

**AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN DIEGO**

RULE 67.11 - WOOD PRODUCTS COATING OPERATIONS

WORKSHOP REPORT

A workshop notice was mailed to all companies known to operate wood products coating facilities in San Diego county. Notices were also mailed to all Chambers of Commerce and all Economic Development Corporations in the county, the U. S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and other interested parties.

The workshop was held on March 26, 1997 and was attended by 12 people. Written comments were also received. The workshop comments and the District responses are as follows:

1. WORKSHOP COMMENT

Can a wood product painted in the shop and later installed in a building be refinished on site using wood coating applied originally in the shop?

DISTRICT RESPONSE:

The coating of wood products after they are installed in a building is subject to District Rule 67.0 which regulates the VOC content of coatings applied to stationary structures and their appurtenances. The volatile organic compound (VOC) limits in Rule 67.0 are more stringent than those in Rule 67.11. If the coating used in the shop also complied with the VOC limits of Rule 67.0 - Architectural Coatings, the same coating could be used. If this coating does not comply with Rule 67.0, it cannot be used for the refinishing of a wood product installed in the building. In this case, another coating which complies with Rule 67.0 VOC limits must be found. Such coatings are available and are being used throughout Southern California.

2. WORKSHOP COMMENT

Conversion varnishes release formaldehyde, a toxic material, during curing (polymerization). At some facilities, the District limits emissions of formaldehyde through permit conditions by restricting production throughput. Does the District have a rule that regulates the emissions of formaldehyde?

DISTRICT RESPONSE:

Yes. Formaldehyde is classified as a hazardous air pollutant (HAP) by the federal EPA and is also considered a toxic air contaminant by California law. Emissions of toxic air contaminants, including formaldehyde, from new and modified operations are regulated by District Rule 1200, Toxic Air Contaminants - New Source Review. This rule requires the District to conduct a health risk assessment of toxic air contaminant emissions from a new or modified operation to ensure that any potential public health risks are kept below specified acceptable levels. As a result of such analysis, emissions of formaldehyde, which are a function of production throughput, may be limited by permit conditions to ensure that acceptable public health risk levels are not exceeded.

In addition, the state Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) program requires a periodic inventory of existing facilities emitting toxic air contaminants. If the toxic emissions from a facility are potentially significant, the facility must conduct a Health Risk Assessment which may result in the need for public notification and risk reduction through reduction in emissions of toxic air contaminants.

3. WORKSHOP COMMENT

Was a public workshop held during the development of Rule 1200?

DISTRICT RESPONSE:

Yes. California Health and Safety Code requires the District to hold public workshops for all new and modified rules. District policy is to provide a public notice for workshops at least 30 days in advance for all new or amended rules. This was done for Rule 1200. A public workshop was held on June 22, 1995.

4. WORKSHOP COMMENT

What does the term "exempt compounds" mean?

DISTRICT RESPONSE:

"Exempt compounds" are defined as compounds that do not participate in photochemical reactions resulting in smog formation because they have negligible photochemical reactivity. District Rule 2 - Definitions, includes a list of currently exempt compounds.

5. WORKSHOP COMMENT

Why is conversion varnish topcoat excluded from the definition of clear topcoat?

DISTRICT RESPONSE:

Conversion varnishes are excluded from the definition of clear topcoats because they can meet VOC content limits lower than the clear topcoats limit of 680 grams/liter. Based on information available to the District, current conversion varnish topcoats with a VOC content of 550 grams/liter produce acceptable finishes.

6. WORKSHOP COMMENT

Subsection (d)(2)(iii) specifies the VOC limit for clear conversion varnish as 550 grams/liter. The limit for pigmented coatings that would include pigmented conversion varnishes by definition is 275 grams/liter. However, such low content VOC varnishes are not technologically feasible. At present, they cannot be formulated with the VOC content less than 550 grams/liter. The District should revise the definition of clear conversion varnishes to include pigmented conversion varnishes.

DISTRICT RESPONSE:

The District agrees. The definition of conversion varnish has been revised to include pigmented conversion varnish as suggested.

7. WORKSHOP COMMENT

Can the District modify permit conditions for some existing facilities to require monthly recordkeeping instead of daily recordkeeping as presently allowed by Rule 67.11?

DISTRICT RESPONSE:

The possibility of modifying permit conditions that apply to a wood products coating operation will depend upon New Source Review (NSR) rule applicability. If a NSR daily emission limit is applicable, permit conditions cannot be changed without a thorough evaluation by the District and finding that all applicable requirements will be met. If, however, a source's permit requires daily records because of past Rule 67.11 or Rule 66 requirements, the District will likely be able to modify permit conditions to monthly recordkeeping as allowed by Rule 67.11.

