



Air Pollution Control Board
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Air Pollution Control Officer
R. J. Sommerville

NOTICE OF WORKSHOP

FOR DISCUSSION OF PROPOSED AMENDMENTS TO RULE 67.3 - METAL PARTS AND PRODUCTS COATING OPERATIONS

The San Diego County Air Pollution Control District will hold a public meeting to consider proposed amendments to Rule 67.3 - Metal Parts and Products Coating Operations. Comments concerning this proposal may be submitted in writing before, or made at, the workshop which is scheduled as follows:

DATE: Tuesday, June 14, 1994
TIME: 9:00 a.m. - 12:00 p.m.
PLACE: County Operations Center
 Library Training Room - Building #15
 5555 Overland Avenue
 San Diego CA

Rule 67.3 controls emissions of volatile organic compounds (VOC's) resulting from the painting and related cleaning of metal parts and products. In May, 1993 the Environmental Protection Agency (EPA) notified the District that Rule 67.3 had been given only a limited approval because of specified deficiencies. Some of these deficiencies were administrative in nature. Others involved the VOC limits for two specialty coating categories - Pretreatment Wash Primers and High Performance Architectural Coatings. The VOC limits specified in Rule 67.3 exceeded the maximum allowable limits identified in EPA's Control Technique Guideline (CTG) for metal parts and products coatings.

EPA also notified the District that a failure to correct these deficiencies and receive full approval of Rule 67.3 before December, 1994 would result in the imposition of federal sanctions. These sanctions include a 2 to 1 emission offset ratio for new and modified facilities and withholding up to \$75 million in federal transportation funds.

The proposed amendments to Rule 67.3 to be discussed at this workshop correct the administrative deficiencies identified by EPA. The amended rule will also establish a 700 gm/liter VOC limit for Pretreatment Wash Primers and retain the 750 gm/liter VOC limit for High Performance Architectural Coatings. The District will submit to EPA required documentation justifying a VOC limit of 750 g/l for High Performance Architectural Coatings. The District also intends to demonstrate that emissions from Pretreatment Wash Primers presently used in San Diego County which exceed EPA's 420 gm/l VOC limit specified in the CTG, are less than 5% of the total VOC emissions from all metal parts and products coatings subject to, or exempt from, Rule 67.3. If EPA agrees, it can approve the 700 gm/liter limit for Pretreatment Wash Primers. It should be noted that the proposed VOC limits for these two specialty coating categories are subject to EPA approval.

In addition, the proposed amendments provide industry with more choices of materials and/or devices for reducing VOC emissions from surface preparation and cleaning of coating application equipment. Facilities using compliant coatings will also have an option to keep monthly instead of

daily records. The proposed changes will also delete outdated rule provisions and provide updates and clarification's for definitions and test methods.

Specifically, the amended Rule 67.3 will:

- Clarify the applicability of the rule and exemptions.
- Clarify methods for calculating the VOC content of coatings and of surface preparation and cleaning materials.
- Allow the use of materials with a low VOC content, high boiling point or low vapor pressure for surface preparation and equipment cleanup.
- Provide additional options for the cleaning of coating application equipment.
- Clarify the information required by the rule in the requirement to list the coatings, surface preparation and cleaning materials used.
- Provide facilities the option of keeping monthly instead of daily records, except when add-on emission control equipment is used.
- Specify recordkeeping requirements for facilities using add-on emission control equipment for non-compliant coatings.
- Clarify and update test methods for determining compliance with this rule.
- Delete outdated provisions.

If you would like a copy of the proposed amendments to Rule 67.3, please call Jaunita Ogata at (619) 495-8851. If you have any questions concerning the proposal, please call Natalie Zlotin at (619) 694-3312 or me at (619) 694-3303.



RICHARD J. SMITH
Deputy Director

RJS:LAY:jo
5/9/94

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

PROPOSED AMENDMENTS TO RULE 67.3

Amendments are to read as follows:

RULE 67.3. ~~COATING OF METAL PARTS AND PRODUCTS~~ COATING OPERATIONS

(a) APPLICABILITY

(1) Except as otherwise provided in Section (b), this rule is applicable to the surface coating of metal parts and products.

(2) Any coating operation subject to the requirements of Rules 67.0, 67.4, 67.9 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.

(4) Equipment used for cleaning and/or surface preparation of metal parts and products and also used for cleaning of coating application equipment for metal parts and products shall be subject to the applicable requirements of both Rules 67.3 and 67.6.

