RULE 67.3 METAL PARTS AND PRODUCTS COATING OPERATIONS
(Effective 5/9/79: Rev. Effective 11/1/94)

(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

Any person claiming an exemption pursuant to Subsections (b)(1)(i), (b)(1)(ii), (b)(2)(i) and/or (b)(3)(i) shall maintain monthly purchase and daily usage records of coatings and/or cleaning materials, as applicable, containing volatile organic compounds (VOC's) in order to substantiate the applicability of the claimed exemption. These records shall be maintained 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:

(i) Any coating operation where 20 gallons or less of coatings are applied per consecutive 12-month period.

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

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

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

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

(vi) The application of the following coatings:

(A) Cathode coatings.

(B) Chemical milling maskants.

(C) Magnetic tape storage disks coatings.

(D) Safety indicating coatings.

(E) Solid film lubricants.

(F) Stencil coatings.

(G) Wet fastener installation coatings.

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

(i) Any coating operation which applies one gallon or less of coatings during each day of operation.

(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.

(3) The provisions of Subsections (d)(2) and (d)(3) shall not apply to the following:

(i) Pretreatment wash primers with a VOC content, as applied, of less than 780 grams of VOC per liter of coating, less water and exempt compounds, provided that not more than 500 gallons of all pretreatment wash primers are used at a stationary source in each consecutive 12-month period.

(ii) High performance architectural coatings with a VOC content, as applied, of less than 750 grams of VOC per liter of coating, less water and exempt compounds, used at a stationary source which has continuously maintained a District Permit to Operate for each high performance architectural coating operation since November 1, 1993.

(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-Dried Coating"** means any coating which is not heated above 90° C (194° F) for the purpose of curing or drying.

(3) **"Baked Coating"** means any coating which is cured or dried in an oven where the oven air temperature exceeds 90° C (194° F).

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

(5) **"Chemical Agent Resistant Coating (CARC)"** means a coating applied to military tactical equipment in order to protect the equipment from chemical warfare agents and to conceal the equipment from detection.

(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, and 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, or preservative oils.

(8) **"Coating Operation"** means all steps involved in the application, drying and/or curing of surface coatings, including touch-up operations, 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"** means any of the following compounds or classes of 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), 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.

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

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

(14) **"Heat-Resistant Coating"** means any coating which during normal use must withstand a temperature of at least 204.4°C (400°F).

(15) **"High Gloss Coating"** means any coating which achieves at least 75% reflectance on a 60° meter.

(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 605.2-1992.

(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.

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

(19) **"Metallic Topcoat"** means a coating which contains more than 5 grams of elemental metal particles per liter of coating, as applied.

(20) **"Motor Vehicle"** 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 "** means any material which does not contain solids, and is applied to prevent corrosion or provide lubrication or both.

(23) **"Pretreatment 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.

(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 also 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.

(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 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 of an organic binder system containing as its chief pigment material one or more of the following: molybdenum disulfide, graphite, polytetrafluoroethylene or other solids that act as a dry lubricant between meeting surfaces.

(29) **"Stationary Source"** 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.

(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.

(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.

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

(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:

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

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

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

$$C_m voc = (W_s - W_w - W_{es}) / V_m$$

where:

$C_m voc$	=	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

(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) Application Equipment

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

(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) Roll coat, or

(vi) Hand application methods, or

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

(2) VOC Limits

Except as provided in Subsection (d)(3), a person shall not apply any coating 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:

Air-Dried Coatings	340
Baked Coatings	275

(3) VOC Limits for Specialty Coatings

A person shall not apply any specialty coating 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:

CATEGORY	AIR-DRIED	BAKED
Chemical Agent Resistant	420	420
Heat Resistant	420	360
High Gloss	420	360
High Performance Architectural	420	420
Metallic Topcoat	420	360
Pretreatment Wash Primer	420	420
Solar Absorbent	420	360

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

(4) Surface Preparation and Cleanup Solvents

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

(i) The material contains 200 grams or less of VOC per liter of material; or

(ii) The material has an initial boiling point of 190° C (374° F) or greater; or

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

(5) Cleaning of Application Equipment

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

(i) The cleaning material contains 200 grams or less of VOC per liter of material; or

(ii) The cleaning material has an initial boiling point of 190° C (374° F) or greater; or

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

(iv) The cleaning material is flushed or rinsed through the application equipment in a contained manner that will minimize evaporation into the atmosphere; or

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

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

(vii) Other application equipment cleaning methods that are demonstrated to be as effective as any of the equipment described above in minimizing the emissions of VOC to the atmosphere, provided that the device has been tested and approved prior to use by the Air Pollution Control Officer.

(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 metal part or product at any location within San Diego County.

(7) Emission reduction credits that would otherwise be approvable pursuant to District Rule 26.0 et seq., shall not be granted for that portion of the emission reductions attributable to VOC contents of coatings which are subject to this rule, greater than 420 grams per liter or the applicable VOC content limit of this rule, whichever is less.

(e) **CONTROL EQUIPMENT**

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

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

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

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

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

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

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

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

(f) **RECORDKEEPING**

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

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

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

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

(iii) Maintain daily or monthly records of the amount of each coating or each coating component for multi-component coatings used. Maintain records of material additions to dip tanks used for dip coating applications.

(iv) Maintain daily or monthly records showing the amounts of each surface preparation and cleaning material used.

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

(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 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) Measurement of heat resistance referenced in Subsection (c)(14) of this rule shall be conducted in accordance with ASTM Standard Test Method D2485-91.

(2) Measurement of coating reflectance referenced in Subsection (c)(15) of this rule shall be conducted in accordance with ASTM Standard Test Method D523-89.

(3) Measurement of elemental metal content referenced in Subsection (c)(19) 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)(23) of this rule shall be conducted in accordance with ASTM Standard Test Method D1613-91.

(5) 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.

(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 November 1, 1994.

(7) 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 November 1, 1994.

(8) Measurement of the VOC content of ultraviolet radiation-cured coatings subject to Subsections (d)(2) 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.

(9) 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.

(10) 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 November 1, 1994. 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 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.

(11) 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 November 1, 1994.

(12) 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 November 1, 1994 and in accordance with a protocol approved by the Air Pollution Control Officer.

(13) 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.