8. WORKSHOP COMMENT

Are facility emissions restricted by the daily emission limits specified in their permits?

DISTRICT RESPONSE:

Yes. Daily emission limits are generally specified in permits issued pursuant to NSR rules. NSR rules limit the amount of coatings and the corresponding VOC emissions that a facility can use or emit before requiring the application of Best Available Control Technology (BACT). If a facility complies with BACT requirements, these limits may be removed. In certain cases, the District can also convert the daily limit on a permit to either weekly or monthly limits and require corresponding recordkeeping. See also the response to Comment No. 7 above.

9. WORKSHOP COMMENT

What can a facility that expects to exceed permitted emission limits do to remain in compliance with District rules?

DISTRICT RESPONSE:

If a facility expects a temporary, short-term exceedance of permitted emission limits, it can petition for a variance from the Air Pollution Control District Hearing Board for continuation of operation during the period of noncompliance. A variance is an administrative order that grants temporary relief from District rules for a specified period of time. If the facility expects that the exceedance will be permanent or may be repeated periodically, it must apply for a permit modification to reflect any equipment or operational changes needed to maintain compliance with District rules.

10. WORKSHOP COMMENT

Can a facility that expects a temporary increase in emissions contact the District for an evaluation of the facility's options?

DISTRICT RESPONSE:

Yes. The District will arrange a pre-application meeting to provide information on applicable rule requirements and advice on the options for a facility that needs to add new equipment, modify

existing equipment, or change conditions of operation. A pre-application meeting can be requested by contacting the District's Engineering Division.

11. WORKSHOP COMMENT

Does the District issue variances?

DISTRICT RESPONSE:

No. However, the District Hearing Board, a separate entity from the District, may grant variances from District rules for periods ranging from 30 days for emergency variances and up to one year for regular variances. Variance petitions are evaluated on a case-by-case basis. In all cases, the facility is required to show good cause why it is unable to comply with the District's rules during the period of the variance. See also Response to Comment No. 9.

12. WORKSHOP COMMENT

Can the District provide a contact list for all District inspectors?

DISTRICT RESPONSE:

Yes. A District telephone list is available upon request. All District inspectors can be contacted through a message telephone at (619) 694-3340.

13. WORKSHOP COMMENT

Why does Rule 67.11 not allow the use of air-assisted airless spray equipment?

DISTRICT RESPONSE:

Rule 67.11 allows the use of any coating application method, including air-assisted airless equipment, which complies with the definition of high-volume low-pressure (HVLP) spray. HVLP is defined in Subsection (c)(15) of Rule 67.11 as a coating application method which uses pressurized air at a permanent pressure between 0.1 and 10.0 psig, not to exceed 10.0 psig, measured at the air cap of the coating application equipment. Many models of air-assisted airless coating application equipment can comply with this definition.

14. WORKSHOP COMMENT

Would the installation of complying application equipment meet the requirements of BACT?

DISTRICT RESPONSE:

The use of complying application equipment can be considered a part of BACT for a coating operation. BACT requirements for a facility are considered on a case-by-case basis. Depending on the size and nature of the operation, BACT could be the use of add-on air pollution control equipment or process modifications such as the use of coatings and/or solvents with low VOC content combined with the use of HVLP spray equipment.

15. WORKSHOP COMMENT

What criteria is used to determine if a coating application method is a high-volume low-pressure (HVLP) application method?

DISTRICT RESPONSE:

As defined in Subsection (c)(15) of Rule 67.11, any application method that uses high-volume and low-pressure air, between 0.1 and 10.0 psig, to apply coatings to a target surface is considered an HVLP application method. See also response to Comment No. 13.

16. WORKSHOP COMMENT

Is the definition of high-volume low-pressure (HVLP) spray based on achieving a 65% transfer efficiency or on the liquid pressure of the coating sprayed?

DISTRICT RESPONSE:

The definition of HVLP is based on the pressure of the atomizing air which affects the transfer efficiency of the spray equipment. All of the methods listed in Subsection (d)(1) are expected to provide a transfer efficiency of at least 65%. HVLP application method is one of these.

17. WORKSHOP COMMENT

Would an existing facility that installs new or modified equipment to increase throughput, but does not increase its current emissions, be required to install Best Available Control Technology?

