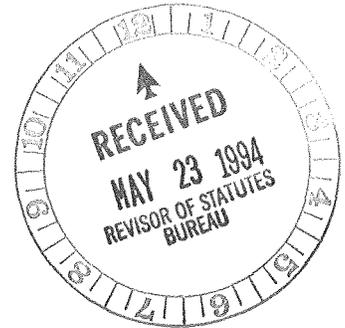


George E. Meyer
Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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STATE OF WISCONSIN)
)
DEPARTMENT OF NATURAL RESOURCES) SS



TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

I, George E. Meyer, Secretary of the Department of Natural Resources and custodian of the official records of said Department, do hereby certify that the annexed copy of Natural Resources Board Order No. AM-3-93 was duly approved and adopted by this Department on March 24, 1994. I further certify that said copy has been compared by me with the original on file in this Department and that the same is a true copy thereof, and of the whole of such original.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the official seal of the Department at the Natural Resources Building in the City of Madison, this 12TH day of May, 1994.


George E. Meyer, Secretary

(SEAL)

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

.....
IN THE MATTER of amending ss. NR 422.02(32) and 439.04(4) (intro.) .
and (5) (a); and creating ss. NR 422.02(11m), (21s), (41p), (41s), .
(41v) and (42m), 422.03(4m), 422.145 and 439.06(3) (j), . AM-3-93
of the Wisconsin Administrative Code pertaining to volatile .
organic compound emissions from screen printing. .
.....

Analysis prepared by the Department of Natural Resources

Statutory authority: ss. 144.31(1) (a), 144.38 and 227.11(2) (a), Stats.

Statutes interpreted: s. 144.31(1) (f), Stats. The State Implementation Plan (SIP) developed under that provision is revised.

In order to reduce ambient ozone concentrations to healthful levels, the Clean Air Act Amendments of 1990 (1990 Amendments) require states to impose reasonably available control technology (RACT) on major stationary sources of volatile organic compounds (VOCs) in certain nonattainment areas. RACT is defined as the lowest emission rate a source is capable of achieving when considering economic and technological feasibility. Screen printing facilities located in these ozone nonattainment areas have been identified as major sources of VOCs. These rules are proposed to fulfill requirements under the 1990 Amendments by establishing RACT for VOC emissions from screen printing facilities. A related change is also being proposed to the definition of the term "paper coating". This change will avoid confusion in determining the applicable emission limitation for similar operations in the paper coating and screen printing industries. This change also will make the definition of "paper coating" consistent with USEPA guidance.

SECTION 1. NR 422.02(11m) and (21s) are created to read:

NR 422.02(11m) "Conductive ink" means an ink used in screen printing which contains material that permits electric current to flow through printed lines or patterns.

(21s) "Ink transfer" means a decal, printed using screen printing onto a special release carrier, that will be transferred from the carrier to a substrate. Final transfer of the decal to the substrate may or may not occur at the screen printing facility.

SECTION 2. NR 422.02(32) is amended to read:

NR 422.02(32) "Paper coating" means application of the uniform coatings, including saturation coatings, put on paper and pressure sensitive tape ~~regardless of substrate~~ in a web process. Related web coating processes on

plastic films and on metal foil are included in this definition but processes such as printing where the coating is not uniform across the web are not included.

SECTION 3. NR 422.02(41p), (41s), (41v) and (42m) are created to read:

NR 422.02(41p) "Screen printing" means a process in which ink or coating is passed through a taut screen mesh or fabric, to which a refined form of stencil has been applied, onto a substrate. The stencil openings determine the form and dimensions of the imprint made on the substrate.

(41s) "Screen printing unit" means a printing application station and its associated flash-off area, ovens or dryers, conveyors or other equipment operating as part of the screen printing process. Screen reclamation is considered to be part of the screen printing process.

(41v) "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.

(42m) "Special purpose screen printing inks and coatings" means inks and coatings used in screen printing which are conductive inks, are used to print ink transfers, or are designed to resist or withstand any of the following:

- (a) More than 2 years of outdoor exposure.
- (b) Exposure to chemicals, solvents, acids, detergents, oil products or cosmetics.
- (c) Temperatures in excess of 170 °F.
- (d) Vacuum forming.
- (e) Embossing.
- (f) Molding.