(b) EXEMPTIONS

Monthly purchase and daily usage records, as applicable, of coatings and/or cleaning materials containing volatile organic compounds (VOCs) shall be maintained to substantiate any coating operation claiming an exemption under Subsections (b)(1)(i), (b)(1)(ii) and (b)(2)(i). These records shall be kept on site for three years and made available to the District upon request.

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

(1)(i) Any coating operation where 20 gallons per year or less of coatings are applied per consecutive 12-month period. Any coating line where twenty gallons per year of coating are applied. It shall be the responsibility of any person claiming this exemption to maintain daily records showing coating usage is twenty gallons per year or less in order for the District to determine this exemption.

(2) Any coating line subject to the requirements of Rules 67.4 or 67.9 or 67.18.

(ii) Any powder coating operation which uses less than 0.5 gallons of any surface preparation or cleaning material containing volatile organic compounds (VOCs) per day.

(3)(iii) The application of the following coatings:

~~(i)(A)~~ Coatings applied to motor ~~Motor~~ vehicles coatings, excluding the application of coatings to component parts or accessories during original manufacture.

~~(ii)(B)~~ Stencil coatings ~~using a template~~.

~~(iii)~~ ~~Coatings used for touch-up and repair provided daily coating usage does not exceed one quart.~~

~~(iv)~~ Architectural coatings, ~~applied to permanent stationary structures.~~

~~(v)(C)~~ Chemical milling maskants.

~~(vi)~~ Adhesive coatings.

~~(vii)(D)~~ Cathode coatings.

~~(viii)(E)~~ Solid film lubricants.

~~(ix)(F)~~ Safety indicating coatings.

~~(x)(G)~~ Magnetic tape storage disks coatings.

~~(xi)(H)~~ Coatings applied using non-refillable handheld aerosol spray containers.

~~(xii)(I)~~ Coatings applied to metal surfaces for the specific purpose of protecting the metal substrate from corrosive attack by storage battery electrolytes.

~~(xiii)(J)~~ Wet fastener installation coatings. ~~Primers applied to wet-installed metal fasteners provided application of primers is done by either dip coating, flow coating or brushing.~~

~~(xiv)~~ ~~Inks or coatings used to form letters or numbers for purposes of identifying metal parts or products provided application is done by brushing, stamping, or by non-refillable handheld aerosol spray containers.~~

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

(i) Any coating operation where one gallon or less of coatings are applied every day.

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

(iii) Any coatings that are applied for touch-up operations.

(c) **DEFINITIONS**

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

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

(2) **"Air-d ~~D~~ried Coating"** means any coating which is ~~dried or cured at ambient temperature, and forced air-dried coatings not heated above 90° C (194° F) for the purpose of curing or drying.~~

(3) **"Architectural Coating"** means the same has the same meaning as defined in Rule 67.0.

(4) **"Baked Coating"** means any coating which is ~~heated above 90° C (194° F) in order to cure or dry the coating.~~ cured or dried in an oven where the oven air temperature exceeds 90° C (194° F).

(5) **"Brush Coat"** ~~means a coating application method accomplished by applying a coating with a brush.~~

~~(6)~~(5) **"Cathode Coating"** means a functional coating applied to an electrical cathode.

~~(7)~~(6) **"Chemical Milling Maskant"** means a coating applied directly to a metal part to protect surface areas during chemical milling, anodizing, aging, bonding, plating, etching, or other chemical surface operations.

(7) **"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 which dries or cures to form a continuous solid film, including but not limited to any paint, primer, varnish, stain, lacquer, enamel, shellac, sealant, or maskant, and excluding any adhesives, preservative oils or preservative compounds.

(8) **"Coating Line"** ~~means the equipment required to apply, dry, cure or bake coatings and associated flashoff areas which is operated in an uninterrupted series in a metal parts and products operation.~~

(8) **"Coating Operation"** means the sum of all steps involved in the application, drying and/or curing of surface coatings, and associated surface preparation and equipment cleaning.

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

(10) **"Electrostatic Spray"** means a coating application method accomplished by charging atomized paint particles for deposition by electrostatic attraction on a metal part or product.

(11) **"Exempt Compound"** is means any of the following compounds or classes of compounds: 1,1,1-trichloroethane, methylene chloride, 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), and 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.

~~(13)~~(12) **"Flow Coat"** means a coating application method accomplished by flowing a stream of coating over an object.

