emissions from offset lithographic printing operations, the following retention factors and capture efficiencies may be used:

(a) A 20% VOC retention factor for heatset inks printed on absorptive substrates, meaning 80% of the VOC in the ink is emitted during the printing process and is available for capture and control by an add-on pollution control device.

(b) A 95% VOC retention factor for sheet-fed and non-heatset web inks printed on absorptive substrates, meaning 5% of the VOC in the ink is emitted during the printing process.

(c) A 50% VOC retention factor for cleaning solution VOC inshop towels where the composite partial vapor pressure of the VOC in the cleaning solution is less than 10 mm of Hg at 20°C (68°F) and the cleaning solution and contaminated shop towels are kept in closed containers, meaning 50% of the VOC used on the shop towels is emitted during the cleaning process.

(d) A 100% VOC capture efficiency for inks. All the VOC in the ink that is not retained is assumed to be volatilized in the press dryer. Capture efficiency testing for heatset dryers is not required if it is demonstrated that pressure in the dryer is negative relative to the surrounding press room and the airflow is into the dryer.

(e) A 70% VOC capture efficiency for fountain solutions containing alcohol substitutes.

(f) A 40% VOC capture efficiency for automatic blanket or roller wash where the VOC composite partial vapor pressure of the blanket or roller wash is less than 10 mm of Hg at 20°C (68°F).

(2) EXEMPTIONS. The following exemptions apply to lithographic printing operations in Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington and Waukesha counties:

(a) Up to 110 gallons of blanket or roller wash, on a 12-consecutive month rolling basis, which do not meet the low VOC composite partial vapor pressure or low VOC content requirements as stated in this section, are exempt from the requirements of this section.

(b) The fountain solution VOC content requirements in sub. (3)(b) do not apply to sheet-fed presses with a maximum sheet size of up to 11 inches by 17 inches or to any lithographic press with a total fountain solution reservoir of less than one gallon.

(c) The printing of books on a heatset lithographic press is exempt from the requirements of sub. (3)(a).

(d) Heatset lithographic presses with a maximum web width of up to 22 inches are exempt from the requirements of sub. (3)(a).

(3) EMISSION LIMITATIONS. (a) *Dryer exhaust.* 1. On and after May 1, 2010, no owner or operator of a heatset web lithographic printing press may operate, or cause, allow or permit the operation of a lithographic press that has maximum theoretical emissions of VOCs, from the dryer, equal to or greater than 25 tons per year from heatset inks, unless the owner or operator installs and operates an emission control device and meets the applicable emission limitation as follows:

a. If the emission control device was first installed prior to May 1, 2010, the owner or operator shall reduce VOC emissions from the lithographic press dryer exhaust by 90% by weight as carbon, minus methane and ethane, or maintain a maximum dryer exhaust outlet VOC concentration of 20 ppmv, as as carbon, minus methane and ethane.

b. If the emission control device was first installed after May 1, 2010, the owner or operator shall reduce VOC emissions from the lithographic press dryer exhaust by 95% by weight as carbon, minus methane and ethane, or maintain a maximum dryer exhaust outlet VOC concentration of 20 ppmv, as as carbon, minus methane and ethane.

Note: With regard to use of the phrase "first installed" in this paragraph, the first installation date for a control device does not change if the device is later moved to a new location. For example, if a brand new control device first installed in 1992 is moved to a new location in 1998, the first installation date is still 1992.

2. If a combined dryer and control device is a part of the press design, a 100% capture at the control inlet may be assumed for purposes of meeting the emission reduction limits in subd. 1.

(b) *Fountain solutions.* 1. 'Heatset web presses'. On and after May 1, 201,0 any person who owns or operates a heatset web lithographic printing press shall use a fountain solution which has a VOC content, as applied, of no more than one of the following:

a. 1.6% by weight if the fountain solution contains any restricted alcohol and is not refrigerated to 60°F or less.

b. 3.0% by weight if the fountain solution contains any restricted alcohol and is refrigerated to 60°F or less.

c. 5.0% by weight if the fountain solution contains no restricted alcohol.

2. 'Non-heatset web presses'. On and after May 1, 2010, any person who owns or operates a non-heatset web lithographic printing press shall use a fountain solution which contains no restricted alcohol and which has a VOC content, as applied, of no more than 5.0% by weight.

