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

(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:

\[
VOC_{ms} = \frac{VOC_{bc} + 2\, VOC_{cc}}{3}
\]

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.
- \( 2\, VOC_{cc} \) 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:

- $\text{VOC}_{ms}$ is the composite VOC content, less water and less exempt compounds to be used for compliance determination under the multistage topcoat system coating category.
- $\text{VOC}_{bc}$ is the VOC content, less water and less exempt compounds as applied, of any given basecoat.
- $\text{VOC}_{mc}$ is the VOC content, less water and less exempt compounds as applied, of any given midcoat.
- $2 \text{VOC}_{cc}$ 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 any volatile compound containing the element carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds.

(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

<table>
<thead>
<tr>
<th>COATING</th>
<th>On and After December 12, 1998</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>g/L</td>
</tr>
<tr>
<td>Pretreatment</td>
<td>780</td>
</tr>
<tr>
<td>Primer/Primer Surfacer/</td>
<td>250</td>
</tr>
<tr>
<td>Primer Sealer</td>
<td></td>
</tr>
<tr>
<td>Topcoats</td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>340</td>
</tr>
<tr>
<td>Metallic/Iridescent</td>
<td>340*</td>
</tr>
<tr>
<td>Multi-Colored</td>
<td>685</td>
</tr>
<tr>
<td>Multistage</td>
<td>340*</td>
</tr>
<tr>
<td>Specialty Coating</td>
<td>840</td>
</tr>
</tbody>
</table>

*The VOC limits for Metallic/Irridescent and Multistage topcoats for spot repairs on Group I vehicles and mobil 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

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

<sup>1</sup> 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.

<sup>2</sup> 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:

\[
\text{C.E.} = \left[ 1 - \left\{ \frac{\text{VOC}_{\text{LwC}}}{\text{VOC}_{\text{LwN, Max}}} \right\} \times \frac{1 - \left( \frac{\text{VOC}_{\text{LwN, Max}}/\text{D}_{\text{Max}}}{\text{VOC}_{\text{LwC}}/\text{D}_{\text{c}}} \right)}{1 - \left( \frac{\text{VOC}_{\text{LwN, Max}}/\text{D}_{\text{Max}}}{\text{VOC}_{\text{LwC}}/\text{D}_{\text{c}}} \right)} \right] \times 100
\]

Where:

\[
\begin{align*}
\text{C.E.} &= \text{Control Efficiency, percent} \\
\text{VOC}_{\text{LwC}} &= \text{VOC Limit of Rule 1151, less water and less exempt compounds, pursuant to paragraph (c)(1).}
\end{align*}
\]
\(\text{VOC}_{L \text{wn,Max}} = \text{Maximum VOC content of non-compliant coating used in conjunction with a control device, less water and exempt compounds.}\)

\(D_{n,\text{Max}} = \text{Density of VOC solvent, reducer, or thinner contained in the non-compliant coating containing the maximum VOC.}\)

\(D_c = \text{Density of corresponding VOC solvent, reducer, or thinner used in the compliant coating system} = 880 \text{ g/L.}\)

(7) Alternative Emission Control Plan

A person may comply with the provisions of paragraph (c)(1) by means of an Alternative Emission Control Plan (AECP), 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 Specification and Sale

(1) 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 applicable VOC limits required by paragraph (c)(1) for the specific application, or does not meet the requirements of paragraphs (c)(2) or (c)(3).

(2) 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 applicable VOC limits required by paragraph (c)(1) for the specific application, or does not meet the requirements of paragraphs (c)(2) or (c)(3).

(3) 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).
(4) 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.

(5) 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 ("USEPA") 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
   (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 United States Environmental Protection Agency 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 determined to be equivalent after review by the staffs of the District, California Air Resources Board ("ARB"), and the United States Environmental Protection Agency, 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 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) USEPA 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 paragraph (c)(6) 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. USEPA Test Method 18, or ARB 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 paragraphs (c)(1) and (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 prohibition specified in paragraphs (d)(1) or (d)(2) shall not apply to persons offering for sale to, selling to, distributing to, or requiring other persons who are operating an approved emission control system under paragraph (c)(6), or complying under paragraph (c)(7), or operating pursuant to paragraph (i)(4).

(4) 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.

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

(6) The requirements of paragraphs (c)(1), (d)(1), and (d)(2) 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.

(7) 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.

(8) 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.