

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

**RULE 67.11 - WOOD PARTS AND PRODUCTS COATING OPERATIONS**

**WORKSHOP REPORT**

A workshop notice was mailed to all companies known to operate wood parts and 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 8, 1995, and was attended by 21 people. Written comments were also received. The workshop comments and District responses are as follows:

**1. WORKSHOP COMMENT**

Are coatings applied to gymnasium floors subject to Rule 67.11?

**DISTRICT RESPONSE**

No. Coatings applied to gymnasium floors are subject to District Rule 67.0 - Architectural Coatings.

**2. WORKSHOP COMMENT**

If a new coat of paint is applied over an existing "used" coat of paint, would the wooden object be considered a "refinished wood product" as defined in Subsection (c)(21)?

**DISTRICT RESPONSE**

Yes. The VOC limits found in Subsection (d)(3)(i) and (d)(3)(ii) apply to post-consumer "refinished" wood products.

**3. WORKSHOP COMMENT**

Subsection (c)(32) provides a definition for "washcoats", but this coating category does not seem to appear in the rule.

**DISTRICT RESPONSE**

Subsections (d)(2)(ii) and (d)(3)(ii) specify VOC limits for washcoats.

**4. WORKSHOP COMMENT**

Did ARB or EPA indicate any objection to the 500 gallon per year usage exemption provided in Subsection (b)(1)(i)?

**DISTRICT RESPONSE**

No. A copy of the proposed amendments were sent to both ARB and EPA for review. Neither agency indicated that this exemption would create an approvability issue, therefore the District expects both agencies to approve the exemption.

**5. WORKSHOP COMMENT**

Will facilities which use less than 500 gallons of coatings per year need to comply with the proposed July 1996 VOC limits?

**DISTRICT RESPONSE**

No. Subsection (b)(1)(i) states that facilities which apply less than 500 gallons of wood coatings per year are exempt from Sections (d), (e), and (f). Therefore, such operations are not subject to any of the VOC limits in Subsection (d)(2).

**6. WORKSHOP COMMENT**

Does Subsection (b)(1)(i) require both daily and monthly recordkeeping?

**DISTRICT RESPONSE**

No. This subsection requires that monthly purchase records and either daily or monthly records of coating usage be maintained on-site to demonstrate that annual wood coating consumption is less than 500 gallons.

**7. WORKSHOP COMMENT**

Does Subsection (f)(1)(iii) provide any size facility with a choice of keeping daily or monthly records?

**DISTRICT RESPONSE**

Yes. Subsection (f)(1)(iii) provides an option for any size facility to keep daily or monthly records to demonstrate compliance with Rule 67.11. However, some facilities may still need to maintain daily records if its Permit to Operate has specific daily recordkeeping requirements pursuant to the New Source Review rules.

**8. WORKSHOP COMMENT**

Does the exemption for musical instruments limit the annual usage of coatings which can be applied under this exemption?

**DISTRICT RESPONSE**

No. However, the District's New Source Review Rules, if applicable, may place annual usage limits on this type of operation.

**9. WORKSHOP COMMENT**

Why are wooden musical instruments specifically exempt from the VOC limits of the rule?

### DISTRICT RESPONSE

Coatings applied to musical instruments, such as high quality guitars, which are manufactured at one affected facility in San Diego County have to meet unique performance requirements. The wood surface of a guitar vibrates in order to produce sound, and therefore requires a highly flexible coating which will not crack as a result of the vibrations. At the same time, such coatings must have a very high degree of hardness. It was demonstrated to the District that coatings complying with the limits of Rule 67.11 do not meet these unique requirements. It should also be noted that other air pollution control agencies in California provide similar exemptions for coating of musical instruments, and these types of operations will not be subject to EPA's proposed Control Technique Guideline (CTG) for wood furniture coating. Therefore, the District believes an exemption from VOC limits for musical instruments is justified.

#### **10. WORKSHOP COMMENT**

The proposed CTG for wood products coating operations being developed under the EPA Regulatory Negotiation process addresses the use of conversion varnishes. Conversion varnishes are high-solids coatings, which are more expensive and difficult to use than lacquer-based coatings. The Sacramento Air Quality Management District has provided a new category for conversion varnishes with a VOC limit of 550 g/l which will allow the continued use of solvent-based high-end systems. Based upon their limited and specialized use, could a specialty coating category be added for conversion varnishes?

### DISTRICT RESPONSE

The District has investigated the use of this type of coating and has added a specialty coating category for conversion varnishes with a VOC limit of 550 g/l.

#### **11. WORKSHOP COMMENT**

Can a specialty coating category be added for extreme performance coatings?

### DISTRICT RESPONSE

Based on information provided to the District, conversion varnishes are typically used to meet the performance requirements of an extreme performance coating environment. Therefore, a special category for extreme performance coatings is not necessary.