DISTRICT RESPONSE:

It is possible. BACT is applied on an emission unit basis, not facility-wide. If the new or modified equipment has a potential to emit more than the current NSR threshold of 10 pounds per day of VOC's, the operation must apply BACT if it is cost-effective. In some cases, the facility may accept permit conditions that limit emissions to a 10 pounds per day level.

18. WORKSHOP COMMENT

Is there a District rule that specifies Best Available Control Technology for various sources?

DISTRICT RESPONSE:

Yes. District New Source Review rules (Rules 20.1, 20.2, 20.3, and 20.4) specify that BACT is required if the installation of new or modified equipment may result in an emission increase and the equipment has the potential to emit of 10 pounds per day or more. BACT for the equipment is the most stringent emission limitation or control technique that has been achieved in practice, is contained in any approved State Implementation Plan, or that has been found to be technologically feasible and cost-effective for such class or category of source(s).

19. WORKSHOP COMMENT

The South Coast Air Quality Management District (SCAQMD) will conduct a technology review in the year 2003, to determine the feasibility of the final VOC content limits in its Rule 1136 - Wood Products Coatings. Will the District revise Rule 67.11 based on the information obtained from the technology review?

DISTRICT RESPONSE:

Yes, if the technology review performed by the SCAQMD reveals that coatings exist with lower VOC contents which can produce acceptable finish for some or all categories of wood products. In addition, the District will follow any new technological development on its own and may revise Rule 67.11 in the future to reflect new technologies.

20. WORKSHOP COMMENT

Is the District evaluating the effectiveness of new carbon filter systems for the control of volatile organic compound (VOC) emissions during wood coating operations?

DISTRICT RESPONSE:

Not at this time. However, the District is collecting information from the only facility in San Diego county that utilizes carbon adsorption as add-on control for VOC emissions from wood coating operations. The district will welcome any information related to the operation and effectiveness of these systems.

21. WORKSHOP COMMENT

When does the District expect Rule 67.11 will be submitted to the Air Pollution Control Board for adoption?

DISTRICT RESPONSE:

The District expects that Rule 67.11 will be scheduled for adoption in August, 1997.

22. EPA COMMENT

Since Rule 67.11 requires monthly or daily usage records to substantiate the exemption in Subsection (b)(1)(i), the amount of coating being exempted should be specified per record period, i.e., gallons per day or gallons per month instead of gallons per consecutive twelve-month period.

DISTRICT RESPONSE:

The District disagrees. The rule's intent is to provide maximum flexibility in recordkeeping to sources exempt from the emission standards. Since additional restrictions in usage per record period will not lead to appreciable gains in emission reductions, the District will retain the consecutive twelve-month usage exemption.

23. EPA COMMENT

The definition of high-volume low-pressure application equipment should be changed to be consistent with the recommendation provided by the Industrial Coating Committee of the Technical Review Group in the report of their September 22, 1994 meeting.

DISTRICT RESPONSE:

The District disagrees. The intent of the Committee was that the air pressure be measured in the center of the air cap where the atomization of the coating occurs. The definition of HVLP provided in Subsection (c)(15) of this rule is adequate since it requires the measurement of the air pressure at the air cap. Retaining this definition also maintains consistency with other District coating rules.

24. EPA COMMENT

The District should establish interim limits based on acetone formulations as done by the South Coast Air Quality Management District (SCAQMD). The EPA suggests including interim VOC limits of 550 grams/liter for clear topcoats, high solids stains, pigmented coatings and sealers to be effective on the adoption date of this rule.

The EPA also suggests including interim VOC limits of 480 grams/liter for low solid stains, toners and washcoats, also to be effective on the adoption date of this rule.

DISTRICT RESPONSE:

The District disagrees. The suggested interim limits assume the use of acetone-based coatings. At the present time, these coatings do not result in acceptable finished product quality for all categories of products. Aside from unresolved issues of safety and high flammability, there are problems associated with the use of acetone-based coatings during periods of high humidity. Experience with acetone-based coatings is very limited and the additional emission reductions that could be obtained in San Diego County by including interim VOC limits are negligible (approximately 9 tons per year). Therefore, the District has decided not to include them in Rule 67.11 at this time. The District will continue to monitor the use and effectiveness of these coatings.

25. EPA COMMENT

The District should consider adopting VOC limits of 275 grams/liter for fillers, high solids stains, multicolored coatings, pigmented coatings and sealers to be effective on July 1, 2005.

Similarly for low-solids stains, toners and wash coats, the suggested limit should be 120 grams/liter also to be effective on July 1, 2005.

