RULE 4602 MOTOR VEHICLE AND MOBILE EQUIPMENT COATING OPERATIONS

(Adopted April 11, 1991; Amended September 19, 1991; Amended December 17, 1992; Amended December 15, 1994; Amended June 15, 1995; Amended September 17, 1997; Amended December 20, 2001)

1.0 Purpose

The purpose of this rule is to limit the emissions of volatile organic compounds (VOCs) from the finishing and refinishing of Group I Vehicles and Group II Vehicles and Equipment, and from the organic solvent cleaning, and the storage and disposal of solvents and waste solvent materials associated with such finishing and refinishing. This rule also specifies the administrative and recordkeeping requirements and the test methods for determining the VOC content and emissions and the quality of coatings.

2.0 Applicability

This rule is applicable to any person who applies, supplies, sells, offers for sale, or solicits the application of VOC-containing coatings used in the finishing or refinishing of Group I Vehicles and Group II Vehicles and Equipment, and their parts and components as defined in Section 3.0 of this Rule. This rule shall also apply to the organic solvent cleaning, and the storage and disposal of all solvents and waste solvent materials associated with such finishing and refinishing.

3.0 Definitions

3.1 Adhesion Promoter: a coating applied over both an existing non-sanded topcoat, and the coated area immediately adjacent to the non-sanded topcoat, to promote the adhesion of a subsequent topcoat. No topcoat, primer, primer sealer, or primer surfacer shall be classified as an adhesion promoter.

3.2 Aerosol Product: a hand-held, non-refillable container that expels a pressurized solvent-containing product by means of a propellant-induced force.

3.3 Anti-glare/safety Coatings: a coating which minimizes light reflection for safety purposes.

3.4 Application Equipment: a device, including, but not limited to, a spray gun, brush, and roller, used to apply adhesives, coatings, or inks.

3.5 Basecoat: a pigmented topcoat which is the first topcoat applied as part of a multi-stage topcoat system.

3.6 Bright Metal Trim Repair Coating: a coating applied directly to chrome-plated metal surfaces for the purpose of appearance.

3.7 Camouflage Coating: a coating applied on motor vehicles to conceal such vehicles from detection.

3.8 Catalyst: a substance whose presence enhances the reaction between chemical compounds.

3.9 Clearcoat: a topcoat which contains no pigments or only transparent pigments, and which is the final topcoat applied as a part of a multi-stage topcoat system.

3.10 Coating: a material applied onto or impregnated into a substrate for protective, decorative, or functional purposes. Such materials include, but are not limited to, paints, varnishes, sealers, and stains.

3.11 Color Match: the ability of a new coating to blend into an existing coating so that color differences are not visible.

3.12 Composite Vapor Pressure: the sum of the partial pressure of each pure volatile organic compound in a blended solvent. VOC composite partial pressure is calculated as follows:

$$PPc = \frac{\sum_{i=1}^{n} (Wi)(VPi) / MWi}{\frac{Ww}{MWw} + \sum_{e=1}^{n} \frac{We}{MWe} + \sum_{i=1}^{n} \frac{Wi}{MWi}}$$

Where:

W_i	=	Weight of the "i"th VOC compound, in grams
W_w	=	Weight of water, in grams
W_e	=	Weight of the "e"th exempt compound, in grams
MW_e	=	Molecular weight of the "e"th exempt VOC compound, in grams per gram-mole
MW_i	=	Molecular weight of the "i"th VOC compound, in grams per gram-mole
MW_w	=	Molecular weight of water, in grams per gram-mole
Pp_c	=	VOC composite vapor pressure at 20°C, in mm Hg
VP_i	=	Vapor pressure of the "i"th VOC compound at 20°C, in mm Hg

3.13 Cured Coating: a coating that is dry to the touch.

3.14 Degreaser: a tank, tray, drum or other container in which objects to be cleaned are exposed to a solvent or solvent vapor in order to remove contaminants. The objects to be cleaned include, but are not limited to, parts, products, tools, machinery, and equipment. An enclosed spray application equipment cleaning system is not a degreaser.