#### **12. WORKSHOP COMMENT**

Can the proposed 1996 VOC limits for clear topcoats and sealers be raised and the limits for other coatings be lowered, to offset any increase in emissions, as was done in Rule 67.18 - Marine Coating Operations?

### DISTRICT RESPONSE

The District has made a preliminary estimate of the current emissions from each coating category in Rule 67.11. Based upon this estimate, it does not appear that there would be enough potential emission reductions to offset the significant increases in emissions if the VOC limits for clear topcoats and sealers were raised.

### 13. WORKSHOP COMMENT

The proposed limit for low-solids washcoats will require the use of water-based coatings which are not technically feasible for medium density fiberboard (MDF). Can a specialty coating category for MDF be established with a VOC limit which would allow the use of solvent-based coatings?

#### DISTRICT RESPONSE

Yes. The rule has been revised to include a specialty coating category for medium density fiberboard with a VOC limit of 680 g/l.

### 14. WORKSHOP COMMENT

Currently there are no low-solids stains, toners and washcoats which can comply with the VOC limit of 480 g/l except products based on 1,1,1-trichloroethane (TCA) or water. Coatings containing TCA are currently being phased out. At the same time, available water-based coatings do not work well as toners and washcoats because of their much slower drying time. Many coating manufacturers do not believe that acceptable coatings with a VOC content of 480 g/l or less will be available by July 1, 1996. Can the allowable VOC content for these coatings be raised to 700 g/l, i.e. to the same level as the present limit for high-solids stains?

#### DISTRICT RESPONSE

Yes. The proposed VOC limit for low-solids stains, toners and washcoats which will take effect upon rule adoption has been increased to 700 g/l. In addition, a future limit of 480 g/l, effective July 1997, has been added to encourage further development of coatings with a lower VOC content. The District will also continue to monitor the progress made in the use of lower VOC materials in the South Coast Air Quality Management District.

### 15. WORKSHOP COMMENT

Is it necessary to include the proposed lower July 1996 VOC limits in the revision of Rule 67.11 for adoption into the State Implementation Plan (SIP), or can the District wait until it is determined that these limits are technologically feasible for all field use applications?

#### DISTRICT RESPONSE

The federal Clean Air Act requires the District to submit rules regulating VOC emissions which reflect Reasonably Available Control Technology (RACT). RACT is defined as the lowest emission limitation which is proven in field use and is technically and economically feasible. At this time, there is no federal RACT determination for wood coating operations. Based on industry concerns regarding the technical and economic feasibility of water-based coatings, the District has decided not to include the proposed future VOC limits in the SIP. When EPA finalizes a Control Technique Guideline specifying RACT limits for wood furniture coating operations, the District will consider revisions to the VOC limits in Rule 67.11 to reflect federal requirements, and may submit them as a SIP revision.

## 16. WORKSHOP COMMENT

Many of the wood coating rules in California, including San Diego's, contain future VOC limits which are much stricter than the proposed Control Technique Guideline (CTG) limits for wood furniture coating operations. Rule 67.11 should only be as strict as the proposed federal rule.

### DISTRICT RESPONSE

The CTG emission limitations proposed by EPA reflect the requirements of the federal Clean Air Act. However, the District must also comply with the requirements of the California Clean Air Act (CCAA). The CCAA establishes state air quality standards which are stricter than the federal standards. San Diego County violates the state standard for ozone and is designated as a serious ozone non-attainment area. Therefore, the District is mandated by California law to adopt rules which reflect the Best Available Retrofit Control Technology (BARCT) for sources of ozone precursors, i.e. volatile organic compounds and nitrogen oxides. The California Health & Safety code defines BARCT as "an emission limitation that is based on the maximum degree of reduction achievable, taking into account environmental, energy, and economic impacts by each class or category of source".

While a specific BARCT determination for wood coating operations has not yet been made, the California Air Resource Board (ARB) has assumed that the lowest VOC limits found in any local district rule (in this case, the South Coast and Bay Area Air Quality Management Districts), represent BARCT for that source category.

The low VOC limits in these districts were first proposed in 1990, based on information from coating manufacturers that the limits were technologically achievable by utilizing water-based coatings. Today there are water-based coatings produced by several companies which meet the VOC limits specified in the South Coast and Bay Area District rules and which are being used by a few comparatively large furniture manufacturers. However, the District believes that water-based coatings do not perform well enough in field applications to be used by all wood coating facilities, especially small operations. In addition, while the low-VOC coating materials themselves are comparable in cost with solvent-based products, the use of water-based coatings may require new skills, specialized and more expensive processing equipment, and increased labor costs, to achieve a high quality surface coating that is comparable to the quality achieved by conventional systems and demanded by wood product customers.

