

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

RULE 1151 - MOTOR VEHICLE AND MOBILE EQUIPMENT NON-ASSEMBLY LINE COATING OPERATIONS

(Adopted July 8, 1988)(Amended May 5, 1989; March 2, 1990; June 28, 1990; November 2, 1990; December 7, 1990; August 2, 1991; September 6, 1991; December 9, 1994; March 8, 1996; June 13, 1997; December 11, 1998; December 2, 2005)

The provisions of subdivisions (a) through (i) of this rule shall sunset on June 30, 2008, and subdivisions (a) through (i) of Appendix A shall become effective on July 1, 2008.

(a) Purpose and Applicability

The purpose of this rule is to reduce emissions of volatile organic compounds (VOC) and stratospheric ozone-depleting and global-warming compounds from coatings applied on Group I Vehicles and Equipment and Group II Vehicles, as defined in this rule, and their parts and components.

This rule applies to all commercial and non-commercial coating applications to Group I Vehicles and Equipment and Group II Vehicles and their parts and components at facilities involved in the non-assembly line production, modification, or refinishing of motor vehicles and mobile equipment. Commercial and non-commercial facilities with coating operations considered within the scope of this rule include, but are not limited to: autobody repair/paint shops, production autobody paint shops, new car dealer repair/paint shops, fleet operator repair/paint shops, custom-made car fabrication facilities, truck body-builders, and residences. Motor vehicle assembly-line coating operations are subject to Rule 1115 - Motor Vehicle Assembly Line Coating Operations, whereas the application of coatings on a vehicle which is not self-propelled, such as trailers and mobile homes, are subject to other source specific rules contained in Regulation XI.

(b) Definitions

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

- (1) ADHESION PROMOTER is 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.

- (2) AEROSOL COATING PRODUCT is a pressurized coating product containing pigments or resins that dispenses product ingredients by means of a propellant, and is packaged in a disposable can for hand-held application, or for use in specialized equipment for ground traffic/marketing applications.
- (3) ANTI-GLARE SAFETY COATING is a coating formulated to eliminate glare for safety purposes on interior surfaces of a vehicle and which shows a reflectance of 25 or less on a 60° gloss meter.
- (4) BASECOAT is a pigmented topcoat which is the first topcoat applied as part of a multistage topcoat system.
- (5) BASECOAT/CLEARCOAT TOPCOAT SYSTEM is a topcoat system composed of a basecoat portion and a clearcoat portion. The VOC content of a basecoat/clearcoat topcoat system shall be calculated according to the following formula:

$$\text{VOC}_{\text{ms}} = \frac{\text{VOC}_{\text{bc}} + 2 \text{VOC}_{\text{cc}}}{3}$$

Where:

VOC_{ms} is the composite VOC content, less water and less exempt compounds to be used for compliance determination under the multistage topcoat system coating category.

VOC_{bc} is the VOC content, less water and less exempt compounds as applied, of any given basecoat.

2VOC_{cc} is two times the VOC content, less water and less exempt compounds as applied, of any given clearcoat.

- (6) BRIGHT METAL TRIM REPAIR COATING is a coating applied directly to chrome-plated metal surfaces for the purpose of appearance.
- (7) BUS is any motor vehicle having a manufacturer's gross vehicle weight of more than 8600 pounds and which is designed primarily for the transportation of persons, and having a design capacity of over 12 persons.
- (8) CLEARCOAT is a topcoat which contains no pigments or only transparent pigments and which is the final topcoat applied as a part of a multistage topcoat system.
- (9) COATING is a material which is applied to a surface and which forms a film in order to beautify and/or protect such surface.

- (10) ELASTOMERIC MATERIALS are coatings which are specifically formulated and applied over coated or uncoated flexible plastic substrates for the purpose of adhesion.
- (11) ELECTROSTATIC APPLICATION is a method of applying coatings whereby the atomized coating droplets are charged and subsequently deposited on the substrate by electrostatic attraction.
- (12) END-USER is a person who applies coatings.
- (13) EXEMPT COMPOUNDS (See Rule 102-Definition of Terms).
- (14) GENERAL TOPCOAT is any type of topcoat except metallic/iridescent topcoat, and any topcoat applied as part of a multistage topcoat system.
- (15) GRAMS OF VOC PER LITER OF COATING LESS WATER AND LESS EXEMPT COMPOUNDS, is the weight of VOC per combined volume of VOC and coating solids and shall be calculated by the following equation:

$$\text{Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Where: W_s = weight of volatile compounds in grams
 W_w = weight of water in grams
 W_{es} = weight of exempt compounds in grams
 V_m = volume of material in liters
 V_w = volume of water in liters
 V_{es} = volume of exempt compounds in liters

- (16) GRAMS OF VOC PER LITER OF MATERIAL is the weight of VOC per volume of material and shall be calculated by the following equation:

$$\text{Grams of VOC per Liter of Material} = \frac{W_s - W_w - W_{es}}{V_m}$$

Where: W_s = weight of volatile compounds in grams
 W_w = weight of water in grams
 W_{es} = weight of exempt compounds in grams
 V_m = volume of material in liters

- (17) GROUP I VEHICLES AND EQUIPMENT are large-sized trucks, buses, and mobile equipment.
- (18) GROUP II VEHICLES are passenger cars, small-sized trucks and vans, medium-sized trucks and vans, motor homes, and motorcycles.
- (19) HIGH-VOLUME, LOW-PRESSURE (HVLP) SPRAY is an equipment used to apply coatings by means of a spray gun which is designed to be operated and which is operated between 0.1 and 10 pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns.
- (20) HIGHWAY is a way or place of whatever nature, publicly maintained and open to the public for purposes of vehicular travel. Highway includes street.
- (21) IMPACT RESISTANT COATING is any coating applied to a rocker panel for the purpose of chip resistance to road debris.
- (22) METALLIC/IRIDESCENT TOPCOAT is a topcoat which contains iridescent particles, composed of either metal as metallic particles or silicon as mica particles, in excess of 5 g/L (0.042 lb/gal) as applied, where such particles are visible in the dried film.
- (23) MIDCOAT is a semi-transparent topcoat which is the middle topcoat applied as part of a three-stage topcoat system.
- (24) MOBILE EQUIPMENT is self-propelled equipment which is physically capable of being driven on a highway. Mobile Equipment includes, but is not limited to: construction (mobile crane, bulldozer, concrete mixer), farming (wheel tractor, plow, pesticide sprayer), and miscellaneous (street cleaners, golf carts, hauling equipment used inside and around an airport, dock, depot, and industrial and commercial plants).
- (25) MOTOR HOME is any motor vehicle originally designed, or permanently altered, and equipped for human habitation as defined in Section 362 of the California Vehicle Code.
- (26) MOTOR VEHICLE is a vehicle which is self-propelled and which is physically capable of being driven on a highway.
- (27) MOTORCYCLE is any motor vehicle other than a tractor having a seat or saddle for the use of the rider and designed to travel on not more than three wheels in contact with the ground and weighing less than 1500 pounds, except that four wheels may be in contact with the ground when two of the wheels are a functional part of a sidecar.