DISTRICT RESPONSE:

The District disagrees. The District believes that the current rule limits will allow the District to meet its regulatory obligations without placing an undue burden on industry. However, the District will consider amending the rule in the future if the proposed technology review by the SCAQMD in the year 2003 (or any other available information) indicates that acceptable coatings exist that meet these or other lower limits.

26. EPA COMMENT

Section (f) should reflect the EPA statutory record retention period of five years.

DISTRICT RESPONSE:

The District disagrees. The 2-year record retention is adequate for enforcement purposes and does not burden regulated facilities with high recordkeeping costs. 95% of affected facilities in San Diego county are small businesses. Furthermore, the 2-year record retention requirement in Rule 67.11 maintains consistency with other District coating rules.

GA:jo
5/15/97

**AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN DIEGO**

PROPOSED AMENDMENTS TO RULE 67.11

Proposed amendments to Rule 67.11, Sections (c), (d) and (g) are to read as follows:

RULE 67.11 WOOD PRODUCTS COATING OPERATIONS

(a) APPLICABILITY

(1) Except as otherwise provided in Section (b), this rule is applicable to all wood products coating operations.

(2) Any coating operation subject to the requirements of Rules 67.0 or 67.18 shall not be subject to this rule.

(3) Rule 66 shall not apply to any coating operation which is subject to this rule.

(b) EXEMPTIONS

(1) The provisions of Sections (d), (e) and (f) shall not apply to the following:

(i) A stationary source which applies less than 500 gallons of coatings to wood products in every consecutive twelve-month period. It shall be the responsibility of any person claiming this exemption to maintain monthly purchase and monthly or daily usage records. These records shall be maintained on-site for three years and made available to the District upon request.

(ii) Coatings applied using non-refillable handheld aerosol spray containers.

(2) The provisions of Subsection (d)(1) shall not apply to the following:

(i) Any coatings when applied by the use of air brushes with a coating capacity of two ounces (59.1 ml) or less.

(ii) Any coatings when applied during touch-up operations.

(3) The provisions of Subsections (d)(2) and (d)(3) shall not apply to coatings applied to wooden musical instruments.

(c) DEFINITIONS

For the purposes of this rule the following definitions shall apply:

(1) **"Adhesive"** means a material applied to a wood surface for the sole purpose of bonding the wood surface with another wood or non-wood surface by attachment.

(2) **"Binder"** means a non-volatile polymeric organic material, such as a resin, which forms a surface film during coating applications.

(3) **"Clear Topcoat"** means a final coating which contains binders, but not opaque pigments, and is specifically formulated to form a transparent or translucent solid protective film. Clear topcoats include clear lacquers and varnishes but exclude conversion varnishes.

(4) **"Coating"** means a material containing more than 20 grams per liter of VOC as applied, less water and exempt compounds, which can be applied as a thin layer to a substrate, and which dries or cures to form a continuous solid film, including but not limited to any paint, ink, sealer, varnish, or lacquer, and excluding any adhesives. Coating also includes stains, inks, fillers, washcoats, and toners.

(5) **"Coating Operation"** means all steps involved in the application, drying and/or curing of surface coatings, including touch-up operations, and associated stripping, surface preparation and coating application equipment cleaning.

(6) **"Conversion Varnish"** means a topcoat which is comprised of a homogeneous transparent or translucent liquid (alkyd-amino resin), which when acid catalyzed and applied, hardens by evaporation and polymerization.

(7) **"Dip Coat"** means a coating application method accomplished by dipping an object into the coating material.

(8) **"Electrostatic Spray"** means a coating application method accomplished by charging atomized paint particles for deposition by electrostatic attraction.

(9) **"Exempt Compound"** means the same as defined in Rule 2.

(10) **"Filler"** means a material used to fill in cracks, grains and imperfections of wood before applying a coating.

(11) **"Flow Coat"** means a coating application method accomplished by flowing a stream of coating over an object.

(12) **"Glaze Stain"** means a semitransparent tinted coating applied on a previously coated surface to produce a decorative effect.

(13) **"Hand Application Method"** means a coating application method accomplished by applying a coating by manually held, non-mechanically operated equipment. Such equipment includes paint brushes, hand rollers, rags and sponges.

(14) **"High-Solids Stain"** means a stain containing more than one pound of solids per gallon.

(15) **"High-Volume Low-Pressure (HVLP) Spray"** means a coating application method which uses pressurized air at a permanent pressure between 0.1 and 10.0 psig, not to exceed 10.0 psig, measured at the air cap of the coating application system.