This information was presented at a recent meeting of the Technical Review Group (TRG) of the California Air Pollution Control Officers Association. The TRG directed its Industrial Coatings Committee to accelerate the development of a statewide RACT/BARCT determination for wood coating operations. That determination will consider the full economic impact on all sources subject to the recommended VOC limits including small businesses. The District will be informing all workshop participants and other interested parties on the progress of this work. The District also urges all users, manufacturers and suppliers of wood coatings in San Diego County to actively participate in this process by providing the relevant information and taking part in the future workshops which will be conducted by the Industrial Coating Committee together with ARB.

## 17. WORKSHOP COMMENT

Can the proposed July 1996 VOC limits be postponed until July 1997 to allow facilities more time to experiment with and develop the process changes necessary for using water-based coatings?

### **DISTRICT RESPONSE**

Yes. The future effective date for lower VOC limits has been postponed to July 1997 pending the outcome of the RACT/BARCT determination for wood coating operations. This will also allow the District time to refine the emission inventory for these types of coatings, research the appropriate applications of water-based coatings within the wood coating industry, and make any necessary changes to Rule 67.11.

### **18. WORKSHOP COMMENT**

Can a "bubble" concept be used to average emissions rather than comply with the proposed VOC limits of the rule?

### **DISTRICT RESPONSE**

Yes. Rule 67.11 contains a provision which allows the use of an Alternative Emission Control Plan ("bubble" or averaging concept) provided that it complies with the requirements of Rule 67.1. However, Rule 67.1 contains a 20% discount provision, as specified by EPA policy, which requires the total averaged emissions to be 20% less than the emissions which would occur if all coatings used were in compliance with the VOC standards of Rule 67.11.

### **19. WORKSHOP COMMENT**

The phasing-out of coatings containing 1,1,1-trichloroethane and the current problems associated with water-based coatings will result in more facilities using traditional solvent-based coatings. This, in turn, may cause an affected source to exceed a facility-wide annual emissions cap imposed by the permit conditions. Can the District revise the emission cap to take into account the necessity of conversion from trichloroethane-based coatings to solvent-based coatings?

### **DISTRICT RESPONSE**

If any currently permitted operation contains a specific permit condition limiting facility-wide annual emissions, and that limit would be exceeded because of solvent changes or production increases, an application must be submitted to the District requesting an increase in the annual VOC emission limit. The VOC emission increase will likely be subject to the District's New Source Review rules. Depending on the size of the source and the amount of the emission increase, these rules may require the facility to install the Best Available Control Technology (or justify an exemption) and provide emission offsets for some or all of the emission increases sought.

### **20. WORKSHOP COMMENT**

If EPA designates acetone as a non-photochemically reactive (exempt) compound, will the District do the same?

### **DISTRICT RESPONSE**

The designation of acetone as an exempt compound has not yet been finalized by EPA. If and when EPA makes its final decision, the District will consider its policy in consultation with ARB. Presently, the District is planning to submit comments to ARB regarding the anticipated increase in acetone usage in San Diego County if EPA's proposal to exempt acetone from the VOC definition is finalized. The ARB must also approve the exemption of acetone before the District can revise its VOC definition.

## **21. WORKSHOP COMMENT**

Water-based technology is desirable if it can produce an acceptable product which can compete in the world market place, since water-based coatings are less flammable and less toxic than solvent-based coatings. Water-based coatings do not have wide-spread use because their quality is not acceptable. The proposed July 1996 VOC limits will require the use of water-based coatings, which will put San Diego County wood coating facilities at a competitive disadvantage, and will eventually drive them out of business.

### **DISTRICT RESPONSE**

Many air districts in California, including other districts in Southern California are requiring wood coating operations to use a water-based coating system by the middle of 1995. However, as noted in the responses to the workshop comments # 16 and 17, the proposed postponement of lower VOC limits in Rule 67.11 until July 1997 will also allow enough time for the District and industry representatives to work with ARB and the TRG Industrial Coating Committee on the development of a state-wide RACT/BARCT determination.

## **22. ARB COMMENT**

The proposed VOC limits in Subsections (d)(i) and (d)(ii) are less stringent than those found in other district rules such as Bay Area Air Quality Management District Rule 8-32 and South Coast Air Quality Management District Rule 1136. For example, the VOC limit for high solids stains effective July 1996 in proposed Rule 67.11 is 700 g/l compared to 240 g/l in the South Coast and Bay Area rules.

Upon discussing these less stringent limits with the District, it is our understanding the District is anticipating the release of a U.S. EPA CTG document regarding wood product coating operations. However, because the standards specified in Rule 67.11 are significantly higher than those in other district rules, we encourage the District to further investigate the feasibility of lowering these standards in future revisions of Rule 67.11.