- (28) MULTI-COLORED TOPCOAT is a coating which exhibits more than one color when applied, and which is packaged in a single container and applied in a single coat.
- (29) MULTI-COLORED MULTISTAGE TOPCOAT SYSTEM is a basecoat/clearcoat topcoat system in which the basecoat portion is a multi-colored topcoat.
- (30) MULTISTAGE TOPCOAT SYSTEM is any basecoat/clearcoat topcoat system or any three-stage topcoat system, manufactured as a system, and used as specified by the manufacturer.
- (31) PASSENGER CAR is any motor vehicle designed primarily for transportation of persons and having a design capacity of 12 persons or less.
- (32) PRETREATMENT COATING is a coating which contains no more than 16 percent solids, by weight, and at least 1/2-percent acid, by weight, is used to provide surface etching, and is applied directly to bare metal surfaces to provide corrosion resistance and promote adhesion for subsequent coatings.
- (33) PRIMER is a coating applied for purposes of corrosion resistance or adhesion of subsequent coatings.
- (34) PRIMER SEALER is a coating applied prior to the application of a topcoat for the purpose of color uniformity, or to promote the ability of an underlying coating to resist penetration by the topcoat.
- (35) PRIMER SURFACER is a coating applied for the purpose of corrosion resistance or adhesion, and which promotes a uniform surface by filling in surface imperfections.
- (36) PROTOTYPE MOTOR VEHICLE is a motor vehicle whose design is the first of its kind and which is manufactured for public display to collect public opinion for potential assembly-line production.
- (37) ROCKER PANEL is the panel area of a motor vehicle which is no more than ten inches from the bottom of a door, quarter panel or fender.
- (38) RUBBERIZED ASPHALTIC UNDERBODY COATING is 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.
- (39) SOLVENT CLEANING OPERATIONS is the removal of loosely held uncured adhesives, uncured inks, uncured coatings, and contaminants

which include, but are not limited to, dirt, soil, and grease from parts, products, tools, machinery, equipment, and general work areas. Each distinct method of cleaning in a cleaning process which consists of a series of cleaning methods shall constitute a separate solvent cleaning operation.

- (40) SPECIALTY COATING is any of the following coatings: adhesion promoters, uniform finish blenders, elastomeric materials, anti-glare safety coatings, impact resistant coatings, rubberized asphaltic underbody coatings, water hold-out coatings, weld-thru coatings, and bright metal trim repair coatings.
- (41) SPOT REPAIRS are repairs to motor vehicles in which the damaged area to be repaired is limited to only a portion of any given panel so that an entire panel need not be repaired.
- (42) STENCIL COATING is an ink or a pigmented coating which is rolled or brushed onto a template or a stamp in order to add identifying letters, symbols, and/or numbers to motor vehicles, mobile equipment, or their parts and components.
- (43) THREE-STAGE TOPCOAT SYSTEM is a topcoat system composed of a basecoat portion, a midcoat portion and a transparent clearcoat portion. The VOC content of a three-stage topcoat system shall be calculated according to the following formula:

$$\text{VOC}_{ms} = \frac{\text{VOC}_{bc} + \text{VOC}_{mc} + 2 \text{VOC}_{cc}}{4}$$

Where:

VOC_{ms} is the composite VOC content, less water and less exempt compounds to be used for compliance determination under the multistage topcoat system coating category.

VOC_{bc} is the VOC content, less water and less exempt compounds as applied, of any given basecoat.

VOC_{mc} is the VOC content, less water and less exempt compounds as applied, of any given midcoat.

2VOC_{cc} is two times the VOC content, less water and less exempt compounds as applied, of any given clearcoat.

- (44) TOPCOAT is a coating applied over any coating, for the purpose of appearance, identification, or protection.

- (45) TOUCH-UP COATING is a coating applied by brush, air-brush, or non-refillable aerosol can to cover minor surface damage and dispensed in containers of no more than eight (8) ounces.
- (46) TRANSFER EFFICIENCY is the ratio of the weight of coating solids deposited on an object to the total weight of coating solids used in a coating application step, expressed as a percentage.
- (47) TRUCK is a motor vehicle designed, used, or maintained primarily for the transportation of property.
 - (A) LARGE-SIZED TRUCK is a truck having a manufacturer's gross vehicle weight rating of more than 8600 pounds.
 - (B) MEDIUM-SIZED TRUCK is a truck having a manufacturer's gross vehicle weight of 6001 to 8600 pounds.
 - (C) SMALL-SIZED TRUCK is any motor vehicle having a manufacturer's gross vehicle weight rating at 6000 pounds or less and which is designed primarily for the purposes of transportation of property or is a derivative of such vehicle, or is available with special features enabling on-street or off-highway operation and use.
- (48) UNIFORM FINISH BLENDERS are coatings which are 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.
- (49) VAN is a closed truck for carrying property or persons.
 - (A) MEDIUM-SIZED VAN is a van having a manufacturer's gross vehicle weight rating of 6001 to 8600 pounds.
 - (B) SMALL-SIZED VAN is a van having a manufacturer's gross vehicle weight rating at 6000 pounds or less and which is designed primarily for purposes of transportation of property and/or persons.
- (50) VEHICLE is a device by which any person or property may be propelled, moved, or drawn upon a highway, excepting a device moved exclusively by human power or used exclusively upon stationary rails or tracks.
- (51) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102 – Definition of Terms. For the purpose of this rule, tertiary butyl acetate (TBAC) is not a VOC when used in coatings other than color coatings and clear coatings.

The Executive Officer shall conduct a technical assessment on the use of TBAC as a non-VOC by July 1, 2007. In conducting the technical

assessment, the Executive Officer shall consider all information on TBAC including, toxicity, carcinogenic and health risk assessment studies. The Executive Office shall report to the Governing Board as to the appropriateness of maintaining TBAC as a non-VOC.

- (52) WATER HOLD-OUT COATING is a coating applied to the interior cavity areas of doors, quarterpanels and rocker panels for the purpose of corrosion resistance to prolonged water exposure.
- (53) WELD-THRU COATING is a coating applied to metal immediately prior to welding to provide corrosion resistance.

