



Air Pollution Control Board
(vacant) District 1
Dianne Jacob District 2
Pam Slater District 3
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Air Pollution Control Officer
R. J. Sommerville

NOTICE OF WORKSHOP

FOR DISCUSSION OF PROPOSED AMENDMENTS TO RULE 67.11 - WOOD PRODUCTS COATING OPERATIONS

The San Diego County Air Pollution Control District will hold a public meeting to consider proposed amendments to Rule 67.11 - Wood Products Coating Operations. Comments concerning this proposal may be submitted in writing before, or made at, the workshop which is scheduled as follows:

DATE: Wednesday, March 8, 1995
TIME: 9:00 - 11:00 a.m.
PLACE: County Operations Center
Farm Advisor's Conference Room
Building 4
5555 Overland Avenue
San Diego CA

Rule 67.11 controls emissions of volatile organic compounds (VOC's) resulting from the painting of wood products and associated cleanup operations. The proposed amendments will set separate VOC limits for coatings applied to new wood products and those used for refinishing wood products. The proposed changes will also extend the compliance dates for lower VOC content limits for clear topcoats, multi-colored and pigmented coatings, sealers and other coatings applied to new wood products until July 1, 1996. These changes are based on comments from coating manufacturers and users who have indicated that while some presently available water-based coatings comply with the more stringent VOC limits in the current rule, the quality of the coatings is still not acceptable for all applications. Several other air pollution control districts in the state have also recognized this problem and have revised their rules to set new effective dates for the lower VOC limits.

In addition, the current VOC limits for sealers and clear topcoats will be slightly increased to provide facilities the opportunity to find complying substitutes for coatings based on 1,1,1-trichloroethane, which use is being increasingly limited by EPA because it is a stratospheric ozone-depleting compound.

The proposed amendments also provide more choices of materials and/or devices for reducing VOC emissions from surface preparation and cleaning of coating application equipment and reduce recordkeeping requirements. Under the proposed changes facilities using coatings which meet the VOC limits specified in the rule will have the option to keep monthly instead of daily records. The proposed changes will also delete outdated provisions and provide clarification and updates for definitions and test methods.

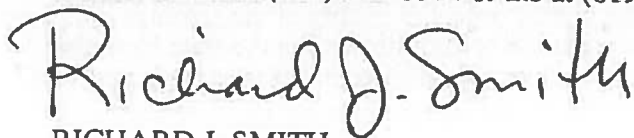
Specifically, the amended Rule 67.11 will:

- Clarify the applicability of the rule and exemptions.

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- Add a new limited exemption for coatings applied to musical instruments.
- Clarify methods for calculating the VOC content of coatings and surface preparation and cleaning materials.
- Set new VOC limits for clear topcoats, fillers, multi-colored and pigmented coatings applied to new wood products.
- Set new effective dates for complying with lower VOC limits for clear topcoats, pigmented coatings and general coatings applied to new wood products.
- Set separate VOC limits for coatings applied to refinished wood products.
- Provide several options for materials used for surface preparation and equipment cleanup.
- Provide additional options for the cleaning of coating application equipment.
- Clarify the information required by the rule for listing the coatings, surface preparation and cleaning materials used.
- Provide facilities the option of keeping monthly instead of daily records if coatings complying with the VOC standards are used.
- Specify recordkeeping requirements for facilities using add-on emission control equipment
- Clarify and update test methods for determining compliance with this rule.
- Add a prohibition regarding the disposal of solvents and coatings into the air.

If you would like a copy of the proposed amendments to Rule 67.11, please call Juanita Ogata at (619) 694-8851. If you have any questions concerning the proposed amendments, please call Natalie Zlotin at (619) 694-3312 or me at (619) 694-3303.



RICHARD J. SMITH
Deputy Director

RJS:NZ:jo
1/31/95

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.

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

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

(4)(8) "Exempt Compound" means any of the following compounds or classes of compounds: 1,1,1-trichloroethane, methylene chloride, (dichloromethane), trichlorofluo-

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

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

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

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

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

~~(8)~~(17) **"Low-Solids Stain"** means a stain containing one pound of solids per gallon, or less.

~~(9)~~(18) **"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.~~

(19) **"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.

~~(11)~~(20) **"Pigmented Coating"** means ~~a~~ any opaque coating containing binders and colored pigments, and formulated to hide the wood surfaces.

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

~~(12)~~(23) **"Sealer"** means ~~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) "Stationary Source" means the same as defined in Rule 20.1.

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

(15)(26) "Toner" means 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) "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) "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) "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) "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:

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

where:

$C_{c,voc}$ = VOC content 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

(31) "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
 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) "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) "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 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:

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

CATEGORY

Clear Topcoats
 High-Solids Glaze Stains
 High-Solids Non-Glaze Stains
 Multi-Colored Coatings
 Pigmented Coatings
 Sealers
 Strippers
 Any Other Coating

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

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

(ii) On and after 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:

CATEGORY

Low-Solids Stains, Toners and Washcoats

VOC LIMIT (grams per liter of material as applied)
 Effective 12/31/90 Effective 1/1/95

480 480

CATEGORY	VOC LIMIT Effective (date of adoption)
Low-Solids Stains, Toners or Washcoats	480

The requirements of Subsection (d)(2) may be met using an Alternative Emission Control Plan (AECP) 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), 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>
Clear Topcoats	680
Fillers	500
High-Solids Stains	700
Inks	500
Multi-Colored Coatings	685
Pigmented Coatings	600
Sealers	680
Any Other Coating	420

(ii) A person shall not apply any 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>
Low-Solids Stains, Toners or Washcoats	480

The requirements of Subsection (d)(3) may be met using an Alternative Emission Control Plan (AECP) 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 emis-

sions 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~~

~~(iii)(ii)~~ 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) 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) 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 cleaning material used; and

(i)(B) Mix mix ratio of components; and

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

(2)(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) 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.

~~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 coating, cleaning, and/or surface preparation 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 Subsection (d)(2) 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 Isotenoscope. 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 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.~~