### **DISTRICT RESPONSE**

Based on information provided at the workshop and the District's own observation of some wood coating operations, the District no longer believes with "a reasonable degree of certainty" that the future proposed VOC limits in the Bay Area and South Coast air districts are technologically and/or economically feasible for all affected facilities in San Diego County, including small businesses. Therefore, the District has postponed the effective dates of the lower VOC limits until July 1997 to allow ARB and the TRG Industrial Coating Committee enough time to develop a statewide RACT/BARCT determination for this source category.

## **23. ARB COMMENT**

Subsection (g)(6) specifies methods for quantifying water and exempt compounds in a solvent and requires that the total vapor pressure be corrected for the partial pressure of water and exempt compounds. No general analytical procedure for quantifying compounds other than water and exempt compounds is specified. Correcting vapor pressure for water and exempt compounds requires that their mole fraction in the solvent be known; therefore, general analytical methods such as ASTM E168-92, E169-93, and E260-91 should be specified for determining solvent composition.

### **DISTRICT RESPONSE**

Subsection (g)(6) has been revised as suggested.

#### **24. EPA COMMENT**

Subsection (g)(9) does not specify a test method for determining capture efficiency. Recently, EPA ended the capture efficiency moratorium, as indicated in the memo from John Seitz dated February 7, 1995. The appropriate citations for capture efficiency test methods are contained in the EPA reference document entitled "Guidelines for Determining Capture Efficiency", dated January 9, 1995. References should be made to Appendix A of this document as appropriate.

### **DISTRICT RESPONSE**

Subsection (g)(9) has been revised to include language which references EPA's new Guidelines for Determining Capture Efficiency.

#### **25. EPA COMMENT**

EPA is developing a Control Techniques Guideline (CTG) for the wood furniture industry. When finalized, the CTG will specify the "presumptive norm" for what is federal reasonably available control technology (RACT) for wood furniture coating processes. EPA estimates that the CTG will be finalized later this year. If state or local agency rules differ significantly (from the CTG) in terms of standards and enforceability, they will have to be revised to meet federal RACT.

### **DISTRICT RESPONSE**

When the CTG for wood furniture coating operations is published, the District will revise Rule 67.11 as appropriate to comply with the requirements of the federal Clean Air Act.

#### **26. EPA COMMENT**

The Rule 67.11 VOC limits effective July 1996 are significantly less stringent than the limits in similar wood products coatings rules of other California air districts. In order to ensure consistency throughout the state, EPA strongly recommends that the coating limits in Subsection (d)(2)(i) be revised to conform with other California districts.

### **DISTRICT RESPONSE**

The District is not confident that the proposed July 1996 VOC limits are technologically and economically feasible for all sources including small businesses. Therefore, the limits referenced in the comment have been postponed until July 1997. In addition, those future limits will not be included in the version of Rule 67.11 to be submitted to EPA for inclusion in the SIP.



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

**PROPOSED AMENDMENTS TO RULE 67.11**

Rule 67.11 is amended to read as follows:

**RULE 67.11      WOOD PRODUCTS COATING OPERATIONS**

**(a)    APPLICABILITY**

(1) Except as otherwise provided in Section (b), This this rule is applicable to all surface coating of wood products coating operations including refinishing or refurbishing, in which volatile organic compounds (VOC) are employed. Operations subject to this rule and in compliance with Section (d) of this rule shall not be subject to Rule 66.

(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) this rule 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, wood products coating operations at a stationary source, as defined in Rule 20.1, using less than a total of 500 gallons of coatings 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 of coating usage. These records shall be maintained retained on-site for at least three years and shall be made available to the District immediately upon request.

(ii) Coatings applied using non-refillable handheld aerosol spray containers. The provisions of this rule shall not apply to coating operations subject to District Rules 67.0 and 67.18.

(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 the following:

(i) 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.

(1) "Application Equipment" means equipment used in hand application methods such as, but not limited to, paint brushes, hand rollers, caulking guns, trowels, spatulas, syringe daubers, rags and sponges, and equipment used in mechanically operated application methods, including, but not limited to spray guns, spinning disks, and pressure pots.