3. 'Sheet-fed presses'. On and after May 1, 2010, any person who owns or operates a sheet-fed lithographic printing press shall, use a fountain solution which has a VOC content, as applied, of no more than one of the following:

a. 5.0% by weight.

b. 8.5% by weight if the fountain solution is refrigerated to 60°F or less.

(c) *Blanket or roller wash.* Except as provided in sub. (2)(a), on and after May 1, 2010, no owner or operator of a lithographic printing press may use, or cause, allow or permit the use of a blanket or roller wash unless the VOC content of the wash is less than or equal to 30% by weight or has a composite partial vapor pressure of less than or equal to 10 mm of Hg at 68°F.

(4) WORK PRACTICES. (a) On and after 3 months after the effective date of this rule ... [LRB insert date], the owner or operator of a lithographic press subject to this subsection shall store all solvents, solvent solutions and any applicator moistened with solvents or solvent solutions that are used in cleaning operations related to lithographic printing in covered non-absorbent, non-leaking containers, except when filling or emptying the container.

(5) TEMPERATURE MONITORING. The owner or operator of any lithographic printing press shall monitor, at least once each 8-hour shift, the temperature of each fountain solution reservoir for any fountain solution subject to sub. (3)(b)1.b. or 3.b.

(6) RECORDKEEPING REQUIREMENTS. In addition to the applicable recordkeeping requirements in s. NR 439.04, the owner or operator of any lithographic printing press shall collect and record the applicable information specified in this subsection. The information shall be maintained at the facility for a minimum of 5 years and shall be made available to an authorized department representative at any time during normal working hours. The information required is:

(a) For a heatset web lithographic printing press using a control device, for each day of operation:

1. Control device monitoring data in accordance with s. NR 439.055.

2. A log of the operating time for the control device, control device monitoring equipment, and the associated printing line or operation.

3. A maintenance log for the control device and control device monitoring equipment detailing all routine and non-routine maintenance performed and including the dates and duration of any outages.

(b) For fountain solutions monitored under sub. (5), the fountain solution reservoir temperature for each 8-hour shift of operation.

(c) For each fountain solution used, the percent by weight VOC content as applied, and the CAS

number and chemical name of each restricted alcohol.

(d) For each blanket or roller wash, the percent by weight VOC content as applied or the composite partial vapor pressure, as appropriate, in measurement units consistent with the applicable emission limitation.

(e) For each month of operation, the volume of all blanket or roller wash used which does not meet either of the emission limitations in sub. (3)(c).

(7) COMPLIANCE TESTING. (a) The owner or operator of a heatset web lithographic printing press shall demonstrate compliance with the appropriate destruction efficiency or emission rate in sub. (3)(a) by performing compliance emission tests on each control device. The initial emission tests shall be performed by the compliance deadline in sub. (8)(a)1. or (b)1or 2. Each emission test shall follow the methods and procedures listed in s. NR 439.07. Method 18, 25 or 25A in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04(16), (19) and (20), shall be used to determine the VOC concentration at the sampling points. When determining the VOC concentration, the probe shall be heated during testing to at least the exhaust gas stream temperature.

(b) The owner or operator of a heatset web lithographic printing press shall perform the compliance emission tests required under par. (a) according to one of the following applicable test schedules:

1. Any facility with allowable VOC emissions from lithographic printing presses of 100 tons or more per year shall perform an emission test which demonstrates compliance with sub. (3)(a) every 24 months. Each biennial test shall be performed within 90 days of the anniversary date of the initial emission test.

2. Any facility with allowable VOC emissions from lithographic printing presses of less than 100 tons per year shall perform an emission test which demonstrates compliance with sub. (3)(a) every 48 months. Each test shall be performed within 90 days of the anniversary date of the initial emission test.

(c) The VOC content of heatset web, sheet-fed and cold set web lithographic inks shall be determined in accordance with NR 439.06(3)(j).

(8) COMPLIANCE SCHEDULE AND CERTIFICATION REQUIREMENTS. (a) *Existing sources.* 1. The owner or operator of a lithographic printing press shall comply with the applicable emission limitations

for the dryer exhaust in sub. (3)(a) by May 1, 2010.

2. The owner or operator of a heatset web lithographic printing press shall submit to the department, no later than July 1, 2010, written certification that the press is in compliance with the applicable requirements of subs. (3) to (5) and shall provide a demonstration of compliance in accordance with subs. (6) and (7). A compliance emission test performed in accordance with s. NR 439.07 no more than 2 years prior to the compliance deadline, which demonstrates compliance with sub. (3)(a), is acceptable as a demonstration of compliance in accordance with sub. (7).