(16) **"Ink"** means a liquid that contains dyes and/or colorants and is used to make markings, but not to protect surfaces.

(17) **"Low-Solids Coating"** means a coating containing one pound of solids per gallon, or less.

(18) **"Low-Solids Stain"** means a stain containing one pound of solids per gallon, or less.

(19) **"Medium Density Fiberboard (MDF) Coating"** means the initial coating which is applied directly to the surface of MDF, which is a wood product composed of tightly compressed wood fibers bonded with resins, and has a density greater than 45 pounds per cubic foot.

(20) **"Multi-Colored Coating"** means a coating which exhibits more than one color when applied and which is packaged in a single container and applied in a single coat.

(21) **"New Wood Product"** means a wood product which has not been previously coated. A wood product from which coatings have been removed to repair flaws in initial coating applications is a new wood product.

(22) **"Pigmented Coating"** means an opaque coating containing binders and colored pigments, and formulated to hide the wood surfaces.

(23) **"Refinished Wood Product"** means a post-consumer wood product which has had some or all of the coatings removed, and to which new coatings are applied in order to preserve or restore the post-consumer wood product to its original condition. A wood product from which coatings have been removed to repair flaws in initial coatings applications is not a refinished wood product.

(24) **"Roll Coat"** means a coating application method accomplished by rolling a coating onto a flat surface using a roll applicator.

(25) **"Sealer"** means a coating which contains binders and which seals wood surfaces prior to the application of subsequent coatings.

(26) **"Stationary Source"** means the same as defined in Rule 2 20.1.

(27) **"Stripper"** means a liquid applied to remove a coating or coating residue.

(28) **"Toner"** means a coating which contains not more than one pound of binders and dyes or pigments per gallon of coating and which is used to add tint to a coated surface.

(29) **"Touch-up Operation"** means the portion of a coating operation which is incidental to the main coating process but necessary to cover minor imperfections or minor mechanical damage incurred prior to intended use, or to achieve coverage as required.

(30) **"Transfer Efficiency"** means the ratio of the weight of coating solids adhering to the part being coated to the weight of coating solids used in the application process expressed as a percentage.

(31) **"Volatile Organic Compound" (VOC)** means the same as defined in Rule 2.

~~any volatile compound of carbon, which may be emitted to the atmosphere during operations or activities subject to this rule, except methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonates, and exempt compounds.~~

(32) **"VOC Content Per Volume of Coatings, Less Water and Exempt Compounds"** means the same as defined in Rule 2.

~~weight of VOC per combined volume of VOC and coating solids and is calculated by the following equation:~~

$$C_{\text{evoc}} = (W_s - W_w - W_{\text{es}}) / (V_m - V_w - V_{\text{es}})$$

where:

$C_{c\text{voc}}$	=	VOC content per volume of coating, less water and exempt compounds
W_s	=	weight of volatile compounds including water and exempt compounds
W_w	=	weight of water
W_{es}	=	weight of exempt compounds
V_m	=	volume of material including water and exempt compounds
V_w	=	volume of water
V_{es}	=	volume of exempt compounds

(33) **"VOC Content Per Volume of Material"** means the same as defined in Rule 2. weight of VOC per volume of material and is calculated by the following equation:

$$C_{m\text{voc}} = (W_s - W_w - W_{es}) / V_m$$

where:

$C_{m\text{voc}}$	=	VOC content per volume of material
W_s	=	weight of volatile compounds including water and exempt compounds
W_w	=	weight of water
W_{es}	=	weight of exempt compounds
V_m	=	volume of material including water and exempt compounds

(34) **"Wash Coat"** means a coating containing not more than one pound of solids per gallon, which is used to seal wood surfaces, prevent undesired staining and control penetration. A wash coat may also be used to provide a barrier coat when paper laminates are applied to the wood surface, or when glazes are applied during the coating operation.

(35) **"Wood Products"** means any objects that are made of or primarily fabricated with solid wood, wood composition, bamboo and/or rattan, including furnishings, art objects, tables, chairs, beds, sofas, and shutters and cabinets which are not permanently attached to stationary structures at the time of coating.

(d) STANDARDS

(1) Application Equipment

Except as provided in Subsection (b)(2), no coatings shall be applied unless one of the following application methods is used:

- (i) Hand application method, or
- (ii) Dip coat, or
- (iii) Roll coat, or
- (iv) Flow coat, or
- (v) Electrostatic spray, or

(vi) High-volume low-pressure (HVLP) spray, or

(vii) Other coating application methods that are demonstrated to have a transfer efficiency at least equal to one of the above application methods, and which are used in such a manner that the parameters under which they were tested are permanent features of the method. Such coating application methods shall be approved in writing by the Air Pollution Control Officer prior to use.