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

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

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

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

(4)(8)(9) "Exempt Compound" means any of the following compounds or classes of compounds:

(i) the following compounds:

1,1,1-trichloroethane,

methylene chloride, (dichloromethane),

trichlorofluoromethane (CFC-11),

dichlorodifluoromethane (CFC-12),

trifluoromethane (HFC-23),

trichlorotrifluoroethane (CFC-113),

dichlorotetrafluoroethane (CFC-114),

chloropentafluoroethane (CFC-115),

chlorodifluoromethane (HCFC-22),  
dichlorotrifluoroethane (HCFC-123),  
dichlorofluoroethane (HCFC-141b),  
1,1,1,2-tetrafluoroethane (HFC-134a),  
1,1,2,2-tetrafluoroethane (HFC-134),  
chlorodifluoroethane (HCFC-142b),  
2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124),  
pentafluoroethane (HFC-125),  
1,1,1-trifluoroethane (HFC-143a),  
1,1-difluoroethane (HFC-152a),

(ii) the following linear volatile methyl siloxane (VMS) compounds:

hexamethyldisiloxane (MM),  
octamethyltrisiloxane (MDM),  
decamethyltetrasiloxane (MD<sub>2</sub>M),  
dodecamethylpentasiloxane (MD<sub>3</sub>M),  
tetradecamethylhexasiloxane (MD<sub>4</sub>M),  
dimethyl silicones and siloxanes (MD<sub>x</sub>M),

(iii) the following cyclic volatile methyl siloxane (VMS) compounds:

hexamethylcyclotrisiloxane (D<sub>3</sub>),  
octamethylcyclotetrasiloxane (D<sub>4</sub>),  
decamethylcyclopentasiloxane (D<sub>5</sub>),  
dodecamethylcyclohexasiloxane (D<sub>6</sub>),  
cyclopolydimethylsiloxanes (D<sub>x</sub>),

(iv) the following branched volatile methyl siloxane (VMS) compounds:

1,1,1,3,5,5,5-heptamethyl-3-[(trimethylsilyl)oxyl]-trisiloxane (M<sub>3</sub>T),  
1,1,1,5,5,5-hexamethyl-3,3-bis[(trimethylsilyl)oxy]-trisiloxane (M<sub>4</sub>Q),  
pentamethyl[(trimethylsilyl)oxy]cyclotrisiloxane (MD<sub>3</sub>),

(v) and the following four classes of perfluorocarbon (PFC) compounds:

- (i) cyclic, branched, or linear, completely fluorinated alkanes,
- (ii) cyclic, branched, or linear, completely fluorinated ethers with no unsaturations,
- (iii) cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations, and
- (iv) sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine,

1,1,1 trichloroethane, methylene chloride, trichlorofluoromethane (CFC 11), dichlorodifluoromethane (CFC 12), trifluoromethane (FC 23), trichlorotrifluoroethane (CFC 113), dichlorotetrafluoroethane (CFC 114), chloropentafluoroethane (CFC 115), chlorodifluoromethane (CFC 22), dichlorotrifluoroethane (HCFC 123), dichlorofluoroethane (HCFC 141b), tetrafluoroethane (HFC 134a), and chlorodifluoroethane (HCFC 142b).

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

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

(5)(11)(12) "Glaze Stain" means a semitransparent tinted coating applied on a previously coated surface to produce a decorative effect.

(12)(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.

(6)(13)(14) "High-Solids Stain" means a stain containing more than one pound of solids per gallon and includes wiping stains, glazes and opaque stains.

(7)(14)(15) "High-Volume Low-Pressure (HVLP) Spray" means a coating application method which uses using 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, and a permanent liquid coating pressure of not more than 50 psig.

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

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

(8)(17)(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.

(9)(18)(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.

(10) "Opaque Stain" means any stain which is used to give character or texture to wood, and which contains pigments not classified as semi-transparent.

(49)(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.

(14)(20)(22) **"Pigmented Coating"** means ~~an~~ any opaque coating containing binders and colored pigments, and formulated to hide the wood surfaces.

(24)(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.

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

(12)(23)(25) **"Sealer"** means a ~~a~~ any coating which contains binders and which seals wood surfaces prior to the application of subsequent coatings.

(13) **"Semi-transparent Stain"** means a solution of coloring matter which contains dyes and/or semi-transparent pigments and which is formulated to change surface color but not to conceal surface grain. These include sap stain and non-grain raising stain.

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

(14)(25)(27) **"Stripper"** means a liquid applied to remove a coating or coating residue.

(15)(26)(28) **"Toner"** means a ~~a~~ any coating which contains not more than one pound of binders and dyes or pigments and which is used to add tint to a coated surface.

(27)(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.

(16)(28)(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 a coating operation, expressed as a percentage.