(c) Requirements

(1) VOC Content of Coatings

A person shall not apply a coating to Group I vehicles and equipment, and Group II vehicles, or their parts and components, which has a VOC content which exceeds the limits contained in subparagraphs (c)(1)(A) and (c)(1)(B). Compliance with the VOC limits shall be based on VOC content, including any VOC material added to the original coating supplied by the manufacturer, less water and exempt compounds, as applied to the vehicle, mobile equipment, or parts and components.

(A) Group I Vehicles and Equipment

A person who applies coatings to Group I vehicles and equipment, or their parts or components, shall not apply a coating which has a VOC content in excess of the limits in Table 1.

TABLE 1

VOC LIMITS
Grams Per Liter of Coating,
Less Water and Exempt Compounds

<u>COATING</u>	On and After <u>December 12, 1998</u>	
	<u>g/L</u>	<u>lb/gal</u>
Pretreatment	780	6.5
Primer/Primer Surfacer/ Primer Sealer	250	2.1
Topcoats		
General	340	2.8
Metallic/Iridescent	340*	2.8*
Multi-Colored	685	5.7
Multistage	340*	2.8*
Specialty Coating	840	7.0

*The VOC limits for Metallic/Iridescent and Multistage topcoats for spot repairs on Group I vehicles and mobile equipment will be 3.5 lb/gal (less water and exempt compounds).

(B) Group II Vehicles

A person who applies coatings to Group II vehicles, or their parts or components, shall not apply a coating which has a VOC content in excess of the limits in Table 2.

TABLE 2

VOC Limits
Grams Per Liter of Coating,
Less Water and Exempt Compounds

COATING	On and After <u>December 12, 1998</u>		On and After <u>July 1, 1999</u>		On and After <u>October 1, 1999</u>	
	<u>g/L</u>	<u>lb/gal</u>	<u>g/L</u>	<u>lb/gal</u>	<u>g/L</u>	<u>lb/gal</u>
	Pretreatment	780	6.5	780	6.5	780
Primer/Primer Surfacer	250	2.1	250	2.1	250	2.1
Primer Sealer	340	2.8	340	2.8	340	2.8
Topcoats						
General	420	3.5	420	3.5	420	3.5
Metallic/Iridescent	420	3.5	420	3.5	420	3.5
Multi-Colored	685	5.7	685	5.7	685	5.7
Multistage System						
≥ 2 gal/day ¹	540	4.5	420 ¹	3.5	420	3.5
< 2 gal/day ²	540	4.5	540 ²	4.5	420	3.5
Multi-Colored Multistage	420	3.5	420	3.5	420	3.5
Specialty Coating	840	7.0	840	7.0	840	7.0

¹ On and after July 1, 1999, any person who uses two gallons or more of combined basecoat and clearcoat, as applied, on any given day shall comply with the 420 g/L (3.5 lb/gal) limit.

² Any person who uses less than two gallons of combined basecoat and clearcoat, as applied, on each day up to September 30, 1999 shall comply with the 3.5 lb/gal limit on and after October 1, 1999.

- (2) Exempt Compounds
A person shall not apply a coating which contains any Group II exempt compounds as defined in Rule 102 except for methylene chloride; carbon tetrachloride; perchloroethylene; or cyclic, branched, or linear, completely methylated siloxanes (VMS).
- (3) Carcinogenic Materials
A person shall not apply the coatings in which cadmium or hexavalent chromium was introduced as a pigment or as an agent to impart any property or characteristic to the coatings during manufacturing, distribution, or use of the applicable coatings.
- (4) Transfer Efficiency
- (A) A person shall not apply coatings except by the use of one of the following methods:
- (i) electrostatic application, or
 - (ii) high-volume, low-pressure (HVLP) spray, or
 - (iii) such other coating application methods as are demonstrated, in accordance with the provisions of subparagraph (g)(1)(E), to be capable of achieving equivalent or better transfer efficiency than the coating application method listed in clause (c)(4)(A)(ii), and for which written approval of the Executive Officer has been obtained.
- (B) A person shall not apply coatings by any of the methods listed in subparagraph (c)(4)(A) unless the coating is applied with properly operating equipment, operated according to procedures recommended by the manufacturer.
- (5) Solvent Cleaning Operations; Storage and Disposal of VOC-containing Materials
Solvent cleaning of application equipment, parts, products, tools, machinery, equipment, general work areas, and the storage and disposal of VOC-containing materials used in cleaning operations shall be carried out pursuant to Rule 1171 - Solvent Cleaning Operations.
- (6) Approved Emission Control System
A person may comply with the provisions of paragraph (c)(1), by using an approved emission control system, consisting of collection and control devices, which is approved, in writing, by the Executive Officer for

reducing emissions of VOC. The Executive Officer shall approve such emission control system only if the VOC emissions resulting from the use of non-compliant coatings will be reduced to a level equivalent to or lower than that which would have been achieved by the compliance with the terms of paragraph (c)(1).

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

$$C.E. = \left[1 - \left\{ \frac{(VOC_{LWc})}{(VOC_{LWn,Max})} \times \frac{1 - (VOC_{LWn,Max}/D_{n,Max})}{1 - (VOC_{LWc}/D_c)} \right\} \right] \times 100$$

Where:

C.E.	=	Control Efficiency, percent
VOC_{LWc}	=	VOC Limit of Rule 1151, less water and less exempt compounds, pursuant to paragraph (c)(1).
$VOC_{LWn,Max}$	=	Maximum VOC content of non-compliant coating used in conjunction with a control device, less water and exempt compounds.
$D_{n,Max}$	=	Density of VOC solvent, reducer, or thinner contained in the non-compliant coating containing the maximum VOC.
D_c	=	Density of corresponding VOC solvent, reducer, or thinner used in the compliant coating system = 880 g/L.

(7) Alternative Emission Control Plan

A person may comply with the provisions of paragraph (c)(1) by means of an Alternative Emission Control Plan (AECPP), pursuant to Rule 108.

(8) Specialty Coatings

Use of all specialty coatings shall not exceed 10 percent (by volume) of all coatings applied, averaged on a monthly (calendar) basis.