(2) VOC Limits for New Wood Products

(i) Except as provided in Subsection (d)(2)(ii), on and after ~~June 27, 1995~~ (date of adoption) a person shall not apply any coating to a new wood product with a VOC content in excess of the following limits expressed as grams of VOC per liter of coating (pounds of VOC per gallon of coating), as applied, excluding water and exempt compounds :

<u>CATEGORY</u>	<u>VOC LIMITS</u>	
	<u>g/L</u>	<u>lb/gal</u>
Clear Topcoats	680	<u>5.7</u>
<u>Conversion Varnishes</u>	<u>550</u>	<u>4.6</u>
Fillers	500	<u>4.2</u>
High-Solids Stains	700	<u>5.8</u>
Inks	500	<u>4.2</u>
Medium Density Fiberboard (MDF) Coatings	680	<u>5.7</u>
Multi-Colored Coatings	685	<u>5.7</u>
Pigmented Coatings	600	<u>5.0</u>
Sealers	680	<u>5.7</u>
Any Other Coating	420	<u>3.5</u>

(ii) ~~On and after June 27, 1995 a~~ A person shall not apply the following low-solids coatings to a new wood product with a VOC content in excess of the following limit expressed as grams of VOC per liter of material (pounds of VOC per gallon of material) as applied:

<u>CATEGORY</u>	<u>VOC LIMIT</u>	
	<u>g/L</u>	<u>lb/gal</u>
Low-Solids Stains, Toners or Wash Coats	700	<u>5.8</u>

(iii) Except as provided in Subsection (d)(2)(iv), on and after July 1, ~~1997~~ 2005, a person shall not apply any coating to a new wood product with a VOC content in excess of the following limits expressed as grams of VOC per liter of coating (pounds of VOC per gallon of coating), as applied, excluding water and exempt compounds:

<u>CATEGORY</u>	<u>VOC LIMITS</u>	
	<u>g/L</u>	<u>lb/gal</u>
Clear Topcoats	275	<u>2.3</u>
Conversion Varnishes	550	<u>4.6</u>
Fillers	500	<u>4.2</u>
High-Solids Stains	550	<u>4.6</u>
Inks	500	<u>4.2</u>
Medium Density Fiberboard (MDF) Coatings	550	<u>4.6</u>
Multi-Colored Coatings	685	<u>5.7</u>
Pigmented Coatings	275	<u>2.3</u>
Sealers	550	<u>4.6</u>
Any Other Coating	275	<u>2.3</u>

(iv) On and after July 1, 1997 ~~2005~~, a person shall not apply the following low-solids coatings to a new wood product with a VOC content in excess of the following limit expressed as grams of VOC per liter of material (pounds of VOC per gallon of material), as applied:

<u>CATEGORY</u>	<u>VOC LIMIT</u>	
	<u>g/L</u>	<u>lb/gal</u>
Low-Solids Stains, Toners or Wash Coats	480	<u>4.0</u>

The requirements of Subsection (d)(2) may be met using an Alternative Emission Control Plan (AECPP) that has been approved pursuant to Rule 67.1.

(3) VOC Limits for Refinished Wood Products

(i) Except as provided in Subsection (d)(3)(ii), ~~on and after June 27, 1995~~, a person shall not apply any coating to a refinished wood product with a VOC content in excess of the following limits expressed as grams of VOC per liter of coating (pounds of VOC per gallon of coating), as applied, excluding water and exempt compounds :

<u>CATEGORY</u>	<u>VOC LIMITS</u>	
	<u>g/L</u>	<u>lb/gal</u>
Clear Topcoats	680	<u>5.7</u>
Fillers	500	<u>4.2</u>
High-Solids Stains	700	<u>5.8</u>
Inks	500	<u>4.2</u>
Medium Density Fiberboard (MDF) Coatings	680	<u>5.7</u>
Multi-Colored Coatings	685	<u>5.7</u>
Pigmented Coatings	600	<u>5.0</u>
Sealers	680	<u>5.7</u>
Any Other Coating	420	<u>3.5</u>

(ii) ~~On and after June 27, 1995, a~~ A person shall not apply the following low-solids coatings to a refinished wood product with a VOC content in excess of the following limit expressed as grams of VOC per liter of material (pounds of VOC per gallon of material), as applied:

<u>CATEGORY</u>	<u>VOC LIMIT</u>	
	<u>g/L</u>	<u>lb/gal</u>
Low-Solids Stains, Toners or Wash Coats	700	<u>5.8</u>

The requirements of Subsection (d)(3) may be met using an Alternative Emission Control Plan (AECPP) that has been approved pursuant to Rule 67.1.

