Air Pollution Control Board

San Diego County Air Pollution Control District

AGENDA ITEM

DATE: June 30, 2010

TO: San Diego County Air Pollution Control Board

SUBJECT: NOTICED PUBLIC HEARING - ADOPTION OF RULE 67.20.1 - MOTOR VEHICLE AND MOBILE EQUIPMENT COATING OPERATIONS, AND REPEAL OF EXISTING RULE 67.20 - MOTOR VEHICLE AND MOBILE EQUIPMENT REFINISHING OPERATIONS (DISTRICT: ALL)

SUMMARY:

Overview

Adoption by the Air Pollution Control Board is requested for proposed Rule 67.20.1, regulating emissions of volatile organic compounds from automotive coating operations. Volatile organic compounds emitted into the atmosphere contribute to formation of ozone, a major component of smog. San Diego County does not yet attain State and federal standards for ozone. Consequently, State law requires local adoption of all feasible measures to control emissions of volatile organic compounds.

Rule 67.20.1, if adopted, will replace Rule 67.20 and reflects the current availability of lower-emitting water-based automotive paints and cleaning solvents used in refinishing operations. The proposed rule provisions are consistent with those in a Suggested Control Measure developed by the California Air Resources Board, designed to simplify and improve consistency among automotive refinishing rules of California air districts while further reducing emissions from refinishing operations. The California Air Resources Board has requested adoption and implementation of the Suggested Control Measure by local air districts as soon as possible. Adoption of Rule 67.20.1 will fulfill this request for San Diego County.

Existing automotive refinishing operations will have 12 months to comply with the new rule, allowing time for adjustments of their processes and to deplete existing inventories of non-compliant materials. Upon completion of the 12-month grace period for existing operations, Rule 67.20 will automatically be repealed.

Staff conducted substantial outreach to affected facilities and industrial groups. All known issues have been addressed. Numerous automotive refinishing shops are already

in compliance due to market availability of compliant products.

Recommendation(s)
AIR POLLUTION CONTROL OFFICER

1. Find that the adoption of Rule 67.20.1 and repeal of Rule 67.20 are categorically exempt from the provisions of the California Environmental Quality Act pursuant to California Code of Regulations, Title 14, Section 15308, as an action taken to assure the protection of the environment, where the regulatory process involves procedures for protection of the environment, and pursuant to California Code of Regulations Title 14, Section 15061(b)(3), since it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment.

2. Adopt the resolution entitled Resolution Adopting New Rule 67.20.1 – Motor Vehicle and Mobile Equipment Coating Operations, and Repeal of Rule 67.20 – Motor Vehicle and Mobile Equipment Refinishing Operations of Regulation IV of the Rules and Regulations of the San Diego County Air Pollution Control District.

Fiscal Impact
The proposed new Rule 67.20.1 will not have a significant fiscal impact on the Air Pollution Control District. The rule will be implemented and enforced with existing Air Pollution Control District staff.

Business Impact Statement
Adopting Rule 67.20.1 will not adversely impact the business community. Compliant coatings and cleaning solvents are widely available and many affected businesses are already using compliant materials. The socioeconomic impact assessment conducted by the San Diego County Air Pollution Control District and its contractor shows that the proposed rule will not have a detrimental impact on affected industries.

Advisory Board Statement
At its meeting on April 14, 2010, with a quorum present, the Air Pollution Control District Advisory Committee supported the Air Pollution Control District's recommendations.

BACKGROUND:
San Diego County does not currently meet the National and State Ambient Air Quality Standards for ozone and therefore is classified as an ozone nonattainment area. Both federal and State laws require the San Diego County Air Pollution Control District (District) to implement rules that regulate emissions of ozone precursors – volatile organic compounds (VOCs) and oxides of nitrogen.