(d) Prohibition of Possession, Specification and Sale

(1) Effective July 1, 2006, no person that applies automotive coatings subject to this rule shall possess any automotive coating that is not in compliance

with requirements of paragraph (c)(1), unless one or more of the following conditions apply:

- (A) The coating is located at a facility that utilizes an approved emission control device pursuant to paragraph (c)(6), and the coating meets the limits specified in permit conditions.
 - (B) The coating is at a facility that operates in compliance with an approved Alternative Emissions Control Plan pursuant to paragraph (c)(7), and the coating is specified in the plan.
 - (C) The coating is exempt pursuant to paragraph (i)(3) or (i)(5).
- (2) No person shall solicit from, or require any other person to use in the District any coating which, when applied as supplied or thinned or reduced according to the manufacturer's recommendation for application, does not meet the:
- (A) Applicable VOC limits required by paragraph (c)(1) for the specific application unless:
 - (i) The coating is located at a facility that utilizes an approved emission control device pursuant to paragraph (c)(6), and the coating meets the limits specified in permit conditions; or,
 - (ii) The coating is at a facility that operates in compliance approved Alternative Emissions Control Plan pursuant to paragraph (c)(7), and the coating is specified in the plan; or
 - (iii) the coating is specifically exempt pursuant to subdivision (i) of this rule; and
 - (iv) the coating meets requirements of paragraphs (c)(2) or (c)(3).
- (3) No person shall offer for sale, sell, or distribute for use in the District any coating which, when applied as supplied or thinned or reduced according to the manufacturer's recommendation for application, does not meet the:
- (A) applicable VOC limits required by paragraph (c)(1) for the specific application, unless:
 - (i) The coating is located at a facility that utilizes an approved emission control device pursuant to paragraph (c)(6), and the coating meets the limits specified in permit conditions; or,

- (ii) The coating is specifically exempt pursuant to subdivision (i) of this rule; and,
 - (iii) The coating is at a facility that operates in compliance approved Alternative Emissions Control Plan pursuant to paragraph (c)(7), and the coating is specified in the plan; and
 - (iv) The person that offers for sale or distributes the coating keeps the following records for at least five years and makes them available to the Executive Officer upon request:
 - (I) Coating name and manufacturer;
 - (II) Application method;
 - (III) Coating category and mix ratio specific to the coating;
 - (IV) VOC content of the coating;
 - (V) Documentation that the material is a coating;
 - (VI) Current manufacturer specification sheets, material safety data sheets, technical data sheets, or air quality data sheets, which list the VOC content of each ready-to-spray coating (based on the manufacturer's stated mix ratio) and automotive coating components and VOC content of each solvent;
 - (VII) Purchase records identifying the coating category, name, and volume of coatings; and
 - (VIII) The name and address of the person purchasing the coating, a statement of the basis the purchase will comply with this paragraph, including if use is for outside the District, and acknowledgement by the purchaser that this statement is correct.
- (B) the requirements of paragraphs (c)(2) or (c)(3).
- (4) No person shall solicit from, require, offer for sale to, sell to, or distribute to any other person for use in the District any coating application equipment which does not meet the requirements of subparagraph (c)(4)(A).
 - (5) No person shall offer for sale, sell, or distribute an HVLP spray gun unless the person offering for sale, selling, or distributing the HVLP spray gun

provides accurate information to the spray gun recipient on the maximum inlet air pressure to the spray gun which would result in a maximum 10 pounds per square inch gauge air pressure measured dynamically at the center of the air cap and the air horns. The information shall be permanently marked on the gun, or provided on the company's letterhead or in the form of technical literature which clearly identifies the spray gun manufacturer, the salesperson, or the distributor.

- (6) The requirements of paragraphs (d)(1), (d)(2), (d)(3) or (d)(4) shall apply to all written or oral agreements executed and entered into under the terms of which a coating or a coating application equipment shall be used at any location within the District.
- (e) Offer for Sale
- (1) On and after February 1, 1999, any coating manufacturer that sells or offers for sale for use in the District clearcoat shall offer for sale at least one clearcoat product line with a VOC content of 2.1 pounds per gallon (excluding water and exempt compounds) or less, on an as applied basis, at all locations where their clearcoats are sold or offered for sale to the end users.
 - (2) On and after February 1, 1999, any person who sells or offers for sale to the end users a coating manufacturer's clearcoat for use in the District shall offer for sale at least one clearcoat product line with a VOC content of 2.1 pounds per gallon (excluding water and exempt compounds) or less, on an as applied basis, offered for sale by that coating manufacturer.
- (f) Recordkeeping Requirements
- (1) Recordkeeping for VOC Emissions
Records of coating usage shall be maintained pursuant to Rule 109.
 - (2) Recordkeeping for Emission Control Systems
Any person using an emission control system as a means of complying with the provisions of paragraph (c)(1) shall maintain daily records of key system operating and maintenance procedures 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.

(g) Test Methods

(1) Methods of Analysis

For the purpose of this rule, the following test methods shall be used:

(A) VOC Content of Coatings

The VOC content of coatings shall be determined by the methods specified in clauses (g)(1)(A)(i) or (g)(1)(A)(ii):

(i) United States Environmental Protection Agency ("U.S. EPA") Reference Method 24, (Title 40 Code of Federal Regulations, Part 60, Appendix A). The exempt compounds content shall be determined by SCAQMD Method 303 (Determination of Exempt Compounds) contained in the SCAQMD "Laboratory Method of Analysis for Enforcement Samples" manual; or

(ii) SCAQMD Method 304 [Determination of Volatile Organic Compounds (VOCs) in Various Materials] contained in the SCAQMD "Laboratory Method of Analysis for Enforcement Samples" manual.

(iii) Exempt Perfluorocarbon Compounds

The following classes of compounds: cyclic, branched, or linear, completely fluorinated alkanes; cyclic, branched, or linear, completely fluorinated ethers with no unsaturations; cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine, will be analyzed as exempt compounds for compliance with paragraph (c)(1), only at such time as manufacturers specify which individual compounds are used in the formulation of the coatings and identify the test methods, which have been approved by the U.S. EPA and the District prior to such analysis, that can be used to quantify the amount of each exempt compound.

- (B) Determination of Iridescent Particles in Metallic/Iridescent Topcoat
The metal and silicon content of metallic/iridescent topcoat shall be determined by SCAQMD Method 311 (Determination of Percent Metal in Metallic Coatings by Spectrographic Method) contained in the SCAQMD "Laboratory Method of Analysis for Enforcement Samples" manual.
 - (C) Acid Content in Pretreatment Coatings
The acid content of pretreatment coatings shall be determined by ASTM Test Method D1613.
 - (D) Reflectance of Anti-Glare Safety Coatings
The reflectance of anti-glare safety coatings shall be measured by ASTM Test Method D-523.
 - (E) Transfer Efficiency
The transfer efficiency of alternative coating application methods, as defined by clause (c)(4)(A)(iii), shall be determined in accordance with the SCAQMD method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989."
 - (F) Equivalent Test Methods
Other test methods may also be used for method of analysis if approved in writing by the Executive Officer, the California Air Resources Board ("CARB"), and the U.S. EPA.
- (2) Determination of Efficiency of Emission Control Systems
- (A) The efficiency of the collection device of an emission control system as specified in paragraph (c)(6) shall be determined by the methods specified in clauses (g)(2)(A)(i), (g)(2)(A)(ii), or (g)(2)(A)(iii).
 - (i) U.S. EPA method cited in 55 Federal Register (FR) 26865, June 29, 1990; or
 - (ii) The SCAQMD "Protocol for Determination of Volatile Organic Compounds (VOC) Capture Efficiency"; or
 - (iii) Any other method approved by the Executive Officer, CARB and U.S. EPA.
 - (B) The efficiency of the control device of an emission control system as specified in paragraph (c)(6) and the VOC content in the control

device exhaust gases, measured and calculated as carbon, shall be determined by U.S. EPA Test Methods 25, 25A, or SCAQMD Method 25.1 (Determination of Total Gaseous Non-Methane Organic Emissions as Carbon) as applicable. U.S. EPA Test Method 18, or CARB Method 422 shall be used to determine emissions of exempt compounds.