(20)(29)(31) **"Volatile Organic Compound" (VOC)** means any volatile compound of carbon, which may be emitted to the atmosphere during operations or activities subject to this rule, ~~except containing at least one atom of carbon excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonates, and exempt compounds,~~

~~which may be emitted to the atmosphere during application of and/or subsequent drying or curing of coatings subject to this rule. VOC limits of coatings and strippers are expressed in grams of VOC per liter of coating or stripper as applied, minus water and minus exempt compounds. VOC limits of low solid stains, toners, washcoats and cleaning materials are expressed in grams of VOC per liter of material.~~

(30)(32) **"VOC Content Per Volume of Coatings, Less Water and Exempt Compounds"** means the weight of VOC per combined volume of VOC and coating solids and is calculated by the following equation:

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

where:

$C_{cVOC}$  = 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

(34)(33) "VOC Content Per Volume of Material" means the weight of VOC per volume of material and is calculated by the following equation:

$$C_{mVOC} = (W_s - W_w - W_{es}) / V_m$$

where:

$C_{mVOC}$  = 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

(17)(32)(34) "Wash Coat" means a coating containing that contains not more than 1.0 one pounds of solids per gallon, which is used to seal wood surfaces, prevents undesired staining and which controls 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 operations.

~~(18) "Wood Products" means any furnishings, including tables, chairs, beds, sofas, shutters and cabinets which are not permanently attached to stationary structures at the time of coating, art objects, and any other objects made of solid wood, wood composition, bamboo and/or rattan, or which are primarily fabricated with such materials.~~

(33)(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.

~~(19) "Wood Products Coating Operation" means the application of coating materials to wood products and includes coating application equipment, flash-off area, spray booths, dip tanks, ovens, conveyors and/or other equipment operated for the purpose of applying and drying or curing wood products coating materials.~~

#### (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: Any person applying coatings to wood products shall use one of the following application methods:

- (i) Hand application methods ~~Brush coat~~, or
- (ii) Dip coat, or
- (iii) Roller coat, or
- (iv) Flow coat ~~Wiping~~, or
- (v) Electrostatic ~~coat~~ spray, or
- (vi) High-volume low-pressure (HVLP) ~~coat~~ spray, or
- (vii) Other coating application methods that are demonstrated to ~~achieve as a minimum 65 percent transfer efficiency or have a transfer efficiency at least equal to one of the above application methods, and which are operated~~ 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 and are approved in writing by the Air Pollution Control Officer prior to use. , California Air Resources Board and Environmental Protection Agency.

~~The provisions of Subsection (d)(1) shall not apply to coatings that are applied by the use of air brushes with a coating capacity of two ounces (59.1 ml) or less through a template to add designs, letters and/or numbers to the wood products.~~

(2) VOC Limits for New Wood Products ~~Content of Coatings and Strippers:~~

- (i) ~~A person shall not apply any coatings or strippers subject to this rule which, as applied, contain VOC in excess of the following:~~

<u>CATEGORY</u>	<u>VOC LIMIT (grams per liter of coating or stripper, as applied, less water and exempt compounds)</u>
Clear Topcoats	700
High-Solids Glaze Stains	700
High-Solids Non-Glaze Stains	800
Multi-Colored Coatings	685
Pigmented Coatings	700
Sealers	700
Strippers	800

<u>CATEGORY</u>	<u>VOC LIMIT (grams per liter of material as applied)</u>
Low-Solids Stains, Toners and Washcoats	800

- (ii)(i) Except as provided in Subsection (d)(2)(ii), On and after (date of adoption) the following dates, a person shall not apply any coatings to a new wood

product or strippers subject to this rule with a which contain VOC content in excess of the following limits expressed as grams of VOC per liter of coating, as applied, excluding water and exempt compounds:

<u>CATEGORY</u>	<u>VOC LIMIT</u>	
	<u>Effective</u> <u>(date of adoption)</u>	<u>Effective</u> <u>7/1/96</u>
<u>Clear Topcoats</u>	<u>680</u>	<u>275</u>
<u>Fillers</u>	<u>500</u>	<u>500</u>
<u>High-Solids Stains</u>	<u>700</u>	<u>700</u>
<u>Inks</u>	<u>500</u>	<u>500</u>
<u>Medium Density Fiberboard (MDF) Coatings</u>	<u>680</u>	
<u>Multi-Colored Coatings</u>	<u>685</u>	<u>685</u>
<u>Pigmented Coatings</u>	<u>600</u>	<u>275</u>
<u>Sealers</u>	<u>680</u>	<u>550</u>
<u>Any Other Coating</u>	<u>420</u>	<u>275</u>

CATEGORY

VOC LIMIT (grams per liter of coating or stripper, as applied, less water and exempt compounds)

	<u>Effective 12/31/90</u>	<u>Effective 1/1/95</u>
<u>Clear Topcoats</u>	<u>550</u>	<u>275</u>
<u>High Solids Glaze Stains</u>	<u>700</u>	<u>700</u>
<u>High Solids Non Glaze Stains</u>	<u>700</u>	<u>700</u>
<u>Multi-Colored Coatings</u>	<u>685</u>	<u>275</u>
<u>Pigmented Coatings</u>	<u>600</u>	<u>275</u>
<u>Sealers</u>	<u>550</u>	<u>550</u>
<u>Strippers</u>	<u>350</u>	<u>350</u>
<u>Any Other Coating</u>	<u>420</u>	<u>275</u>