3.15 Dissolver: an organic solvent that is added to an adhesive, coating, or ink in order to melt or to liquefy solid particles.

3.16 Elastomeric Materials: a coating which is specifically formulated for adhesion to a flexible substrate, and applied over coated or uncoated flexible plastic substrates.

3.17 Electrostatic Application: a method of spray application of coatings where an electrostatic potential is created between the part to be coated and the paint particles.

3.18 Exempt Compound: an organic compound not classified as a volatile organic compound (VOC), as listed in the definition of volatile organic compound in Rule 1020 (Definitions).

3.19 Finishing: the coating of incomplete vehicles, their parts and components, or mobile equipment for which the original coating was not applied from an Original Equipment Manufacturing (OEM) plant coating assembly line.

3.20 Grams of VOC per Liter of Coating Excluding Water and Exempt Compounds: the weight of VOC per combined volume of VOC and coating solids and can be calculated by the following equation:

$$\text{Grams of VOC per Liter of Coating Excluding Water and Exempt Compounds} = \frac{Ws - Ww - Wec}{Vm - Vw - Vec}$$

Where:

Ws	=	weight of volatile compounds, in grams
Ww	=	weight of water, in grams
Wec	=	weight of exempt compounds, in grams
Vm	=	volume of material, in liters
Vw	=	volume of water, in liters
Vec	=	volume of exempt compounds, in liters

3.21 Grams of VOC per liter of Material: the weight of VOC per volume of material and can be calculated by the following equation:

$$\text{Grams of VOC per Liter of Material} = \frac{Ws - Ww - Wec}{Vm}$$

Where:

Ws	=	weight of volatile compounds, in grams
Ww	=	weight of water, in grams
Wec	=	weight of exempt compounds, in grams
Vm	=	volume of material, in liters

3.22 Graphic Arts Operation: the application of logos, letters, numbers, or graphics to a painted surface with or without the use of a template.

3.23 Groundcoat: a primer sealer which may be tinted and is used to even out or mask previous coatings that may otherwise show through the new multi-stage topcoat system, and is applied prior to the basecoat.

3.24 Group I Vehicle: passenger cars, large/heavy duty truck cabs and chassis, light and medium duty trucks and vans, golf carts and motorcycles.

3.25 Group II Vehicles and Equipment: buses and mobile equipment.

3.26 Heat Resistant Coating: coatings which, during normal use, must withstand temperatures of at least 400°F.

3.27 High-Volume, Low-Pressure (HVLP) Spray Equipment: equipment used to apply materials by means of a spray gun which is designed and intended to be operated, and which is operated, between 0.1 and 10.0 psig of air atomizing pressure.

3.28 Impact Resistant Coating: any coating which is applied to a rocker panel for the purpose of chip resistance to road debris.

3.29 Large/Heavy Duty Trucks: any truck having a manufacturer's gross vehicle weight rating of over 10,000 pounds.

3.30 Light and Medium Duty Trucks and Vans: any truck or van having a manufacturer's gross vehicle weight rating of 10,000 pounds or less.

3.31 Liquid Leak: a visible solvent leak from a container at a rate of more than three drops per minute, or a visible liquid mist.

3.32 Maintenance Cleaning: the cleaning of tools, forms, molds, jigs, machinery, and equipment, and the cleaning of work areas where maintenance or manufacturing occurs.

3.33 Manufacturing Process: the process of making goods or articles by hand or by machine.

3.34 Metallic/Iridescent Topcoat: any single stage coating which contains more than 0.042 lb/gal of metal or iridescent particles, as applied, where such particles are visible in the dried film.

3.35 Midcoat: a semi-transparent topcoat which is the middle topcoat applied as part of a multi-stage topcoat system.

3.36 Mobile Equipment: any equipment which may be drawn or capable of being used and/or driven on rails or a roadway including, but not limited to, trains, railcars, truck trailers, camper shells, mobile cranes, bulldozers, street cleaners, and implements of husbandry or agriculture.