(b) *New sources* 1. The owner or operator of a heatset web lithographic printing press which is installed after May 1, 2010 shall perform a compliance emission test within 180 days after installation of the press and shall submit to the department no later than 60 days after the test written certification that the press is in compliance with the applicable requirements of subs. (3) and (6) and a demonstration of compliance in accordance with subs. (7) and (8).

2. The owner or operator of any lithographic printing press, other than a heatset web press, which is installed after May 1, 2010 shall submit to the department, no later than 180 days after installation of the press, written certification that the press is in compliance with the applicable requirements of subs. (3) and (6) and a demonstration of compliance in accordance with subs. (7) and (8).

SECTION 21. NR 423.02(5m) and (9t) are created to read:

NR 423.02(5m) "Flexible magnetic data storage disc" means a flat, circular plastic film, contained in a non-rigid envelope, with a magnetic coating on which digital information can be stored by selective magnetization of portions of the flat surface.

(9t) "Rigid magnetic data storage disc" means a flat, circular, non-flexible plate with a magnetic coating on which digital information can be stored by selective magnetization of portions of the flat surface.

SECTION 22. NR 423.035(title), (1)(a) and (b), (2)(intro.), (b)(intro) and 4., (e), (g), (3)(intro.), (6)(a) and (b) and (9)(a) are amended to read:

NR 423.035(title) **Industrial cleaning operations-part 1.**

(1)(a) Except as provided in subs. (2) and (9)(a), this section applies to industrial cleaning operations at facilities that are located in Kenosha, Milwaukee, Ozaukee, Racine, Washington or Waukesha county and have maximum theoretical emissions of VOCs from the facility, excluding any maximum theoretical emissions of VOCs resulting from combustion, or VOCs specifically subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420, 421 or 422, or s. NR 423.03, 423.05, 424.04 or 424.05, of 25 tons per year or more.

Note: To determine the maximum theoretical emissions of VOCs from a facility, excluding any maximum theoretical emissions of VOCs specifically subject to the cited provisions, use the following procedure. 1. Calculate the maximum theoretical emissions of VOCs from the facility excluding emissions from combustion. 2. Calculate the maximum theoretical emissions of VOCs from the facility subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420, 421 or 422, or s. NR 423.03, 423.05, 424.04 or 424.05. 3. Subtract the emissions calculated in step 2 from the emissions calculated in step 1. 4. If the quantity calculated in step 3 is less than 25 tons per year, then the only requirements of this section that apply to the facility are the recordkeeping requirements of sub. (9)(a).

(b) Except as provided in subs. (2) and (9)(a), this section applies to industrial cleaning operations at facilities that are located in Kewaunee, Manitowoc or Sheboygan county and have maximum theoretical emissions of VOCs from the facility, excluding any maximum theoretical emissions of VOCs resulting from combustion, or VOCs specifically subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420, 421 or 422, or s. NR 423.03, 423.05, 424.04 or 424.05, of 100 tons per year or more.

Note: To determine the maximum theoretical emissions of VOCs from a facility, excluding any maximum theoretical emissions of VOCs specifically subject to the cited provisions, use the following procedure. 1. Calculate the maximum theoretical emissions of VOCs from the facility excluding emissions from combustion. 2. Calculate the maximum theoretical emissions of VOCs from the facility subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420, 421 or 422, or s. NR 423.03, 423.05, 424.04 or 424.05. 3. Subtract the emissions calculated in step 2 from the emissions calculated in step 1. 4. If the quantity calculated in step 3 is less than 100 tons per year, then the only requirements of this section that apply to the facility are the recordkeeping requirements of sub. (9)(a).

(2)(intro.) EXEMPTIONS. If ~~an~~ any exemption in this subsection is based on an exemption threshold and that threshold is exceeded, the exemption will no longer apply to the facility. ~~Exemptions include the~~ The following exemptions are applicable to various provisions of this section:

(b)(intro.) Subsection (3) does not apply to any of the following activities or facilities:

4. Facilities ~~where~~ whose aggregate use of solvent and solvent solutions which do not comply with the applicable VOC content limits in sub. (3) and of any coatings and inks exempt under s. NR 422.03(7) does not exceed 55 gallons during any 12 consecutive months at the facility.