(ii) On and after (date of adoption) the following date, a person shall not apply the following low-solids coatings to a new wood product with a VOC content in excess of the following limits expressed as grams of VOC per liter of material, as applied:

<u>CATEGORY</u>	<u>VOC LIMIT</u> <u>Effective (date of adoption)</u>
<u>Low-Solids Stains, Toners or Wash Coats</u>	<u>480 700</u>

CATEGORY

VOC LIMIT (grams per liter of material as applied)

	<u>Effective 12/31/90</u>	<u>Effective 1/1/95</u>
<u>Low Solids Stains, Toners and Washcoats</u>	<u>480</u>	<u>480</u>



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

<u>CATEGORY</u>	<u>VOC LIMIT</u>
<u>Clear Topcoats</u>	<u>275</u>
<u>Conversion Varnishes</u>	<u>550</u>
<u>Fillers</u>	<u>500</u>
<u>High-Solids Stains</u>	<u>550</u>
<u>Inks</u>	<u>500</u>
<u>Medium Density Fiberboard (MDF) Coatings</u>	<u>550</u>
<u>Multi-Colored Coatings</u>	<u>685</u>
<u>Pigmented Coatings</u>	<u>275</u>
<u>Sealers</u>	<u>550</u>
<u>Any Other Coating</u>	<u>275</u>

(iv) On and after July 1, 1997, 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, as applied:

<u>CATEGORY</u>	<u>VOC LIMIT</u>
<u>Low-Solids Stains, Toners or Wash Coats</u>	<u>480</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 (date of adoption), a person shall not apply any coatings to a refinished wood product with a VOC content in excess of the following limits expressed as grams of VOC per liter of coating, as applied, excluding water and exempt compounds:

<u>CATEGORY</u>	<u>VOC LIMIT</u> <u>Effective (date of adoption)</u>
<u>Clear Topcoats</u>	<u>680</u>
<u>Fillers</u>	<u>500</u>
<u>High-Solids Stains</u>	<u>700</u>
<u>Inks</u>	<u>500</u>
<u>Medium Density Fiberboard (MDF) Coatings</u>	<u>680</u>
<u>Multi-Colored Coatings</u>	<u>685</u>
<u>Pigmented Coatings</u>	<u>600</u>
<u>Sealers</u>	<u>680</u>
<u>Any Other Coating</u>	<u>420</u>

(ii) A On and after (date of adoption), a person shall not apply any the following low-solids coatings to a refinished wood product with a VOC content in excess of the following limits expressed as grams of VOC per liter of material, as applied:

<u>CATEGORY</u>	<u>VOC LIMIT</u> <u>Effective (date of adoption)</u>
<u>Low-Solids Stains, Toners or Wash Coats</u>	<u>480</u> <u>700</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.

(3)(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).

(i) ~~A person shall not use VOC containing materials which have a VOC content of more than 200 grams per liter of material for surface preparation excluding cleaning of coating application equipment; or~~

(ii) ~~A person shall not use a VOC containing material which has a composite vapor pressure greater than 45 mm Hg at a temperature 20°C (68°F) for surface preparation, excluding cleaning of coating application equipment. After January 1, 1992, the VOC content of such material shall not be greater than 200 grams per liter regardless of the vapor pressure of the material.~~

(4)(5) Cleaning up of Application Equipment

~~Effective May 1, 1991, a~~ A person shall not use VOC containing materials for the cleaning up of application equipment used in coating 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

(i)(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.

~~(ii) The cleaning solvent is transferred through the application equipment, without exposure to air, into a container which has in place an apparatus or cover which completely covers the container and has no visible holes, breaks, openings or separations between adjoining components of the container or container cover; or~~

~~(iii) The cleaning solvent has a VOC content of less than 200 grams per liter.~~

(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.

(5) A person shall not sell, offer for sale, or apply any coating or cleaning solvent for use in wood products coating operations that, after December 18, 1990 was newly formulated to contain or reformulated to increase the content of methylene chloride, trichlorofluoromethane (CFC-11), dichlorodifluoromethane (CFC-12), trichlorotrifluoroethane (CFC-113), dichlorotetrafluoroethane (CFC-114), or chloropentafluoroethane (CFC-115).

(6) After December 18, 1990 a person shall not manufacture, sell, offer for sale, or supply any coating or cleaning material for use in wood products coating operations unless the coating or cleaning material container displays the content of methylene chloride, trichlorofluoromethane (CFC-11), dichlorodifluoromethane (CFC-12), trichlorotrifluoroethane (CFC-113), dichlorotetrafluoroethane (CFC-114), or chloropentafluoroethane (CFC-115).