3.37 Multi-color Coating: a coating that exhibits more than one color when applied from a single application.

3.38 Multi-Stage Topcoat System: A topcoat system composed of either a basecoat/clearcoat, a basecoat/midcoat/clearcoat, a groundcoat/basecoat/clearcoat, or a groundcoat/basecoat/midcoat/clearcoat. A multi-stage topcoat system may be either a solid or metallic/iridescent color.

The VOC content of a basecoat/clearcoat coating system shall be calculated according to the following formula:

$$VOC_{MS} = \frac{VOC_{bc} + 2\,VOC_{cc}}{3}$$

The VOC content of a 3-Stage coating system shall be calculated according to either of the two following formulas:

$$VOC_{MS} = \frac{VOC_{bc} + VOC_{mc} + 2\,VOC_{cc}}{4}$$

$$VOC_{MS} = \frac{VOC_{gc} + VOC_{bc} + 2\,VOC_{cc}}{4}$$

The VOC content of a 4-Stage coating system shall be calculated according to the following formula:

$$VOC_{MS} = \frac{VOC_{gc} + VOC_{bc} + VOC_{mc} + 2\,VOC_{cc}}{5}$$

Where:
VOC_{MS} is the average of the VOC content, and used to determine compliance with the standards in Section 5.0.
VOC_{gc} is the VOC content, of a pigmented groundcoat, basecoat or tinted primer sealer.
VOC_{bc} is the VOC content, of a pigmented basecoat or translucent midcoat.
VOC_{mc} is the VOC content, of a translucent midcoat or tinted clearcoat.
$2VOC_{cc}$ is two times the VOC content, of a transparent clearcoat.

3.39 Non-Absorbent Container: a container made of non-porous material that does not allow the migration of solvents through it.

3.40 Non-Atomized Solvent Flow: solvents in the form of a liquid stream without the introduction of any propellant.

3.41 Non-Leaking Container: a container without liquid leak.

3.42 Organic Solvent: the same as "Solvent."

3.43 Organic Solvent Cleaning: as defined in Rule 4663 (Organic Solvent Cleaning, Storage, and Disposal).

3.44 Precoat: any coating which is applied to bare metal to deactivate the metal surface prior to the application of a compliant primer surfacer for corrosion resistance and adhesion. A precoat dries by oxidation or chemical polymerization.

3.45 Pretreatment Wash Primer: any coating which contains a minimum of one-half (0.5) percent acid by weight, is necessary to provide surface etching, and is applied directly to bare metal surfaces to provide corrosion resistance and adhesion.

3.46 Primer: any coating applied prior to the application of a topcoat for the purpose of corrosion resistance and adhesion of the topcoat.

3.47 Primer Sealer: any coating applied for the purpose of sealing the underlying metal or coating system prior to the application of a topcoat for corrosion resistance, adhesion of the topcoat, color uniformity, and to promote the ability of an undercoat to resist penetration by the topcoat.

3.48 Primer Surfacer: any coating applied prior to the application of a topcoat for the purpose of corrosion resistance, adhesion of the topcoat, and which promotes a uniform surface by filling in surface imperfections.

3.49 Propellant: any gas, including air, in a pressure container for expelling the contents when the pressure is released.

3.50 Reducer/Thinner: the solvent used to thin a coating.

3.51 Refinishing: any coating of vehicles, their parts and components, or mobile equipment, including partial body collision repairs, for the purpose of protection or beautification and which is subsequent to the original coating applied at an Original Equipment Manufacturing (OEM) plant coating assembly line.

3.52 Repair Cleaning: a solvent cleaning operation or activity carried out during a repair process.

3.53 Repair Process: the process of returning a damaged object or an object not operating properly to good condition.

3.54 Rubberized Asphaltic Underbody Coating: a coating applied to wheel wells, the inside of door panels or fenders, the underside of a trunk or hood, or the underside of the motor vehicle itself, for the purpose of sound deadening or protection.

3.55 Solvent: as defined in Rule 4663 (Organic Solvent Cleaning, Storage, and Disposal).

3.56 Solvent Flushing: the use of a solvent to remove uncured adhesives, uncured inks, uncured coatings, or contaminants from the internal surfaces and passages of equipment by flushing solvent, by a non-atomized solvent flow, through the equipment.