(3) Multiple Test Methods

When more than one test method or set of test methods are 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 the rule.

(h) Rule 442 Applicability

Any coating operation, subject to this rule which is exempt from all or a portion of the VOC limits of this rule shall comply with the provisions of Rule 442.

(i) Exemptions

(1) The provisions of paragraph(c)(4) of this rule shall not apply to:

(A) touch-up coatings.

(B) stencil coatings.

(2) The prohibition specified in subdivision (d) shall not apply to coatings or spray equipment which will be used solely outside of the District.

(3) The requirements of paragraph (c)(1) shall not apply to coatings applied for educational purposes at coating training centers, which are owned and operated by coating manufacturers, provided that the VOC emissions emitted at a coating training center from coatings not complying with paragraph (c)(1) do not exceed twelve (12) pounds per day.

(4) The provisions of this rule shall not apply to aerosol coating products.

(5) The requirements of paragraphs (c)(1), (d)(1), (d)(2), and (d)(3) shall not apply to topcoats supplied by an assembly-line motor vehicle manufacturer for use by a prototype motor vehicle manufacturing facility in the finishing of a prototype motor vehicle, provided that the VOC emissions at the prototype motor vehicle manufacturing facility from such topcoats does not exceed 21 pounds in a calendar day and 930 pounds in a calendar year.

- (6) The requirements of paragraph (e)(1) shall not apply to coating manufacturers that only sell or offer for sale for use in the District clearcoat that is formulated and recommended for use in conjunction with only waterborne-basecoats.
- (7) The requirements of paragraph (e)(2) shall not apply to a coating manufacturer's clearcoats which are formulated and recommended for use in conjunction with only waterborne basecoats.

Appendix A

Rule 1151 – Effective July 1, 2008

Effective July 1, 2008, the provisions in subdivisions (a) through (i) of this appendix shall become effective and replace subdivisions (a) through (i) of Rule 1151

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(a) Purpose

The purpose of this rule is to limit volatile organic compound (VOC), stratospheric ozone-depleting compound, and global-warming compound emissions from coatings operations associated with the coating of motor vehicles and mobile equipment.

(b) Applicability

This rule is applicable to any person who supplies, sells, offers for sale, manufactures, or distributes any automotive coating or associated solvent for use within the District, as well as any person who uses, applies, or solicits, the use or application of any automotive coating or associated solvent within the District.

(c) Definitions

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

- (1) ADHESION PROMOTER means a coating, which is labeled and formulated to be applied to uncoated plastic surfaces to facilitate bonding of subsequent coatings, and on which, a subsequent coating is applied.
- (2) AEROSOL COATING means a pressurized coating product containing pigments or resins that dispenses product ingredients by means of a propellant, and is packaged in a disposable can for hand-held application.
- (3) ASSEMBLY LINE means an arrangement of industrial equipment and workers in which the product passes from one specialized operation to another until complete, by either automatic or manual means.
- (4) ASSOCIATED PARTS AND COMPONENTS means structures, devices, pieces, modules, sections, assemblies, subassemblies, or elements of motor vehicles or mobile equipment that are designed to be a part of motor vehicles or mobile equipment but which are not attached to motor vehicles or mobile equipment at the time of coating the structure, device, piece, module, section, assembly, subassembly, or element. The Associated parts and components definition does not include circuit boards.
- (5) AUTOMOTIVE COATING means any coating or coating component used or recommended for use in motor vehicle or mobile equipment refinishing, service, maintenance, repair, restoration, or modification, except metal plating activities. Any reference to automotive refinishing or automotive coating made by a person on the container or in product

literature constitutes a recommendation for use in motor vehicle or mobile equipment refinishing.

- (6) AUTOMOTIVE COATING COMPONENT means any portion of a coating, including, but not limited to, a reducer or thinner, toner, hardener, and additive, which is recommended by any person to distributors or end-users for use in an automotive coating, or which is used in an automotive coating. The raw materials used to produce the components are not considered automotive coating components.
- (7) AUTOMOTIVE REFINISHING FACILITY means any shop, business, location, or parcel of land where motor vehicles or mobile equipment or their associated parts and components are coated, including autobody collision repair shops. “Automotive Refinishing Facility” does not include the original equipment manufacturing plant where the motor vehicle or mobile equipment is completely assembled.
- (8) CARB means the California Air Resources Board.
- (9) CLEANING OPERATIONS means the removal of loosely held uncured adhesives, inks, coatings, or contaminants, including, but not limited to, dirt, soil, or grease, from motor vehicles, mobile equipment, associated parts and components, substrates, parts, products, tools, machinery, equipment, or general work areas.
- (10) CLEAR COATING means any coating that contains no pigments and is labeled and formulated for application over a color coating or clear coating.
- (11) COATING means a material which is applied to a surface and forms a film in order to beautify, preserve, repair, or protect such a surface.
- (12) COLOR COATING means any pigmented coating, excluding adhesion promoters, primers, and multi-color coatings, that requires a subsequent clear coating and which is applied over a primer or adhesion promoter. Color coatings include metallic/iridescent color coatings.
- (13) ELECTROSTATIC SPRAY APPLICATION means any method of spray application of coatings where an electrostatic attraction is created between the part to be coated and the paint particles.
- (14) EMISSION CONTROL SYSTEM means any combination of capture systems and control devices used to reduce VOC emissions from automotive coating operations.
- (15) EXEMPT COMPOUNDS are as defined in Rule 102-Definition of Terms.