~~(14)~~ **"Forced Air-Dried Coating"** means a coating which is heated to a temperature less than or equal to 90° C (194° F) in order to cure or dry the coating.

(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.

~~(15)~~(14) **"Heat-Resistant Coating"** means any coating which during normal use used on surfaces where the coating must withstand a temperatures of greater than at least 204.4°C (400°F), as demonstrated when tested in accordance with ASTM Method D-2485.

(12)(15) **"Extreme High Gloss Coating"** means any non-metallic coating which achieves has a reflectance of at least 75% percent reflectance on a 60° meter when tested in accordance with ASTM Method D-523 (1980).

(16) **"High Performance Architectural Coating"** means a coating used to protect architectural subsections which meets the specifications of the Architectural Aluminum Manufacturers Association publication AAMA 605.2-1980.

(17) **"High-Volume Low-Pressure (HVLP) Spray"** means a coating application method which uses pressurized air at a permanent pressure between 0.1 and 10.0 psig, not to exceed 10 psig, measured at the air cap of the coating application system, ~~and a permanent liquid coating pressure of not more than 50 psig.~~

(18) **"Integral Fuel Tank Coating"** means ~~a coating applied to the interior surfaces of a fuel tank by means of a fill and drain application method and which is formulated to resist the corrosive action of the fuel and moisture.~~

(19)(18) **"Magnetic Tape Storage Disk Coating"** means a coating used on a metal disk which stores data magnetically.

(20)(19) **"Metallic Topcoat"** means a coating which contains more than 5 grams of elemental metal particles per liter of coating, as applied, ~~and is applied to surfaces which require heat reflectivity or protection from high temperatures (400° F) or above.~~

(21)(20) **"Motor Vehicle"** means the same ~~has the same meaning~~ as defined in Section 415 of the Vehicle Code.

(21) **"Powder Coating"** means any material applied as a dry (without a carrier) finely divided solid which, when melted and fused, adheres to the substrate as a paint film.

(22) **"Preservative Oils and Preservative Compounds"** means any material which does not contain solids, and is applied to prevent corrosion or provide lubrication or both.

(22)(23) **"Pretreatment Coating (Wash Primer)"** means any coating which contains a minimum of 0.5 percent acid by weight and which is applied directly to bare metal surfaces and is necessary to provide surface etching and required adhesion for subsequent coatings.

(23)(24) **"Primer"** means a coating applied for purposes of corrosion prevention, protection from the environment, functional fluid resistance and/or adhesion of subsequent coatings. A primer would include a coating which is formulated to be used as a primer

but which, in a specific application, is used as an initial and final coating without subsequent application of a topcoat.

(24) **"Repair"** ~~means recoating portions of a previously coated product due to mechanical damage to the coating following normal painting operations.~~

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

(26) **"Safety Indicating Coating"** means a coating applied to pressurized air cylinders which ~~and is formulated to~~ undergoes a wide color change when exposed to a high temperature.

(27) **"Solar Absorbent Coating"** means a coating formulated for the sole purpose of absorbing solar radiation to produce heat.

(28) **"Solid Film Lubricant"** means a thin film coating ~~consisting of~~ an organic binder system containing as its chief pigment material one or more of the following: molybdenum disulfide, graphite, polytetrafluoroethylene (PTFE) or other solids that act as a dry lubricant between meeting surfaces.

(29) **"Stationary Source"** means the same ~~has the same meaning~~ as defined in Rule 20.1.

(30) **"Stencil Coating"** means any ink or coating which is rolled, brushed or applied by air brush or non-refillable handheld aerosol spray containers onto a template or stamp in order to add identifying letters and/or numbers to metal parts and products.

~~(30)~~(31) **"Touch-up Operation"** means that portion of the 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.

~~(31)~~(32) **"Transfer Efficiency"** means the ratio of the weight of coating solids adhering to the part being coated to the weight of coating solids used in the application process expressed as a percentage.

~~(32)~~(33) **"Volatile Organic Compounds (VOC)"** ~~for the purpose of this rule~~ means any volatile compound of carbon, which may be emitted to the atmosphere during operations or activities subject to this rule, except excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides and carbonates, ammonium carbonate, and exempt compounds, ~~which may be emitted to the atmosphere during the application,~~

drying and curing operations. VOC content of coatings is expressed in grams of VOC per liter of coating, as applied, less water and less exempt compounds. VOC content of cleaning materials is expressed in grams of VOC per liter of material.