3.57 Specialty Coatings: unique coatings and compliant coatings with additives which are necessary due to unusual job performance requirements. Said coatings include, but are not limited to, adhesion promoters, uniform finish blenders, elastomeric materials, gloss flatteners, bright metal trim repair, heat resistant, water hold-out,

weld-thru, impact resistant, rubberized asphaltic underbody, anti-glare/safety, and multi-color coatings.

3.58 Stationary Source: as defined in Rule 2201 (New and Modified Stationary Source Review Rule).

3.59 Stripping: the use of solvent to remove material such as cured adhesives, cured inks, cured or dried paint, cured or dried paint residue or temporary protective coating.

3.60 Surface Preparation: The removal of contaminants from a surface prior to the application of coatings, inks, or adhesives or before proceeding to the next step of a manufacturing process.

3.61 Temporary Protective Coating: a coating applied for the purpose of protecting areas adjacent to that being painted from overspray. The temporary protective coating is removed after primer or topcoat application.

3.62 Thinner: a solvent that is added to an adhesive, coating, or ink to make it more fluid.

3.63 Topcoat: any single-stage coating applied over a primer, primer surfacer, or an original OEM finish for the purpose of protection or appearance.

3.64 Touch-up Coating: a coating applied by brush, air brush or hand-held, non-refillable aerosol cans to repair minor surface damage and imperfections.

3.65 Transfer Efficiency: a ratio of the amount of coating solids adhering to the object being coated to the total amount of coating solids used in the application process, expressed as a percentage.

3.66 Uniform Finish Blenders: a coating which is applied in spot repairs for the purpose of blending a paint overspray area of a repaired topcoat to match the appearance of an adjacent existing topcoat.

3.67 Utility Bodies: a special purpose service compartment or unit that will be bolted, welded, or affixed onto an existing cab and chassis. The compartment may serve as storage for equipment or parts.

3.68 Viscosity Reducer: an organic solvent which is added to an adhesive, coating or ink to make it more fluid.

3.69 Volatile Organic Compound (VOC): as defined in Rule 1020 (Definitions).

3.70 Waste Solvent Material: any solvent which may contain dirt, oil, metal particles, sludge, and/or waste products, or wiping material containing VOCs including, but not limited to, paper, cloth, sponge, rag, or cotton swab used in organic solvent cleaning.

3.71 Water Hold-out Coating: a coating applied to the interior cavity areas of doors, quarterpanels and rocker panels for the purpose of corrosion resistance to prolonged water exposure.

3.72 Weld-Thru Coating: a coating applied to metal immediately prior to welding to provide corrosion resistance.

3.73 Wipe Cleaning: a solvent cleaning activity performed by hand rubbing an absorbent material such as a rag, paper, sponge, brush, or cotton swab containing solvent.

4.0 Exemptions

4.1 The provisions of this rule shall not apply to the following source operations:

4.1.1 Touch-up coating operations as defined in Section 3.0 of this rule.

4.1.2 Graphic art operations as defined in Section 3.0.

4.1.3 Coating of radiators.

4.1.4 Stripping of cured coatings, except the stripping of such materials from spray application equipment.

4.2 Coating operations and/or stationary sources exempt from this rule must comply with all other applicable District rules.

5.0 Requirements

5.1 Effective on the dates specified, a person shall not finish or refinish Group I Vehicles and their parts and components, or Group II Vehicles and Equipment and their parts and components where color match is required, using any coating with a VOC content in excess of the following limits, expressed as grams of VOC per liter (or pounds per gallon) of coating as applied, excluding water and exempt compounds (as defined in Section 3.0):

Table 1 - VOC Content Limits, where color match is required

	Effective 7/1/91		Effective 1/1/93		Effective 7/1/95	
Pretreatment Wash Primer	780 g/l	6.5 lbs/gal	780 g/l	6.5 lbs/gal	780 g/l	6.5 lbs/gal
Precoat	780	6.5	780	6.5	600	5.0
Primer/Primer Surfacer	720	6.0	340	2.8	250	2.1
Primer Sealer	720	6.0	420	3.5	420	3.5
Topcoat	720	6.0	600	5.0	420	3.5
Metallic/Iridescent Topcoat	720	6.0	600	5.0	520	4.3
Multi-Stage Topcoat System					540	4.5