- (16) GRAMS OF VOC PER LITER OF COATING LESS WATER AND LESS EXEMPT COMPOUNDS, is the weight of VOC per combined volume of VOC and coating solids and shall be calculated by the following equation:

$$\begin{aligned} &\text{Grams of VOC per Liter of Coating, Less} \\ &\text{Water and Less Exempt Compounds} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}} \end{aligned}$$

Where: W_s = weight of volatile compounds in grams
 W_w = weight of water in grams
 W_{es} = weight of exempt compounds in grams
 V_m = volume of material in liters
 V_w = volume of water in liters
 V_{es} = volume of exempt compounds in liters

- (17) GRAMS OF VOC PER LITER OF MATERIAL is the weight of VOC per volume of material and shall be calculated by the following equation:

$$\text{Grams of VOC per Liter of Material} = \frac{W_s - W_w - W_{es}}{V_m}$$

Where: W_s = weight of volatile compounds in grams
 W_w = weight of water in grams
 W_{es} = weight of exempt compounds in grams
 V_m = volume of material in liters

- (18) HIGH-VOLUME, LOW-PRESSURE (HVLP) means spray equipment permanently labeled HVLP and which is designed and operated between 0.1 and 10 pounds per square inch, gauge, (psig) air atomizing pressure measured dynamically at the center of the air cap and at the air horns.
- (19) METALLIC/IRIDESCENT COLOR COATING means any coating that contains more than 0.042 pounds per gallon (5 grams per liter) of metal or iridescent particles as applied, where such particles are visible in the dried film.
- (20) MOBILE EQUIPMENT means any device that may be drawn and/or driven on rails or a roadway including, but not limited to, trains, railcars, truck trailers, mobile cranes, bulldozers, street cleaners, and implements of husbandry or agriculture.

- (21) MOTOR VEHICLE means any self-propelled vehicle, including, but not limited to, cars, trucks, buses, golf carts, vans, motorcycles, tanks, and armored personnel carriers.
- (22) MULTI-COLOR COATING means any coating that exhibits more than one color in the dried film after a single application, is packaged in a single container, and hides surface defects on areas of heavy use, and which is applied over a primer or adhesion promoter.
- (23) PRETREATMENT COATING means any coating that contains a minimum of one-half (0.5) percent acid by weight and not more than 16 percent solids by weight necessary to provide surface etching and is labeled and formulated for application directly to bare metal surfaces to provide corrosion resistance and adhesion.
- (24) PRIMER means any coating, which is labeled and formulated for application to a substrate to provide 1) a bond between the substrate and subsequent coats, 2) corrosion resistance, 3) a smooth substrate surface, or 4) resistance to penetration of subsequent coats, and on which a subsequent coating is applied. Primers may be pigmented.
- (25) SINGLE-STAGE COATING means any pigmented coating, excluding primers and multi-color coatings, labeled and formulated for application without a subsequent clear coat. Single-stage coatings include single-stage metallic/iridescent coatings.
- (26) SPOT REPAIR means repair of an area on a motor vehicle, piece of mobile equipment, or associated parts or components of less than 1 square foot (929 square centimeters).
- (27) TEMPORARY PROTECTIVE COATING means any coating which is labeled and formulated for the purpose of temporarily protecting areas from overspray or mechanical damage.
- (28) TRANSFER EFFICIENCY means the amount of coating solids adhering to the object being coated divided by the total amount of coating solids sprayed, expressed as a percentage.
- (29) TRUCK BED LINER COATING means any coating, excluding color, multi-color, and single stage coatings, labeled and formulated for application to a truck bed to protect it from surface abrasion.
- (30) UNDERBODY COATING means any coating labeled and formulated for application to wheel wells, the inside of door panels or fenders, the underside of a trunk or hood, or the underside of the motor vehicle.

- (31) UNIFORM FINISH COATING means any coating labeled and formulated for application to the area around a spot repair for the purpose of blending a repaired area's color or clear coat to match the appearance of an adjacent area's existing coating.
- (32) U.S. EPA means the United States Environmental Protection Agency.
- (33) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102-Definition of Terms. For the purpose of this rule, tertiary butyl acetate (TBAC) is not a VOC when used in coatings other than color coatings and clear coatings.

The Executive Officer shall conduct a technical assessment on the use of TBAC as a non-VOC by July 1, 2007. In conducting the technical assessment, the Executive Officer shall consider all information on TBAC including, toxicity, carcinogenic and health risk assessment studies. The Executive Office shall report to the Governing Board as to the appropriateness of maintaining TBAC as a non-VOC.

(d) Requirements

- (1) A person shall not apply any coating to a vehicle, mobile equipment, or associated parts or components, that have a VOC content in excess of the limits contained in Table A of this paragraph. Compliance with the VOC limits shall be based on VOC content, including any VOC material added to the original coating supplied by the manufacturer, less water and exempt compounds, as applied to the vehicle, mobile equipment or parts and components.

Table A – Coating Categories and VOC limits

Coating Categories	VOC Limits Less Water and Less Exempt Compounds Effective Dates					
	July 1, 2008		January 1, 2009		January 1, 2010	
	g/L	lb/gal	g/L	lb/gal	g/L	lb/gal
	Adhesion Promoter					540
Clear Coating	250	2.1				
Color Coating	420	3.5				
Multi-Color Coating			680	5.7		
Pretreatment Coating			660	5.5		
Primer					250	2.1
Single-Stage Coating					340	2.8
Temporary Protective Coating			60	0.5		
Truck Bed Liner Coating			310	2.6		
Underbody Coating			430	3.6		
Uniform Finishing Coating			540	4.5		
Any other coating type			250	2.1		

(2) Most Restrictive VOC Limit

If any representation on information on the container of any automotive coating, or any label or sticker affixed to the container, or in any sales, advertising, or technical literature supplied by a person that indicates that the coating meets the definition of or is recommended for use for more than one of the coating categories listed in paragraph (d)(1), then the lowest VOC content limit shall apply.

(3) VOC Limits Compliance Dates

The VOC limits in effect as of December 2, 2005 shall be applicable until superseded by the VOC limits and effective dates in Table A of paragraph (d)(1).

(4) Alternative Compliance

(A) Emission Control System

A person may comply with the provisions of paragraph (d)(1), by using an approved emission control system, consisting of collection and control devices, that is approved, in writing, by the Executive Officer for reducing emissions of VOC. The Executive Officer shall approve such emission control system only if the VOC emissions resulting from the use of non-compliant coatings will be reduced to a level equivalent to or lower than that which would have been achieved by the compliance with the terms of paragraph (d)(1). The required efficiency of an emission control system at which an equivalent or greater level of VOC emission reduction will be achieved shall be calculated by the following equation:

$$C.E. = \left[1 - \left\{ \frac{(VOC_{LWc})}{(VOC_{LWn,Max})} \times \frac{1 - (VOC_{LWn,Max}/D_{n,Max})}{1 - (VOC_{LWc}/D_c)} \right\} \right] \times 100$$

Where:

- C.E. = Control Efficiency, percent
- VOC_{LWc} = VOC Limit of Rule 1151, less water and less exempt compounds, pursuant to paragraph (d)(1).
- $VOC_{LWn,Max}$ = Maximum VOC content of non-compliant coating used in conjunction with a control device, less water and exempt compounds.
- $D_{n,Max}$ = Density of VOC solvent, reducer, or thinner contained in the non-compliant coating containing the maximum VOC.
- D_c = Density of corresponding VOC solvent, reducer, or thinner used in the compliant

coating system = 880 g/L.