SECTION 4. NR 422.03(4m) is created to read:

NR 422.03(4m) Screen printing facilities as described under s. NR 422.145 which are:

- (a) Located outside the counties of Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington and Waukesha; or

(b) Located in the county of Kenosha, Milwaukee, Ozaukee, Racine, Washington or Waukesha and which have maximum theoretical emissions of VOCs from all screen printing units at the facility of less than or equal to 25 tons per year; or

(c) Located in the county of Kewaunee, Manitowoc or Sheboygan and which have maximum theoretical emissions of VOCs from all screen printing units at the facility of less than or equal to 100 tons per year.

SECTION 5. NR 422.145 is created to read:

NR 422.145 SCREEN PRINTING. (1) APPLICABILITY. This section applies to all screen printing units at screen printing facilities which are not exempt facilities under s. NR 422.03(4m).

(2) EMISSION LIMITATIONS. (a) General. No owner or operator of a screen printing unit may cause, allow or permit the emission of any VOCs in excess of 0.40 kilograms per liter (3.3 pounds per gallon) of ink or coating, excluding water, delivered to an applicator, except as provided in pars. (b) and (c).

(b) Special purpose inks and coatings. No owner or operator of a screen printing unit using a special purpose ink or coating may cause, allow or permit the emission of any VOCs in excess of 0.80 kilograms per liter (6.7 pounds per gallon) of special purpose ink or coating, excluding water, delivered to an applicator.

(c) Roll coating. No owner or operator of a screen printing unit may cause, allow or permit the emission of any VOCs in excess of 0.80 kilograms per liter (6.7 pounds per gallon), excluding water, delivered to a roll coating applicator associated with screen printing.

(d) Screen reclamation. No owner or operator of a screen printing unit may cause, allow or permit the emission of any VOCs in excess of 0.24 kilograms per square meter (0.050 pounds per square foot) of screen reclaimed, calculated on a daily average basis for each day of operation using the following equation:

$$C = A/B$$

where:

C is the daily average VOC emission rate, in kilograms per square meter (pounds per square foot), from all screen reclamation at a screen printing facility

A is the amount of VOCs used in all screen reclamation at a screen printing facility during a day, in kilograms (pounds), except that any VOCs directed into containers that prevent evaporation may be subtracted

B is the surface area of all screens reclaimed during a day, in square meters (square feet)

(3) COMPLIANCE DEADLINE. The owner or operator of a screen printing unit subject to this section on which construction or modification commenced before the effective date of this rule ... [revisor insert date] shall achieve final compliance with the emission limitations of sub. (2) not later than May 31, 1995. Any source which is subject to this section and on which construction or modification commenced on or after the effective date of this rule ... [revisor insert date] shall meet the emission limitations of sub. (2) upon startup.

(4) RECORDKEEPING. The owner or operator of a screen printing unit subject to this section shall collect and record the information required in s. NR 439.04(5) (a). In addition, the owner or operator shall collect and record all of the following information for screen reclamation at the facility for each day of operation:

(a) The daily average VOC emission rate from screen reclamation in kilograms per square meter (pounds per square foot) of screen reclaimed as calculated using the equation in sub. (2) (d).

(b) The amount of VOCs emitted during the day from screen reclamation in kilograms (pounds).

(c) The total surface area of screens reclaimed during the day in square meters (square feet).

SECTION 6. NR 439.04(4) (intro.) is amended to read:

NR 439.04(4) (intro.) Any owner or operator of a coating or printing line or operation that is exempt from the emission limitations of ss. NR 422.05 to 422.14, 422.15 or 422.155, under s. NR 422.03, or is exempt from the emission limitations of s. NR 422.145 under s. NR 422.03(4m) (b) or (c) shall collect and record the following information as appropriate to support the exemption:

SECTION 7. NR 439.04(5) (a) is amended to read:

NR 439.04(5) (a) Any owner or operator of a coating or printing line or operation subject to an emission limitation in ss. NR 422.05 to 422.08, 422.09 to 422.12, ~~422.15~~ or 422.145 to 422.155 shall collect and record the following information for each coating or printing line or operation:

1. A unique name or identification number for each coating or ink, as applied;
2. The VOC content of each coating or ink, as applied, in units of pounds VOC per gallon, excluding water.

The foregoing rule was approved and adopted by the State of Wisconsin Natural Resources Board on March 24, 1994.

The 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.

Dated at Madison, Wisconsin

5/12/94
STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By

George E Meyer
George E Meyer, Secretary

(SEAL)