(e) Subsection (7) does not apply to the cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems that ~~can be~~ are programmed to spray into a closed container.

(g) Subsections (4) to (8) do not apply to cleaning ~~using~~ which uses solvents or solvent solutions containing no more than 0.05 kilograms of VOC per liter.

(3)(intro.) SOLVENT AND SOLVENT SOLUTION REQUIREMENTS. Except as provided under sub. (6), no owner or operator of a facility may cause, allow or permit the use of a solvent or solvent solution for industrial cleaning operations on ~~or~~ and after January 1, 2002 unless the VOC content of the solvent or solvent solution is less than or equal to the applicable VOC content listed in Table 1 for the respective cleaning operation.

(6)(a) The emission control system has ~~an~~ a minimum overall emission reduction efficiency of 85% for VOC emissions as determined in accordance with s. NR 439.06(3)(am).

(b) The emission control system has a minimum VOC capture efficiency of 90% and an output of VOC emissions of less than 50 ppm calculated as carbon, not including methane and ethane, with no dilution, as determined in accordance with s. NR 439.06(3)(a).

(9)(a) To determine applicability under sub. (1), each owner or operator of an industrial cleaning operation at a facility located in Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha county shall maintain records of the maximum theoretical emissions of VOCs from the facility excluding any maximum theoretical emissions of VOCs resulting from combustion, or VOCs specifically subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420, 421 or 422, or s. NR 423.03, 423.04, 423.05, 424.04 or 424.05.

SECTION 23. NR 423.037 is created to read:

NR 423.037 **Industrial cleaning operations-part 2.** (1) APPLICABILITY. On and after May 1, 2010, except as provided in sub. (9)(a), this section applies to industrial cleaning operations at facilities that are located in Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha county and having actual VOC emissions from industrial cleaning operations equal to or exceeding 3 tons on a 12 consecutive month rolling basis from the facility with all control equipment inoperative.

(2) EXEMPTIONS. If any exemption in this subsection is based on an exemption threshold and that threshold is exceeded, the exemption will no longer apply to the facility. The following exemptions are applicable to various provisions of this section:

(a) This section does not apply to:

1. Operations regulated under s. NR 421.06(2)(c), 422.075(3), 422.095(6), 422,105(4), 422,115(4), 422.131(3), 422.141(3), 422.142(2)(c), 422.143(4), 422.145(2)(d), 422.15(8), 422.155(3) or 423.03.

2. Stripping of cured coatings, cured inks or cured adhesives.

3. Cleaning operations in graphic arts pre-press areas including the cleaning of film processors, color scanners or plate processors, or film cleaning and plate cleaning.

4. Cleaning operations associated with the following activities:

a. Aerospace assembly and component coating operations.

b. Wood furniture and products coating, excluding laminated wood products.

c. Coating of marine vessels and components and other structures intended for exposure to a marine environment.

d. Flexible package printing.

e. Lithographic printing.

f. Flat wood panel and wood flat stock coating.

g. Surface coating of large appliances.

h. Furniture metal coating.

i. Paper coating.

j. Film and foil coating.

k. Fabric coating.

L. Plastic parts and products coating.

m. Fiberglass boat manufacturing.

n. Miscellaneous metal parts and products coating.

o. Miscellaneous industrial adhesives use, excluding application equipment.

p. Motor vehicle and mobile equipment assembly and coating operations.

q. Locomotive and railcar assembly and coating operations.

r. Surface preparation of precision optics.

s. Surface preparation of numismatic dies.

t. Resin application equipment operation, excluding polyester resin application equipment.

u. Resin, coating, ink and adhesive mixing and molding equipment operation.

v. Architectural coating, excluding application equipment.

w. Metal container and closure coating.

x. Coil coating.

y. Magnet wire coating.

z. Semiconductor wafer fabrication operations.

za. Coating manufacturing.

zb. Ink and adhesive manufacturing.

zc. Flexible and rigid disc manufacturing.

zd. Polyester resin operations, excluding application equipment.

5. Cleaning operations associated with letterpress printing materials, except for press component cleaning subject to sub. (3)(d)4.

(b) Subsection (3) does not apply to any of the following activities or facilities:

1. Cleaning conducted in conjunction with performance laboratory tests on coatings, adhesives or inks; research and development programs; and laboratory tests in quality assurance laboratories.