(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:

Any person subject to this rule can comply with the provisions of Subsection (d)(2) by using air pollution control equipment which has been approved in writing by the Air Pollution Control Officer provided that the VOC emissions from such operations are reduced such that:

(i) The air pollution control equipment has Has been installed in accordance with an Authority to Construct; and

(ii)(i) Includes an The 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 the air pollution control device; and collects at least 90 percent by weight of the emissions generated by the coating operation, including all VOC emissions from applied coatings.

(ii)(iii) Has a combined emissions capture and control device efficiency of at least 85 percent by weight. The control device reduces VOC emissions, by at least 95 percent by weight; and

(2) A person electing to use comply with the provisions of Subsection (d)(2) by using air pollution control equipment pursuant to Section (e)(1) shall submit to the Air Pollution Control Officer for approval an Operation and Maintenance Plan plan for the VOC proposed emission air pollution 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 Subsections (e)(1)(ii) and (e)(1)(iii), such as temperature, pressure, and/or flow rate; and of this section.

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

(3) ~~The Operation and Maintenance Plan must be submitted to the Air Pollution Control Officer and receive approval prior to operation of the air pollution control equipment. Upon approval of the Air Pollution Control Officer, a~~ A person subject to the requirements of this section ~~Section (e) shall implement the plan on the approval of the Air Pollution Control Officer~~ 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.

~~Effective December 18, 1990, any person applying coatings and/or solvents to wood products shall maintain records in accordance with the following requirements:~~

(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:

~~(1)(i)~~ (i) Maintain a current list of coatings, strippers, ~~thinners,~~ surface preparation and cleaning materials in use which provides all of the VOC data necessary to evaluate compliance, including, but not limited to:

~~(i)(A)~~ (A) manufacturer name and identification for each Type and/or category of 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, thinner, surface preparation or and cleaning material used; and

~~(ii)(B)~~ (B) ~~Mix~~ mix ratio of components; and

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

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

~~(2)(iii)~~ (iii) Maintain daily or monthly records showing of the amount of each coating or each coating component for multi-component coatings used, ,stripper, thinner, cleaning and surface preparation material used.

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

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

~~These records shall be retained for at least three years and shall be made available to the District immediately upon request.~~

(3) Maintain records of content of methylene chloride, trichlorofluoromethane (CFC-11), dichlorodifluoromethane (CFC-12), trichlorotrifluoroethane (CFC-113), dichlorotetrafluoroethane (CFC-114), or chloropentafluoroethane (CFC-115) in any coating or cleaning material used.

(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, cleaning, and/or 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 (date of adoption).

(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 (date of adoption).

(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 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 (date of adoption). 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, Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope. The solvent composition shall be determined using one of the following ASTM standard recommended practices: E168-92, E169-93 or E260-91. 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 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 (date of adoption).

(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 (date of adoption) 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, conducted 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, shall be used as indirect verification that capture efficiency has not diminished.

Measurements of VOC content subject to Section (d) of this rule shall be conducted and reported in accordance with EPA Test Method 24 (40 CFR 60, Appendix A) as it exists on December 18, 1990, and ASTM Test Method D 4457-85 for determination of dichloromethane and 1,1,1-trichloroethane in paints and coatings by direct injection into a gas chromatograph. Measurements of VOC content of multicomponent coatings shall be performed in accordance with ASTM Test Method D 2369-87 with minor modifications outlined in the Federal Register 55 FR 36546, published on September 5, 1990.

Calculations of the VOC content of coatings and strippers less water and less exempt compounds shall be performed in accordance with ASTM Standard Practice D 3960-87 for determining VOC content of paints and related coatings.

Measurements of VOC emissions subject to Section (e) of this rule shall be conducted in accordance with EPA Methods 18 and 25 (40 CFR 60, Appendix A) as they exist on December 18, 1990 and with EPA Guidelines for Determination of Capture Efficiency.

~~Measurements of transfer efficiency pursuant to Subsection (d)(1)(vii) of this rule shall be conducted in accordance with the current version of the South Coast Air Quality Management District's "Spray Equipment Transfer Efficiency Test Procedure for Equipment User".~~

~~Total absolute vapor pressure of VOC containing compounds pursuant to Subsection (d)(3)(ii) of this rule shall be calculated using the District's "Procedure for Estimating the Vapor Pressure of a Solvent Mixture", as it exists on December 18, 1990. If the vapor pressure of the liquid mixture is in excess of the limit specified in Subsection (d)(3)(ii), the vapor pressure shall be determined in accordance with ASTM Test Method D 2879-83, Vapor Pressure Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope.~~