5.2 Effective on the dates specified, a person shall not finish or refinish Group II Vehicles and Equipment or their parts and components where color match is not required, using any coating with a VOC content in excess of the following limits expressed as grams of VOC per liter (or pounds per gallon) of coatings applied, excluding water and exempt compounds (as defined in Section 3.0):

Table 2 - VOC Content Limits, where color match is not required

	Effective 7/1/91		Effective 1/1/93		Effective 7/1/95	
Pretreatment Wash Primer	780 g/l	6.5 lbs/gal	780 g/l	6.5 lbs/gal	780 g/l	6.5 lbs/gal
Precoat	780	6.5	780	6.5	600	5.0
Primer/Primer Surfacer	340	2.8	340	2.8	250	2.1
Primer Sealer					340	2.8
Topcoat	420	3.5	420	3.5	420	3.5
Metallic/Iridescent Topcoat	650	5.4	420	3.5	420	3.5
Camouflage	420	3.5	420	3.5	420	3.5

5.3 In lieu of complying with the requirements in Section 5.1 and 5.2, an owner or operator may operate a VOC emission collection and control system that controls the emissions from the source operation and that meets the requirements of Section 5.4.

5.4 Control System Requirements

The air pollution control equipment shall be operated with an overall capture and control efficiency of 81% or greater on a mass basis as determined in Section 6.5. The control equipment shall be under District permit. In no case shall compliance through the use of this section result in VOC emissions in excess of the VOC emissions which would result from compliance with Sections 5.1 and 5.2.

5.4.1 The minimum required control efficiency of an emission control system at which an equivalent or greater level of VOC reduction will be achieved shall be calculated by the following equation:

$$CE = [1 - \frac{VOC_{LWc}}{VOC_{LWn,Max}} \times \frac{1 - VOC_{LWn,Max} / D_{n,Max}}{1 - VOC_{LWc} / D_c}] \times 100$$

Where:

CE	=	Control Efficiency, percent
VOC_{LWc}	=	VOC Limit less water and less exempt compounds
$VOC_{LWn,Max}$	=	Maximum VOC content of noncompliant coating used in conjunction with a control device, less water and less exempt compounds
$D_{n,Max}$	=	Density of solvent, reducer, or thinner contained in the noncompliant coating, containing the maximum VOC content of the multi-component coating
D_c	=	Density of corresponding solvent, reducer, or thinner used in the compliant coating system.

5.5 Precoat Usage Limitation Requirements

Precoat use shall not exceed the amount of compliant primer surfacer used. Precoat use shall be limited to a single application per vehicle. Precoats shall not be used to fill in surface imperfections.

5.6 Coating Application Methods

A person shall not apply any coating to any Group I Vehicle or Group II Vehicles and Equipment, or their parts and components, unless one of the following methods is used:

5.6.1 Brush, dip, or roll coating operated in accordance with manufacturer's recommendations,

5.6.2 Electrostatic application equipment operated in accordance with manufacturer's recommendations, or

5.6.3 High-Volume, Low-Pressure (HVLP) spray equipment operated in accordance with the manufacturer's recommendations.

5.6.3.1 For HVLP spray guns manufactured prior to January 1, 1996, the end user shall demonstrate that the gun meets HVLP spray equipment standards. Satisfactory proof will be either in the form of manufacturer's published technical material or by a demonstration using a certified air pressure tip gauge measuring

the air atomizing pressure dynamically at the center of the air cap and at the air horns.

5.6.3.2 A person shall not sell or offer for sale for use within the District any HVLP spray gun without a permanent marking denoting the maximum inlet air pressure in psig at which the gun will operate within the parameters specified in Section 3.0.

5.6.4 Any other coating application method which is demonstrated to the APCO to be capable of achieving at least 65 percent transfer efficiency. The transfer efficiency shall be determined in accordance with the SCAQMD method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User," May 24, 1989, as contained in Section 6.5. Prior written approval from the APCO shall be obtained for each coating application method to be used pursuant to Section 5.6.4.