2. Cleaning of electrostatic printing and coating application equipment.

3. Medical device and pharmaceutical manufacturing facilities using less than a total of 1.5 gallons per day of VOC-containing solvents and solvent solutions for industrial cleaning operations.

4. Facilities whose aggregate use of solvent and solvent solutions which do not comply with the applicable VOC content limits in sub. (3) and of any coatings and inks exempt under s. NR 422.03(7) does not exceed 55 gallons during any 12 consecutive months at the facility.

(c) Subsections (3) and (7) do not apply to cleaning with aerosol products if 160 fluid ounces or less of VOC-containing aerosol products are used per day for industrial cleaning operations, per facility.

(d) Subsection (7) does not apply to cleaning with solvents or solvent solutions in spray bottles or containers described in sub. (4)(b).

(e) Subsection (7) does not apply to the cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems that are programmed to spray into a closed container.

(f) Subsection (7) does not apply to automatically applied blanket or roller wash.

(g) Subsections (4) to (8) do not apply to cleaning which uses solvents or solvent solutions containing no more than 0.05 kilograms of VOC per liter.

(3) SOLVENT AND SOLVENT SOLUTION REQUIREMENTS. Except as provided under sub. (6), no owner or operator of a facility may cause, allow or permit the use of a solvent or solvent solution for industrial cleaning operations on and after May 1, 2010 unless the VOC content of the solvent or solvent solution is less than or equal to the applicable VOC content listed in Table 1 for the respective cleaning operation.

Table 1
VOC Content Limits for Solvents and Solvent Solutions Used in Industrial Cleaning Operations

	Cleaning Activity	VOC Content of Solvent or Solvent Solution in kilograms per liter (pounds per gallon)
(a)	Product cleaning during manufacturing process or surface preparation for coating, adhesive or ink application	
	1. General	0.05 (0.42)
	2. Electrical apparatus components and electronic components	
	a. General	0.10 (0.83)
	b. Cables	0.40 (3.3)
	c. Touch-up performed on printed circuit boards where surface mounted devices have already been attached	0.80 (6.7)
	3. Laminated wood products – removal of contact adhesives	
	a. General	0.46 (3.8)
	b. Polyvinylchloride surfaces	0.70 (5.8)
	4. Medical devices and pharmaceuticals	0.80 (6.7)
	5. Screen printing – removal of adhesives from plastic substrates	0.77 (6.4)
(b)	Repair and maintenance cleaning	
	1. General	0.05 (0.42)
	2. Electrical apparatus components and electronic components	
	a. General	0.10 (0.83)
	b. Cables	0.40 (3.3)
	3. Medical devices and pharmaceuticals	
	a. Tools, equipment and machinery	0.80 (6.7)
	b. General work surfaces	0.60 (5.0)
	4. Screen printing – removal of oils and adhesives from cutting dies	0.55 (4.6)
(c)	Cleaning of coatings application equipment or adhesives application equipment	
	1. General	0.05 (0.42)
	2. Architectural coatings	0.95 (7.9)
	3. Ultraviolet coatings	0.80 (6.7)
(d)	Cleaning of ink application equipment	
	1. General	0.05 (0.42)
	2. Flexographic printing – excluding packaging	
	a. General	0.05 (0.42)
	b. Plastics, coated papers and metal foils	0.89 (7.4)
	3. Rotogravure printing - publication	0.10 (0.83)
	4. Letterpress printing	
	a. On-press components	*
	b. Removable press components	0.05 (0.42)
	5. Screen printing	0.77 (6.4)
	6. Ultraviolet ink application equipment (except screen printing)	0..65 (5.4)
(e)	Cleaning of polyester resin application equipment	0.05 (0.42)

* A maximum VOC content of 30% by weight.

(4) CLEANING DEVICES AND METHODS REQUIREMENTS. Except as provided under sub. (6), by 3 months after the effective date of this section ... [LRB insert date], the owner or operator of a facility shall employ one or more of the following cleaning devices or methods when using solvents or solvent

solutions:

(a) Physically rubbing a surface with a porous applicator such as a rag, paper, sponge or a cotton swab moistened with solvent or solvent solution.

(b) Closed containers or hand held spray bottles from which solvents or solvent solutions are applied without a propellant-induced force.

(c) Cleaning equipment which has a solvent or solvent solution container that is closed during cleaning operations, except when depositing and removing objects to be cleaned, and is closed during non-operation with the exception of maintenance and repair to the cleaning equipment itself.