(B) Alternative Emission Control Plan

A person may comply with the provisions of paragraph (d)(1) by means of an Alternative Emissions Control Plan, pursuant to Rule 108 – Alternative Emissions Control Plans.

(5) Exempt Compounds

A person shall not manufacture, sell, offer for sale, distribute for use in the District, or apply any coating which contains any Group II Exempt Compounds as defined in Rule 102.

(6) Carcinogenic Materials

A person shall not manufacture the coatings in which cadmium or hexavalent chromium was introduced as a pigment or as an agent to impart any property or characteristic to the coatings during manufacturing, distribution, or use of the applicable coatings.

(7) Transfer Efficiency

(A) A person shall not apply coatings except by the use of one of the following methods:

- (i) electrostatic application, or
- (ii) high-volume, low-pressure (HVLP) spray, or
- (iii) such other coating application methods as are demonstrated, in accordance with the provisions of subparagraph (h)(1)(E), to be capable of achieving equivalent or better transfer efficiency than the coating application method listed in clause (d)(6)(A)(ii), and for which written approval of the Executive Officer has been obtained.

(B) A person shall not apply coatings by any of the methods listed in subparagraph (d)(6)(A) unless the coating is applied with properly operating equipment, operated according to procedures recommended by the manufacturer and in compliance with permit conditions, if any.

(8) Solvent Cleaning, Storage and Disposal of VOC-Containing Materials

Solvent cleaning of application equipment, parts, products, tools, machinery, equipment, general work areas, and the storage and disposal of

VOC-containing materials used in cleaning operations shall be carried out pursuant to SCAQMD Rule 1171 – Solvent Cleaning Operations.

- (e) Prohibition of Possession, Specification and Sale
 - (1) No person that applies automotive coatings subject to this rule shall possess any automotive coating that is not in compliance with requirements of paragraph (d)(1), unless one or more of the following conditions apply:
 - (A) The coating is located at a facility that utilizes an approved emission control device pursuant to subparagraph (d)(4)(A), and the coating meets the limits specified in permit conditions.
 - (B) The coating is located at a facility that operates in compliance with an approved Alternative Emissions Control Plan pursuant to subparagraph (d)(4)(B), and the coating is specified in the plan
 - (C) The coating is located at a training center and the coating is used for educational purposes, provided that the VOC emissions from coatings not meeting the VOC limits of paragraph (d)(1) do not exceed twelve (12) pounds per day.
 - (D) The topcoat is located at prototype motor vehicle manufacturing facility and the coating is supplied by an assembly-line motor vehicle manufacturer for use in the refinishing of a prototype motor vehicle, provided that the VOC emissions from coatings not meeting the VOC limits of paragraph (d)(1) do not exceed twenty-one (21) pounds per day and 930 pounds in any one calendar year.
 - (2) No person shall solicit from, or require any other person to use in the District any coating which, when applied as supplied or thinned or reduced according to the manufacturer's recommendation for application, does not meet the:
 - (A) applicable VOC limits required by paragraph (d)(1) for the specific application unless:
 - (i) The coating is located at a facility that utilizes an approved emission control device pursuant to subparagraph (d)(4)(A), and the coating meets the limits specified in permit conditions; or,
 - (ii) The coating is coating is located at a facility that operates in compliance with an approved Alternative Emissions

- Control Plan pursuant to subparagraph (d)(4)(B), and the coating is specified in the plan; or
- (ii) the coating is specifically exempt pursuant to subdivision (i) of this rule.
- (B) the requirements of paragraphs (d)(5) and (d)(6).
- (3) No person shall offer for sale, sell, or distribute for use in the District any coating which, when applied as supplied or thinned or reduced according to the manufacturer's recommendation for application, does not meet the:
- (A) Applicable VOC limits required by paragraph (d)(1) for the specific application, unless:
 - (i) The coating is located at a facility that utilizes an approved emission control device pursuant to subparagraph (d)(4)(A), and the coating meets the limits specified in permit conditions; or,
 - (ii) The coating is specifically exempt under subdivision (i) of this rule; or,
 - (iii) The coating is coating is located at a facility that operates in compliance with an approved Alternative Emissions Control Plan pursuant to subparagraph (d)(4)(B), and the coating is specified in the plan; and,
 - (iv) The person that offers for sale or distributes the coating keeps the following records for at least five years and makes them available to the Executive Officer upon request:
 - (I) Coating name and manufacturer;
 - (II) Application method;
 - (III) Coating category and mix ratio specific to the coating;
 - (IV) VOC content of the coating;
 - (V) Documentation that the material is a coating;
 - (VI) Current manufacturer specification sheets, material safety data sheets, technical data sheets, or air quality data sheets, which list the VOC content of each ready-to-spray coating (based on the manufacturer's stated mix ratio) and automotive

coating components and VOC content of each solvent;

(VII) Purchase records identifying the coating category, name, and volume of coatings; and

(VIII) The name and address of the person purchasing the coating, a statement of the basis the purchase will comply with this paragraph, including if use is for outside the District, and acknowledgement by the purchaser that this statement is correct.

(B) or does not meet the requirements of paragraphs (d)(5) and (d)(6).

(4) No person shall solicit from, require, offer for sale to, sell to, or distribute to any other person for use in the District any coating application equipment which does not meet the requirements of subparagraph (d)(7)(A).

(5) No person shall offer for sale, sell, or distribute an HVLP spray gun unless the person offering for sale, selling, or distributing the HVLP spray gun provides accurate information to the spray gun recipient on the maximum inlet air pressure to the spray gun which would result in a maximum 10 pounds per square inch gauge air pressure measured dynamically at the center of the air cap and the air horns. The information shall be permanently marked on the gun, or provided on the company's letterhead or in the form of technical literature which clearly identifies the spray gun manufacturer, the salesperson, or the distributor.

(6) The requirements of paragraphs (e)(1), (e)(2), (e)(3) or (e)(4) shall apply to all written or oral agreements executed and entered into under the terms of which a coating or a coating application equipment shall be used at any location within the District.