5.7 Surface Preparation and Evaporative Loss Minimization

A person shall:

5.7.1 Effective September 1, 1995, use solvents that comply with the following VOC content limits:

5.7.1.1 Cleanup surface preparation solvents shall not exceed 72 g/l (0.6 lb/gal). This limit shall not apply to spot surface preparation solvent applied from a hand-held spray bottle for the removal of road tar;

5.7.1.2 Solvents used for surface preparation of plastic substrates shall not exceed 780 g/l (6.5 lb/gal).

5.7.2 Use closeable containers for the storage of solvent-laden cloth or paper used for surface preparation and cleanup. Containers shall be nonabsorbent and shall remain closed at all times following the disposal of solvent-laden cloth and paper;

5.7.3 Store fresh or spent solvents, coatings, adhesives, catalysts, or thinners in closed containers;

5.7.4 Not use VOC-containing materials for spray equipment cleanup unless an enclosed system or equipment proven to be equally effective is used for cleaning. An enclosed system must totally enclose spray guns, cups, nozzles, bowls, and other parts during washing, rinsing and draining procedures. Solvents used for cleanup of coating application equipment shall not exceed 950 g/l (7.9 lb/gal) and a composite vapor pressure equal to or less than 35 mm Hg at a temperature of 68^{o}F (20^{o}C); and

5.7.5 Not use any temporary protective coating with a VOC content greater than 60 g/l (0.5 lb/gal) of material (as defined in Section 3.0).

5.7.6 Section 5.7 shall remain in effect through November 14, 2002.

5.8 Organic Solvent Cleaning, Storage and Disposal Requirements

5.8.1 Section 5.8 shall be effective on and after November 15, 2002, unless otherwise indicated.

5.8.2 Effective November 15, 2002, through November 14, 2003, an owner or operator shall not use organic solvents for cleaning operations that exceed the VOC content limits and composite partial pressure limits specified as being "Effective November 15, 2002 through November 14, 2003" in Table 3.

Table 3 – VOC Limits for Organic Solvents Used in Cleaning Operations

Type of Solvent Cleaning Operation	Effective November 15, 2002 through November 14, 2003		Effective November 15, 2003
	VOC Content Limit Grams of VOC/liter of material (lb/gal)	VOC Composite Partial Pressure Limit, mm Hg at 20°C (68°F)	VOC Content Limit Grams of VOC/liter of material (lb/gal)
A. Product Cleaning During Manufacturing Process or Surface Preparation for Coating Application	70 (0.58)	no limit	50 (0.42)
B. Repair and Maintenance Cleaning	50 (0.42)	no limit	50 (0.42)
C. Cleaning of Coating Application Equipment	950 (7.9)	35	550 (4.6)

5.8.3 Effective on and after November 15, 2003, an owner or operator shall not use organic solvents for cleaning operations that exceed the VOC content limits specified as being "Effective November 15, 2003" in Table 3. On and after November 15, 2003, the composite partial pressure of solvents used for cleaning operations will not be regulated.

5.8.4 The provisions of Table 3 shall not apply to the cleaning in laboratory tests and analyses, or bench scale or research and development projects.

5.8.5 The provisions of Table 3, subsection B, shall not apply to spot surface preparation solvent applied from a hand-held spray bottle for the removal of road tar.

5.8.6 The provisions of Table 3 shall not apply to the solvents used for surface preparation of plastic substrates provided that the cleaning solvent used does not exceed 100 grams of VOC per liter.

5.8.7 The provisions of Sections 5.8.9 through 5.8.11 of this rule shall only apply to an owner or operator that uses any solvent containing greater than 50 grams of VOC per liter of material for organic solvent cleaning.

5.8.8 An owner or operator shall not use any temporary protective coating with a VOC content greater than 60 g/l (0.5 lb/gal).