(34) "VOC Content Per Volume of Coating, 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:

<u>C_{cvoc}</u>	=	<u>VOC content less water and exempt compounds</u>
<u>W_s</u>	=	<u>weight of volatile compounds including water and exempt compounds</u>
<u>W_w</u>	=	<u>weight of water</u>
<u>W_{es}</u>	=	<u>weight of exempt compounds</u>
<u>V_m</u>	=	<u>volume of material including water and exempt compounds</u>
<u>V_w</u>	=	<u>volume of water</u>
<u>V_{es}</u>	=	<u>volume of exempt compounds</u>

(35) "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:

<u>C_{mvoc}</u>	=	<u>VOC content</u>
<u>W_s</u>	=	<u>weight of volatile compounds including water and exempt compounds</u>
<u>W_w</u>	=	<u>weight of water</u>
<u>W_{es}</u>	=	<u>weight of exempt compounds</u>
<u>V_m</u>	=	<u>volume of material including water and exempt compounds</u>

(33) "VOC Limit" means the VOC content expressed in grams of VOC content per liter of coating, as applied, less water and less exempt VOC, or per liter of surface preparation, stripping and cleanup materials, as applied.

(36) "Wet Fastener Installation Coating" means a primer or sealant applied by dipping, brushing or daubing to fasteners which are installed before the coating is cured.

(d) **STANDARDS**

(1) ~~Transfer Efficiency:~~ Application Equipment

Except as provided in Subsection (b)(2), no coatings shall be applied unless one of the following application methods is used: ~~After April 16, 1991, a person shall not apply more than one gallon each day of coatings to metal parts and products subject to the provisions of this rule except by using properly operated equipment and by means of the following application methods:~~

- (i) Electrostatic spray application, or
- (ii) Flow coat application, or
- (iii) Dip coat application, or
- (iv) High-volume low-pressure (HVLP) spray application, or
- (v) ~~Brush coat, or~~
- ~~(vi)~~(v) Roll coat, or
- (vi) Hand application methods, or

(vii) Other coating application methods that are demonstrated to achieve at least ~~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 prior to use by the Air Pollution Control Officer, 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 metal parts and products.~~

(2) VOC Standards: Limits

Except as provided in Subsections (d)(3), a person shall not apply any coating to metal parts or products any coatings, 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; including any VOC-containing materials added to the original coating supplied by the manufacturer, which exceed the following VOC limits as follows:

Air-Dried or Forced Air-Dried Coatings	340
Baked Coatings	275

(3) VOC Limits for Specialty Coatings

(3) A person shall not apply to metal parts and products any specialty coating of the following specialty coatings, 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; including any VOC-containing materials added to the original coating supplied by the manufacturer which exceeds the applicable VOC limits as follows:

<u>SPECIALTY COATING TYPE</u>	<u>VOC LIMIT EFFECTIVE</u> October 16, 1990	
	<u>AIR-DRIED</u>	<u>BAKED</u>
Extreme High Gloss	420	360
Heat Resistant	420	360
Metallic Topcoat	420	360
Solar Absorbent	420	360
<u>Pretreatment Wash Primer</u>	<u>700</u>	<u>700</u>
<u>High Performance Architectural</u>	<u>750</u>	<u>750</u>

<u>COATING TYPE</u>	<u>VOC LIMIT EFFECTIVE</u>			
	<u>October 16, 1990</u>		<u>January 1, 1994</u>	
	<u>AIR-DRIED</u>	<u>BAKED</u>	<u>AIR-DRIED</u>	<u>BAKED</u>
Pretreatment Coatings (Wash Primer)	780	780	420	360
High Performance Architectural Coatings	750	750	550	550

The requirements of Subsections (d)(2) and (d)(3) may be met using an Alternative Emission Control Plan (AECPP) that has been approved pursuant to Rule 67.1.

(4) Surface Preparation, Stripping, and Cleanup Solvents:

(i) Except as provided in Subsection (d)(5), a A person shall not use VOC-containing materials for surface preparation or cleanup unless: apply solvents with a VOC content in excess of 200 grams per liter of material to metal parts and products for the purpose of stripping of coatings, surface preparation, or cleanup, excluding cleanup of application equipment; or

(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).