(d) A remote reservoir cleaner operated in compliance with all of the following requirements:

1. Solvent vapors are prevented from escaping from the solvent or solvent solution container by using devices such as a cover or a valve when the remote reservoir is not being used, cleaned or repaired.

2. Flow is directed in a manner that prevents solvent or solvent solution from splashing outside of the remote reservoir cleaner.

3. The cleaner is not used for cleaning porous or absorbent materials, such as cloth, leather, wood or rope.

4. Only solvent or solvent solution containers free of all liquid leaks are used. Auxiliary equipment, such as pumps, pipelines or flanges, may not have any liquid leaks, visible tears or cracks. Any liquid leak, visible tear or crack detected shall be repaired within one calendar day, or the leaking section of the remote reservoir cleaner shall be drained of all solvents or solvent solutions and shut down until it is replaced or repaired.

(e) A non-atomized flow method where the used solvents or solvent solutions are collected in a container or a collection system which is closed, except for the solvent or solvent solution collection openings that may be open when filling or emptying, or the opening caused by use of a pressure relief valve.

(f) A flushing method where the used solvents or solvent solutions are discharged into a container which is closed, except for the solvent or solvent solution collection openings that may be open when filling or emptying, or the opening caused by use of a pressure relief valve. The discharged solvents or

solvent solutions shall be collected into containers without atomizing into the open air.

(5) STORAGE AND DISPOSAL. The owner or operator of a facility shall store all solvents or solvent solutions used in industrial cleaning operations in non-absorbent, non-leaking containers which shall be kept covered except when filling or emptying. Cloth and paper moistened with solvents or solvent solutions shall be stored in covered, non-absorbent, non-leaking containers.

(6) CONTROL EQUIPMENT. In lieu of complying with the requirements in sub. (3) or (4), the owner or operator of a facility may use a VOC emission control system to control VOC emissions from the industrial cleaning operations at the facility provided one of the following requirements is met:

(a) The emission control system has a minimum overall emission reduction efficiency of 85% for VOC emissions as determined in accordance with s. NR 439.06(3)(am).

(b) The emission control system has a minimum VOC capture efficiency of 90% and an output of VOC emissions of less than 50 ppm calculated as carbon, not including methane and ethane, with no dilution, as determined in accordance with s. NR 439.06(3)(a).

(c) The emission control system meets the requirements of the applicable source specific rule in chs. NR 420 to 422.

(7) GENERAL PROHIBITIONS. The owner or operator of a facility may not atomize any solvent or solvent solution unless the resulting VOC emissions are controlled by an air pollution control system that meets one of the requirements of sub. (6).

(8) ALTERNATIVE COMPLIANCE OPTION. In lieu of complying with the requirements in sub. (3), the owner or operator of a facility may use solvents or solvent solutions for industrial cleaning operations which have a VOC composite partial vapor pressure of less than or equal to 8 mm of Hg at 20°C.

(9) RECORDKEEPING REQUIREMENTS. (a) To determine applicability under sub. (1), each owner or operator of an industrial cleaning operation at a facility located in Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha county shall maintain records of actual daily emissions of VOCs from industrial cleaning operations from the facility with all control equipment inoperative.

(b) Each owner or operator of a facility that is exempt under sub. (2) shall collect and record the information specified in this paragraph as appropriate.

1. Any owner or operator claiming to be exempt under sub. (2)(b)3. shall maintain records of the

daily quantity in gallons of VOC-containing solvents and solvent solutions used for industrial cleaning operations.

2. Any owner or operator claiming to be exempt under sub. (2)(b)4. shall maintain records of the amount used in gallons of non-compliant solvents and solvent solutions and the amount used in gallons of any coatings and inks exempt under s. NR 422.03(7) during any 12 consecutive months at a facility.

3. Any owner or operator claiming to be exempt under sub. (2)(c) shall maintain records of the daily quantity in fluid ounces of VOC-containing aerosol product used for industrial cleaning operations.

4. Any owner or operator claiming to be exempt under sub. (2)(g) shall maintain a record of the VOC contents of the solvents or solvent solutions used in kilograms per liter or pounds per gallon.

(c) Each owner or operator of a facility that is subject to this section shall collect and record the information specified in this paragraph as appropriate:

1. Any owner or operator subject to sub. (3) shall maintain a record of the VOC contents of the solvents or solvent solutions used in industrial cleaning operations in kilograms per liter, pounds per gallon or weight percent.