5.8.9 Cleaning activities that use solvents shall be performed by one or more of the following methods:

5.8.9.1 Wipe cleaning; or

5.8.9.2 Application of solvent from hand-held spray bottles from which solvents are dispensed without a propellant-induced force; or

5.8.9.3 Non-atomized solvent flow method in which the cleaning solvent is collected in a container or a collection system which is closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container; or

5.8.9.4 Solvent flushing method in which the cleaning solvent is discharged into a container that is closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container. The discharged solvent from the equipment must be collected into containers without atomizing into the open air. The solvent may be flushed through the system by air or hydraulic pressure, or by pumping.

5.8.10 Solvent shall not be atomized into the open air unless it is vented to a VOC emission control system that complies with Section 5.4. This provision shall not apply to the cleaning of nozzle tips of automated spray equipment systems, except for robotic systems, and cleaning with spray bottles or containers described in Section 5.8.9.2.

5.8.11 An owner or operator shall not use VOC-containing materials to clean spray equipment used for the application of coatings, adhesives, or ink,

unless an enclosed system or equipment that is proven to be equally effective at controlling emissions is used for cleaning. If an enclosed system is used, it must totally enclose spray guns, cups, nozzles, bowls, and other parts during washing, rinsing and draining procedures, and it must be used according to the manufacturer's recommendations and must be closed when not in use.

5.8.12 An owner or operator shall store or dispose of fresh or spent solvents, waste solvent cleaning materials such as cloth, paper, etc., coatings, adhesives, catalysts, and thinners in closed, non-absorbent and non-leaking containers. The containers shall remain closed at all times except when depositing or removing the contents of the containers or when the container is empty.

5.9 Prohibition of Sale

A person shall not offer for sale or sell within the District, any coating if such product is prohibited by any of the provisions of this rule. This prohibition shall apply to the sale of any coating which will be applied at any physical location within the District.

5.10 Prohibition of Specification

No person shall solicit or require for use or specify the application of a coating on a Group I Vehicle or Group II Vehicle and Equipment, or their parts and components, if such use or application results in a violation of the provisions of this rule. The prohibition shall apply to all written or oral contracts under the terms of which any coating which is subject to the provisions of this rule is to be applied to any vehicle, mobile equipment or part or component at any physical location within the District.

5.11 Specialty Coating Requirements

5.11.1 A person shall not use any specialty coating with a VOC content in excess of 840 g/l (7.0 lbs/gal), as applied, excluding water and exempt compounds (as defined in Section 3.0). Where use of specialty coatings, except anti-glare/safety coatings, exceeds one (1) gallon per day, the use of such coatings shall not exceed five (5.0) percent of all coatings applied on a monthly basis.

5.11.2 Upon request by the APCO, coating manufacturers shall provide sufficient technical data to verify that products meet the specialty coating definition.

5.12 Utility Body Coating Requirements

5.12.1 A utility body coating operation which coats less than 20 utility bodies per day in which the coating applied to the utility bodies must match that of

the vehicles upon which they will be mounted, shall not use any coating with a VOC content in excess of the standards set forth in section 5.1.

5.12.2 All utility body coating operations not subject to section 5.12.1 shall use coatings meeting the requirements of section 5.2.

6.0 Administrative Requirements

The records kept in compliance with Sections 6.1, 6.2, and 6.3 shall be retained for a minimum of five (5) years and made available for inspection by the APCO upon request.

6.1 Recordkeeping Requirements for Coatings

Any person who applies coatings subject to Section 5.1 or Section 5.2 of this rule shall maintain records on a daily basis, and have available at all times, a current list of coatings in use which provides all of the coating data necessary to evaluate compliance, including the following information as applicable:

6.1.1 the number (quantity) of each type of vehicle coated. Vehicle types are the following:

6.1.1.1 Group I Vehicle,
6.1.1.2 Group II Vehicle and Equipment with color match, or
6.1.1.3 Group II Vehicle and Equipment with no color match.