(ii) ~~A person shall not use VOC-containing material which has a composite vapor pressure greater than 45 mm Hg at a temperature of 20°C (68°F) for surface preparation, stripping or cleanup, 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.~~

(5) ~~Cleaning up Solvents for of Application Equipment: Effective May 1, 1991,~~

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

(i) The cleaning material contains 200 grams or less of VOC per liter of material; or ~~The equipment is cleaned in a solvent container which is covered when not being accessed, which has a facility for draining cleaned parts and the drained solvent is returned to a closed container, or~~

(ii) The cleaning material has an initial boiling point of 190° C (374° F) or greater; or ~~The equipment is cleaned in a device which totally encloses the component parts during washing, rinsing and draining, or~~

(iii) The cleaning material has a total VOC vapor pressure of 20 mm Hg or less, at 20° C (68° F); or ~~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~~

(iv) The cleaning material is flushed or rinsed through the application equipment in a contained manner that will minimize evaporation into the atmosphere; or ~~The solvent does not exceed a VOC limit of 200 grams per liter of solvent.~~

(v) The application equipment or equipment parts are cleaned in a container which is open only when being accessed for adding, cleaning, or removing application equipment or when cleaning material is being added, provided the cleaned equipment or equipment parts are drained to the container until dripping ceases; or

(vi) A system is used that totally encloses the component parts being cleaned during the washing, rinsing, and draining processes; or

(vii) Other application equipment cleanup 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 prior to use by the Air Pollution Control Officer.

~~(6) Rule 66 shall not apply to any coating operation which is subject to and in compliance with Section (d) of this rule.~~

~~(7)(6) No person shall require for use or specify the application of a coating subject to this rule if such use or application any metal part or product in San Diego County in a manner which results in a violation of this rule. This prohibition subsection shall apply to all any written or oral contracts under the terms of which any, existing or new, under which a coating is applied to any metal part or product at any location within San Diego County.~~

~~(8) A person shall not sell, offer for sale, or apply any coating or cleaning solvent subject to this rule that, after October 16, 1990, was newly reformulated to increase the content of methylene chloride, trichlorofluoromethane (CFC 11), dichlorodifluoromethane (CFC 12), trichlorotrifluoroethane (CFC 113), dichlorotetrafluoroethane (CFC 114) or chloropentafluoroethane (CFC 115).~~

~~(9) After October 16, 1990, a person shall not manufacture, sell, offer for sale, or supply any coating or cleaning material for use in metal parts and 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) ADD-ON CONTROL EQUIPMENT DEVICE

~~(1) In lieu of complying with the provisions of Section Subsections (d)(2), (d)(3), (d)(4), and/or (d)(5) of this rule, a person may use an air pollution control system which: equipment which has been approved in writing by the Air Pollution Control Officer provided that the VOC emissions from such operations and/or materials are reduced such that:~~

~~(i) The air pollution control equipment 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 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 from an emissions collection system by at least 95 percent by weight, and

(2) ~~A person electing to comply with provisions of Section (d) by using air pollution control equipment subject to the requirements of this Section (e) shall submit to the Air Pollution Control Officer for approval an Operation and Maintenance (O&M) plan for the proposed VOC emission control device and emission collection system and receive approval prior to operation of the control equipment. Thereafter, the plan can be modified, with Air Pollution Control Officer approval, as necessary to ensure compliance.~~ Such plan shall:

(i) Identify all key system operating parameters. Key system operating parameters are those necessary to ensure compliance with Subsection (e)(1)(i) (iii), such as temperature, pressure, and/or flow rate; and (e)(1)(ii) 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 written 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 shall implement the plan on approval of the Air Pollution Control Officer Operation and Maintenance plan and shall comply with the provisions of the approved plan thereafter.

(f) RECORDKEEPING

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

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

(A) manufacturer name and identification for each coating or coating component for multi-component coatings, (this includes any components such

as bases, catalysts, thinners or reducers, when supplied in separate containers), surface preparation and cleaning material; and

(B) mix ratio of components; and

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

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

(2)(iii) Maintain daily or monthly records of Daily records showing the type and amount of each coating and VOC used, or each coating component for multi-component coatings used. Maintain records of material additions to dip tanks used for dip coating applications.

(3)(iv) Daily Maintain monthly records showing the type and amounts of solvents used for each stripping, surface preparation and cleaning up material used.

(v) Maintain records of the actual drying temperature, if applicable.