(f) Recordkeeping Requirements

(1) Recordkeeping for VOC Emissions

Records of coating usage shall be maintained pursuant to SCAQMD Rule 109 – Recordkeeping for Volatile Organic Compound Emissions, and shall at a minimum include the following information:

(A) Material name and manufacturer;

(B) Application method;

(C) Coating category and mix ratio specific to the coating;

- (D) VOC actual and regulatory for the coating;
 - (E) Documentation that the material is a coating or solvent;
 - (F) Current manufacturer specification sheets, material safety data sheets, technical data sheets, or air quality data sheets, which list the VOC actual for coatings and VOC regulatory for coatings of each ready-to-spray coating (based on the manufacturer's stated mix ratio) and automotive coating components and VOC content of each solvent; and,
 - (G) Purchase records identifying the coating category, name, and volume of coatings and solvents.
- (2) Recordkeeping Requirements for Emission Control System
- Any person using an emission control system shall maintain daily records of key system operating parameters which will demonstrate continuous operation and compliance of the emission control system during periods of VOC emission producing activities. "Key system operating parameters" are those parameters necessary to ensure or document compliance with subparagraph (d)(3)(A), including, but not limited to, temperatures, pressure drops, and air flow rates.
- (g) Administrative Requirements for Coating Manufacturers
- (1) Compliance Statement Requirement
- For each individual automotive coating, coating component, and ready to spray mixture (based on the manufacturers stated mix ratio), the manufacturer shall include the following information on a product data sheet, or an equivalent medium:
- (A) The actual and regulatory VOC for coatings (in grams per liter);
 - (B) The weight percentage of volatiles, water, and exempt compounds; and,
 - (C) The density of the material (in grams per liter).
- (2) Labeling Requirements
- (A) The manufacturer of automobile coatings or coating components shall include on all containers the applicable use category(ies), and the VOC actual and regulatory for coatings, as supplied (in grams per liter).

(B) The manufacturer of solvents subject to this rule shall include on all containers the VOC content for solvents, as supplied (in grams per liter).

(h) Test Methods

(1) Methods of Analysis

For the purpose of this rule, the following test methods shall be used:

(A) VOC Content of Coatings

United States Environmental Protection Agency ("U.S. EPA") Reference Method 24, (Title 40 Code of Federal Regulations, Part 60, Appendix A). The exempt compounds content shall be determined by SCAQMD Method 303 (Determination of Exempt Compounds) contained in the SCAQMD "Laboratory Method of Analysis for Enforcement Samples" manual; or SCAQMD Method 304 [Determination of Volatile Organic Compounds (VOCs) in Various Materials] contained in the SCAQMD "Laboratory Method of Analysis for Enforcement Samples" manual.

(B) Exempt Perfluorocarbon Compounds

The following classes of compounds: cyclic, branched, or linear, completely fluorinated alkanes; cyclic, branched, or linear, completely fluorinated ethers with no unsaturations; cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine, shall be analyzed as exempt compounds for compliance with paragraph (d)(1), only at such time as manufacturers specify which individual compounds are used in the formulation of the coatings and identify the test methods, which have been approved by the U.S. EPA and the District prior to such analysis, that can be used to quantify the amount of each exempt compound.

(C) Determination of Iridescent Particles in Metallic/Iridescent Coatings

The metal and silicon content of metallic/iridescent coatings shall be determined by SCAQMD Method 311 (Determination of Percent Metal in Metallic Coatings by Spectrographic Method)

contained in the SCAQMD "Laboratory Method of Analysis for Enforcement Samples" manual.

- (D) Acid Content in Pretreatment Coatings
The acid content of pretreatment coatings shall be determined by ASTM Test Method D1613.
 - (E) Reflectance of Anti-Glare Safety Coatings
The reflectance of anti-glare safety coatings shall be measured by ASTM Test Method D-523.
 - (F) Transfer Efficiency
The transfer efficiency of alternative coating application methods, as defined by clause (d)(7)(A)(iii), shall be determined in accordance with the SCAQMD method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989," and SCAQMD "Guidelines for Demonstrating Equivalency With District Approved Transfer Efficiency Spray Gun September 26, 2002."
 - (G) Equivalent Test Methods
Other test methods determined to be equivalent after review by the staffs of the District, CARB, and the U.S. EPA, and approved in writing by the District Executive Officer may also be used for methods of analysis.
- (2) Determination of Efficiency of Emission Control Systems
- (A) The efficiency of the collection device of an emission control system as specified in subparagraph (d)(4)(A) shall be determined by the methods specified in clauses (h)(2)(A)(i), (h)(2)(A)(ii), or (h)(2)(A)(iii).
 - (i) U.S. EPA method cited in 55 Federal Register (FR) 26865, June 29, 1990; or
 - (ii) SCAQMD's "Protocol for Determination of Volatile Organic Compounds (VOC) Capture Efficiency"; or
 - (iii) any other method approved by the United States Environmental Protection Agency, the California Air Resources Board, and the District Executive Officer.
 - (B) The efficiency of the control device of an emission control system as specified in subparagraph (d)(4)(A) and the VOC content in the control device exhaust gases, measured and calculated as carbon,

shall be determined by USEPA Test Methods 25, 25A, or SCAQMD Method 25.1 (Determination of Total Gaseous Non-Methane Organic Emissions as Carbon) as applicable. U.S. EPA Test Method 18, or CARB Method 422 shall be used to determine emissions of exempt compounds.

(3) Multiple Test Methods

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

(i) Exemptions

(1) This rule shall not apply to:

- (A) Any coating applied to motor vehicles or mobile equipment, or their associated parts and components, during manufacture on an assembly line.
- (B) Any automotive coating that is offered for sale, sold, or manufactured for use outside of the District or for shipment to other manufacturers for reformulation or repackaging;
- (C) Any aerosol coating product;
- (D) Any automotive coating that is sold, supplied, or offered for sale in 0.5 fluid ounces or smaller containers.

(2) The requirements of paragraph (d)(1) shall not apply to coatings applied for educational purposes at coating training centers, which are owned and operated by coating manufacturers, provided that the VOC emissions emitted at a coating training center from coatings not complying with paragraph (d)(1) does not exceed twelve (12) pounds per day.

(3) The requirements of paragraph (d)(1) shall not apply to coatings supplied by an assembly-line motor vehicle manufacturer for use by a prototype motor vehicle manufacturing facility in the finishing of a prototype motor vehicle, provided that the VOC emissions at the prototype motor vehicle manufacturing facility from such topcoats does not exceed 21 pounds in a calendar day and 930 pounds in a calendar year.

(4) Color and clear coatings that are manufactured prior to the effective date of July 1, 2008, that have a VOC content above the limit specified in Table A of paragraph (d)(1), but not above the applicable limit on the date

of manufacture may be possessed, sold, supplied, offered for sale, or applied up to December 31, 2008.