2. Any owner or operator subject to sub. (6) shall keep a record of the results of any testing conducted as required under sub. (6).

3. Any owner or operator subject to sub. (8) shall keep a record of the VOC composite partial vapor pressures of solvents or solvent solutions used in industrial cleaning operations.

(d) Records required under this subsection shall be kept for 5 years unless another time period is approved by the department.

SECTION 24. NR 439.06(3)(j) is amended to read:

NR 439.06(3)(j) Notwithstanding par. (b), Method 24 of 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04(13), shall be used to determine the VOC content of lithographic inks, fountain solutions and blanket or roller wash in complying with ~~s.~~ ss. NR 422.142 and 422.143.

SECTION 25. NR 484.04(16), (19) and (20) are amended to read:

NR 484.04

	CFR Appendix Referenced	Title	Incorporated by Reference For
(16)	40 CFR part 60 Appendix A, Method 18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography	NR 400.02(77) NR 422.142(5)(a) NR 422.143(7)(a)
(19)	40 CFR part 60 Appendix A, Method 25	Determination of Total Gaseous Nonmethane Organic Emissions as Carbon	NR 422.142(5)(a) NR 422.143(7)(a)
(20)	40 CFR part 60 Appendix A, Method 25A	Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer	NR 422.142(5)(a) NR 422.143(5)(a)

SECTION 26. NR 484.10(9), (12), (14), (21), (32), (36), (56) and (57) are amended to read:

NR 484.10

	Standard Number	Standard Title	Incorporated by Reference For
(9)	ASTM D523-89 (1999)	Standard Test Method for Specular Gloss	~~ANSI/AHA A135.5-1988~~ ANSI A135.5-2004 NR 422.02(49m)
(12)	ASTM D968-93 (2001)	Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive	~~ANSI/AHA A135.5-1988~~ ANSI A135.5-2004
(14)	ASTM D1037-99	Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle Panel Materials	~~ANSI/AHA A135.5-1988~~ ANSI A135.4-2004 ANSI A135.5-2004
(21)	ASTM D1308-02	Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes	~~ANSI/AHA A135.5-1988~~ ANSI A135.5-2004
(32)	ASTM D2197-98 (2002)	Standard Test Method for Adhesion of Organic Coatings by Scrape Adhesion	~~ANSI/AHA A135.5-1988~~ ANSI A135.5-2004
(36)	ASTM D2486-00	Standard Test Method for Scrub Resistance of Wall Paints	~~ANSI/AHA A135.5-1988~~ ANSI A135.5-2004
(56)	~~ASTM E84-01~~ ASTM E84-03	Standard Test Method for Surface Burning Characteristics of Building Materials	~~ANSI/AHA A135.5-1988~~ ANSI A135.5-2004

SECTION 27. NR 484.11(4) is amended to read:

NR 484.11(4) The following are documents from the ~~American Hardboard Association (AHA)~~

American National Standards Institute.

Note: Copies may be purchased for personal use from:
~~American Hardboard Association~~
~~1210 W Northwest Highway~~
~~Palatine IL 60067~~
Composite Panel Association
19465 Deerfield Avenue, Suite 306
Leesburg, VA 20176
Telephone: (703) 724-1128
Website: http://www.pbmdf.com
or from:
HIS Global Engineering Documents
15 Inverness Way East
Englewood, CO 80112
Telephone: (800) 854-7179
E-mail: globalcustomerservice@ihs.com
Website: http://global.ihs.com

	Document Number	Title	Incorporated by Reference For
(a)	~~ANSI/AHA A135.4-1982~~ ANSI A135.4-2004	Basic Hardboard	~~ANSI/AHA A135.5-1988~~ ANSI A135.5-2004 NR 422.02(12s)
(b)	~~ANSI/AHA A135.5-1988~~ ANSI A135.5-2004	Prefinished Hardboard Paneling	NR 422.02(13)

SECTION 28. EFFECTIVE DATE. This rule shall take effect on the first day of the month following publication in the Wisconsin administrative register as provided in s. 227.22 (2) (intro.), Stats.

SECTION 29. BOARD ADOPTION. This rule was approved and adopted by the State of Wisconsin Natural Resources Board on March 25, 2009.

Dated at Madison, Wisconsin _____.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By_____
Matthew J. Frank, Secretary

(SEAL)