(4) Surface Preparation and Stripping Materials

Except as provided in subsection (d)(5), a person shall not use VOC containing materials for surface preparation or stripping unless:

- (i) The material contains 200 grams or less of VOC per liter of material; or
- (ii) The material has an initial boiling point of 190° C (374° F) or greater; or
- (iii) The material has a total VOC vapor pressure of 20 mm Hg or less, at 20° C (68° F).

(5) Cleaning of Application Equipment

A person shall not use VOC containing materials for the cleaning of application equipment used in operations subject to this rule unless:

- (i) The cleaning material contains 200 grams or less of VOC per liter of material; or
- (ii) The cleaning material has an initial boiling point of 190° C (374° F) or greater; or
- (iii) The cleaning material has a total VOC vapor pressure of 20 mm Hg or less, at 20° C (68° F); or
- (iv) The cleaning material is flushed or rinsed through the application equipment in a contained manner that will minimize evaporation into the atmosphere; or
- (v) The application equipment or equipment parts are cleaned in a container which is open only when being accessed for adding, cleaning, or removing application equipment or when cleaning material is being added, provided the cleaned equipment or equipment parts are drained to the container until dripping ceases; or
- (vi) A system is used that totally encloses the component parts being cleaned during the washing, rinsing, and draining processes; or
- (vii) Other application equipment cleaning methods that are demonstrated to be as effective as any of the equipment described above in minimizing the emissions of VOC to the atmosphere, provided that the device has been tested and approved by the Air Pollution Control Officer prior to use.

(6) No person shall require for use or specify the application of a coating subject to this rule if such use or application results in a violation of this rule. This prohibition shall apply to all written or oral contracts under the terms of which any coating is applied to any wood product at any location within San Diego County.

(7) Spray application equipment shall not be used to dispose of waste coatings or solvents into the air.

(e) CONTROL EQUIPMENT

(1) In lieu of complying with the provisions of Subsections (d)(2), (d)(3), (d)(4) and/or (d)(5) of this rule, a person may use an air pollution control system which:

(i) Has been installed in accordance with an Authority to Construct; and

(ii) Includes an emission collection system which captures organic gaseous emissions, including emissions associated with applicable coating, equipment cleaning, and surface preparation operations, and transports the captured emissions to an air pollution control device; and

(iii) Has a combined emissions capture and control device efficiency of at least 85 percent by weight.

(2) A person electing to use control equipment pursuant to Section (e)(1) shall submit to the Air Pollution Control Officer for approval an Operation and Maintenance plan for the proposed emission control device and emission collection system and receive approval prior to operation of the control equipment. Thereafter, the plan can be modified, with Air Pollution Control Officer approval, as necessary to ensure compliance. Such plan shall:

(i) Identify all key system operating parameters. Key system operating parameters are those necessary to ensure compliance with Subsection (e)(1)(iii), such as temperature, pressure, and/or flow rate; and

(ii) Include proposed inspection schedules, anticipated ongoing maintenance, and proposed recordkeeping practices regarding the key system operating parameters.

(3) Upon approval of the Air Pollution Control Officer, a person subject to the requirements of Section (e) shall implement the Operation and Maintenance plan and shall comply with the provisions of the approved plan thereafter.

(f) RECORDKEEPING

All records shall be retained on-site for at least three years and shall be made available to the District upon request.

(1) Any person subject to the provisions of Subsections (d)(2), (d)(3), (d)(4) and/or (d)(5) of this rule shall maintain records in accordance with the following:

(i) Maintain a current list of coatings, strippers, surface preparation and cleaning materials in use which provides all of the VOC data necessary to evaluate compliance, including but not limited to:

(A) manufacturer name and identification for each coating or coating component for multi-component coatings, (this includes any components such as bases, catalysts, thinners or reducers, when supplied in separate containers), stripper, surface preparation and cleaning material; and

(B) mix ratio of components; and

(C) VOC content, vapor pressure and/or initial boiling point, as applicable, for each coating, or coating component for multi-component coatings, stripper, surface preparation and cleaning material.

(ii) Maintain current documentation to demonstrate applicability of any coating category pursuant to Subsection (d)(2) or (d)(3) of this rule.