(4) Maintain records of the content of methylene chloride, trichlorofluoromethane (CFC-11) dichlorodifluoromethane (CFC-12), trichlorotrifluoroethane (CFC-113), dichlorotetrafluoroethane (CFC-114) and chloropentafluoroethane (CFC-115) in any coating material 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, surface preparation and cleaning material used; and

(iii) Maintain records sufficient to document continuous compliance with Subsection (e)(1)(iii), such as records of key system operating parameters as approved in the Operation and Maintenance plan.

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

For facilities subject to both Rule 67.18 and Rule 67.3, and that have received approval for an alternative recordkeeping plan to meet the requirements of Rule 67.18, the Air Pollution Control Officer may approve in writing, the use of an alternative recordkeeping plan to meet the recordkeeping requirements of Rule 67.3, provided that such plan provides for an enforceable daily record which has been approved in writing by the Air Pollution Control Officer.

(g) **TEST METHODS** (Effective 10/16/90)

(1) Measurement of heat resistance referenced in Subsection (c)(14) of this rule shall be conducted in accordance with ASTM Standard Test Method D2485-84.

(2) Measurement of coating reflectance referenced in Subsection (c)(16) of this rule shall be conducted in accordance with ASTM Standard Test Method D523-85.

(3) Measurement of elemental metal content referenced in Subsection (c)(20) of this rule shall be conducted and reported in accordance with the South Coast Air Quality Management District's Spectrographic Method 311.

(4) Measurement of pretreatment wash primer acid content referenced in Subsection (c)(24) of this rule shall be conducted in accordance with ASTM Standard Test Method D1613-91.

(5) Perfluorocarbon (PFC) compounds and other exempt 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.

(6) 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).

(7) Measurement of the VOCs content of coatings, surface preparation and cleaning materials subject to Subsections (d)(2), and (d)(3), (d)(4)(i) or (d)(5)(v) of this rule shall be conducted and reported in accordance with EPA Test Method 24 (40 CFR 60, Appendix A) as it exists on (date of adoption). October 16, 1990.

(8) Measurement of the initial boiling point of cleaning and surface preparation materials subject to Subsection (d)(4)(ii) and/or (d)(5)(vi) of this rule shall be conducted

in accordance with ASTM Standard Test Method D1078-86 for distillation range of volatile organic liquids.

(9) Calculation of total VOC vapor pressure for materials subject to Subsection (d)(4)(iii) and/or (d)(5)(vii) of this rule shall be conducted in accordance with the District's "Permit Processing Procedures Regarding Vapor Pressure of VOC Mixture" as it exists on (date of adoption). If the vapor pressure of the liquid mixture exceeds the limits specified in Subsection (d)(4)(iii) and/or (d)(5)(vii), the vapor pressure shall be determined in accordance with ASTM Standard Test Method D2879-83, Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope. The fraction of water and exempt compounds in the liquid phase shall be determined by using ASTM Standard Test Methods D3792-86 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 D2879-83 shall be corrected for partial pressure of water and exempt compounds.

(10) Measurement of solvent losses from alternative application cleanup equipment subject to Subsection (d)(5)(viii) 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).

(11) 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.

(12) 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 performance has not diminished.

~~Measurement of the water content and exempt solvent content shall be conducted and reported in accordance with ASTM Test Methods D 4457-85 and D 3792-86.~~

~~Calculation of the VOC content of coatings less water and exempt solvents shall be performed in accordance with ASTM Standard Practice D 3960-87.~~

~~Measurement of acid content shall be conducted and reported in accordance with ASTM Test Method D 1613-81.~~

~~Measurement of elemental metal content shall be conducted and reported in accordance with the Spectrographic Method used by Pacific Spectrochemical Laboratory, Inc. for the analysis of carbon dust and carbon laminates.~~

~~Measurement of VOCs subject to Section (e) of this rule shall be conducted and reported in accordance with EPA Guidelines for Capture Efficiency Determination, and with EPA Test Methods 18 and 25 (40 CFR 60, Appendix A) as it exists on October 16, 1990.~~

~~Measurement of VOCs subject to Section (e) of this rule shall be conducted and reported in accordance with EPA Test Method 25 (40 CFR 60, Appendix A) as it exists on October 16, 1990.~~

~~Total absolute vapor pressure of VOC containing compounds pursuant to Subsection (d)(4)(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 October 16, 1990. If the vapor pressure of the liquid mixture exceeds the limit specified in Subsection (d)(4)(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.~~