6.1.2 specific coatings used on each vehicle or equipment, i.e. pretreatment wash primer, precoat, primer/primer surfacer, primer sealer, topcoat, metallic/iridescent and multi-stage topcoat system coatings used;

6.1.3 mix ratios, by volume, of components added to the coating material prior to application and the volume of coatings as applied;

6.1.4 purchase and usage records showing the date, type, and volume of each specific solvent or reducer used;

6.1.5 the quantity and mix ratio of each specialty coating applied;

6.1.6 VOC content of each coating as applied.

6.2 Recordkeeping Requirements for Cleaning Solvents

Effective on and after November 15, 2002, an owner or operator who uses solvents subject to Section 5.8 of this rule shall maintain the following records, and have available at all times, a current list of solvents in use which provides all of the data necessary to evaluate compliance, including the following information as applicable:

6.2.1 Keep a copy of the manufacturer's product data sheet or material safety data sheet of the solvents used for organic solvent cleaning activities.

6.2.2 Maintain a current list of solvents that are being used for organic solvent cleaning activities. The list shall include the following information:

6.2.2.1 The name of the solvent and its manufacturer's name.

6.2.2.2 The VOC content of the solvent expressed in grams/liter or lb/gallon.

6.2.2.3 When the solvent is a mixture of different materials that are blended by the operator, the mix ratio of the batch would be recorded in order to determine compliance with the specified limits of VOC content and/or VOC composite partial pressure, as applied.

6.2.2.4 Through November 14, 2003, the composite partial pressure of the solvent expressed in mm Hg at 20°C (68°F).

6.2.2.5 The type of cleaning activity for each solvent that is being used in accordance with the applicable cleaning category specified in Table 3 of this rule.

6.3 Recordkeeping for Emission Control Systems

Any person using an emission control system as a means of complying with the provisions in Section 5.4 shall maintain daily records of key system operating parameters which will demonstrate continuous operation and compliance of the emission control system during periods of emission producing activities. Key system operating parameters are those necessary to ensure compliance with VOC limits. The parameters include, but are not limited to, temperatures, pressures, and flowrates.

6.4 Compliance Statement Requirement

6.4.1 The manufacturer of coatings subject to this rule shall include a designation of VOC as supplied, including coating components, expressed in grams per liter or pounds per gallon, excluding water and exempt compounds, on material safety data sheets or product data sheets.

6.4.2 Effective on and after November 15, 2002, manufacturers of any solvents subject to this rule shall indicate on the solvent container, or on a separate product data sheet or material safety data sheet, the name of the solvent, manufacturer's name, the VOC content, density, and VOC composite partial vapor pressure, as defined in the rule, of the solvent, as supplied. The VOC content and VOC composite vapor pressure shall be expressed in units of gm/liter or lb/gallon and mm Hg at 20°C (68°F), respectively.

6.5 Test Methods

6.5.1 Analysis of Samples: Samples of VOC as specified in this rule shall be analyzed by USEPA Method 24 and exempt halogenated compounds shall be tested by CARB Method 432.

6.5.2 Determination of Emissions: Emissions of VOC shall be measured by USEPA Method 25, 25a, or 25b, as applicable, and exempt halogenated compounds shall be tested by CARB Method 422.

6.5.3 The qualification of coating as a metallic/iridescent topcoat shall be determined by South Coast Air Quality Management District Method 311, "Analysis of Percent Metal in Metallic Coatings by Spectrographic Method."

6.5.4 Acid Content: Measurement of acid content of pre-treatment wash primers shall be conducted and reported in accordance with the latest revision of ASTM D1613 Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates used in Paint, Varnish, Lacquer, and Related Products, December, 1986.

6.5.5 Determination of emissions of VOC from spray gun cleaning systems shall be made using South Coast Air Quality Management District "General Test Method for Determining Solvent Losses from Spray Gun Cleaning Systems," October 3, 1989.

6.5.6 Capture efficiency shall be determined according to USEPA's technical document, "Guidelines for Determining Capture Efficiency," January 9, 1995.

6.5.7 The transfer efficiency of alternative coating application methods shall be determined in accordance with the SCAQMD method “Spray Equipment Transfer Efficiency Test Procedure for Equipment User,” May 24, 1989.

6.6 Multiple Test Methods

When more than one test method or set of test methods is specified for any testing, a violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of this rule.

6.7 Version of Test Methods

All ASTM test methods referenced in Section 6.0 are the most recently EPA-approved version that appears in the Code of Federal Regulations as Materials Approved for Incorporation by Reference.

This page intentionally blank.