(iii) Maintain daily or monthly records of the amount of each coating or each coating component for multi-component coatings used.

(iv) Maintain daily or monthly records of the amount of each stripper, surface preparation and cleaning material used.

(v) Maintain records of the dates and amounts of material added to coating dip tanks.

(2) Any person using control equipment pursuant to Section (e) of this rule shall:

(i) Maintain records in accordance with Subsection (f)(1); and

(ii) For all coatings, strippers, surface preparation and/or cleaning materials not in compliance with Subsections (d)(2), (d)(3), (d)(4) or (d)(5) of this rule, maintain daily records of the amount of each coating or each coating component for multi-component coatings, stripper, surface preparation and cleaning material used; and

(iii) Maintain daily records of key system operating parameters as approved in the Operation and Maintenance plan. Such records shall be sufficient to document continuous compliance with Subsection (e)(1)(iii) during periods of emission producing activities.

(g) TEST METHODS

(1) Perfluorocarbon (PFC) compounds shall be assumed to be absent from a coating, cleaning, or surface preparation material subject to this rule unless a manufacturer of the material or a facility operator identifies the specific individual compound(s) and the amount(s) present in the material and provides an EPA and ARB approved test method which can be used to quantify the specific compounds.

(2) Measurements of transfer efficiency subject to Subsection (d)(1)(vii) of this rule shall be conducted in accordance with the South Coast Air Quality Management District's "Spray Equipment Transfer Efficiency Test Procedure for Equipment User" as it exists on June 27, 1995 .

(3) Measurement of the VOC content of coatings, surface preparation and cleaning materials subject to Subsections (d)(2), (d)(3), (d)(4)(i), or (d)(5)(i) of this rule shall be conducted in accordance with EPA Test Method 24 (40 CFR 60, Appendix A) as it exists on June 27, 1995.

(4) Measurement of the VOC content of ultraviolet radiation-cured coatings subject to Subsections (d)(2) and/or (d)(3) of this rule shall be conducted in accordance with ASTM Standard Test Method D5403-93. Measurement of the water content and exempt solvent content, if applicable, shall be conducted and reported in accordance with ASTM Standard Test Methods D 3792-91 and D 4457-85.

(5) Measurement of the initial boiling point of cleaning and surface preparation materials subject to Subsection (d)(4)(ii) and/or (d)(5)(ii) of this rule shall be conducted in accordance with ASTM Standard Test Method D1078-86 95 for distillation range of volatile organic liquids.

(6) Calculation of total VOC vapor pressure for materials subject to Subsection (d)(4)(iii) and/or (d)(5)(iii) of this rule shall be conducted in accordance with the District's "Procedures for Estimating the Vapor Pressure of VOC Mixtures" ~~as it exists on June 27, 1995~~. If the vapor pressure of the liquid mixture, as calculated by this procedure, exceeds the limits specified in Subsection (d)(4)(iii) and/or (d)(5)(iii), the vapor pressure shall be determined in accordance with ASTM Standard Test Method D2879-86 96. The solvent composition shall be determined using one of the following ASTM standard recommended practices: E 168-92, E169-93 or E 260-91. The fraction of water and exempt compounds in the liquid phase shall be determined by using ASTM Standard Test Methods D3792-91 and D4457-85 and shall be used to calculate the partial pressure of water and exempt compounds. The results of vapor pressure measurements obtained using ASTM Test Method D2879-86 96 shall be corrected for partial pressure of water and exempt compounds.

(7) Measurement of solvent losses from alternative application cleaning equipment subject to Subsection (d)(5)(vii) shall be conducted and reported in accordance with the South Coast Air Quality Management District's "General Test Method for Determining Solvent Losses from Spray Gun Cleaning Systems" ~~as it exists on June 27, 1995~~.

(8) Measurement of control device efficiency subject to Subsection (e)(1) of this rule shall be conducted in accordance with EPA Methods 18 and/or 25A (40 CFR 60) ~~as they exist on June 27, 1995~~ and in accordance with a protocol approved by the Air Pollution Control Officer.

(9) Measurement of the emission collection system capture efficiency subject to Subsection (e)(1) of this rule shall be determined according to EPA's technical document, "Guidelines for Determining Capture Efficiency," dated January 9, 1995, using a protocol approved by the Air Pollution Control Officer. Subsequent to the initial compliance demonstration period, applicable key system operating parameters, as approved by the Air Pollution Control Officer, may be used as verification that capture efficiency has not diminished.