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Existing Rule 67.20 regulates VOC emissions from motor vehicle and mobile equipment refinishing (coating or recoating) operations. The rule was adopted in 1996 to satisfy State law. In 2005, the California Air Resources Board (ARB) adopted a Suggested Control Measure (SCM) for Automotive Coatings to achieve further VOC emission reductions due to the availability of low emitting water-based paints and cleaning materials. The SCM also improves the clarity and enforceability of District automotive coatings rules and provides a basis for Statewide uniformity in those rules. The SCM reflects nearly four years of study of automotive coatings and was developed in cooperation with local air districts, the United States Environmental Protection Agency, and the affected industry. Several air districts have since updated their rules to reflect the SCM, including South Coast, San Joaquin Valley, Ventura County, Santa Barbara County, and Bay Area.

As a result of the State SCM and other air district rules, compliant coatings and solvents are now readily available in San Diego County and elsewhere. These coatings are lower emitting due to reformulations that replaced some of the organic solvent with water or exempt solvents (with low photochemical reactivity) while maintaining coating durability. New application equipment and training are generally required to apply the low-emitting coatings. However, coating manufacturers and paint suppliers often provide equipment and training free of charge for use of their coatings.

Due to the extent of Rule 67.20 revisions that would be necessary for consistency with the SCM, and for purposes of clarity, the District proposes repealing Rule 67.20 and adopting new Rule 67.20.1 that incorporates the VOC limits and other provisions of the SCM. Consistent with the SCM, Rule 67.20.1 simplifies the regulation of automotive refinishing operations by eliminating the separation of vehicle types into Group I and Group II categories and instead provides uniform VOC limits for coatings used on passenger vehicles, heavy-duty vehicles, and mobile equipment. It also eliminates the composite VOC limit for multistage systems and the corresponding averaging calculations of the VOC content for such systems and instead provides separate VOC limits for clear coatings and color coatings.

Proposed Rule 67.20.1 specifies lower VOC content for nearly all coating categories. It also specifies a VOC limit of 25 grams/liter for any cleaning material used for motor vehicle and mobile equipment coating operations. Additionally, as required by the SCM, the proposed rule has a number of prohibitions that include a prohibition of sale of non-compliant coatings or solvents and a prohibition of possession of such materials in automotive refinishing shops. The rule also contains some additional requirements for manufacturers or suppliers of automotive coatings and related materials to provide all the necessary information to their clients enabling them to comply with the rule requirements.

Proposed Rule 67.20.1 also has some exemptions, as appropriate. These are limited exemptions for military tactical support vehicles and equipment and for motor vehicle restoration facility operations designed to restore a vehicle to its original appearance.

SUBJECT: NOTICED PUBLIC HEARING – ADOPTION OF RULE 67.20.1 – MOTOR VEHICLE AND MOBILE EQUIPMENT COATING OPERATIONS, AND REPEAL OF EXISTING RULE 67.20 – MOTOR VEHICLE AND MOBILE EQUIPMENT REFINISHING OPERATIONS (District: All)

New Rule 67.20.1 will apply to approximately 370 existing automotive refinishing facilities in San Diego County. It will reduce VOC emissions by approximately 65%, or 370 tons per year.

During development of Rule 67.20.1, District staff conducted meetings with the operators of affected sources and conducted a public workshop. Issues that were raised during and after the workshop were successfully resolved with affected parties.

Socioeconomic Impact Assessment
Section 40728.5 of the State Health and Safety Code requires the District to perform an assessment of the socioeconomic impacts when adopting, amending, or repealing a rule that will significantly affect air quality or emission limitations. New Rule 67.20.1 will affect emission limitations by establishing more stringent VOC emission standards for automotive coating operations. Accordingly, a Socioeconomic Impact Assessment has been prepared (Attachment B). It is not anticipated that proposed Rule 67.20.1 will have any significant impacts on the regional economy or on small businesses in San Diego County.

Environmental Statement
The California Environmental Quality Act (CEQA) requires environmental review for certain actions. The ARB determined that no significant adverse environmental impacts should occur as a result of an air district adopting the provisions of the State SCM. The District conducted a preliminary review of whether CEQA applies to the adoption of Rule 67.20.1. Upon full implementation, new Rule 67.20.1 will reduce VOC emissions from automotive refinishing operations by approximately 65%, or 370 tons per year. District staff determined that the adoption of Rule 67.20.1 and repeal of Rule 67.20 are categorically exempt from the provisions of CEQA pursuant to California Code of Regulations, Title 14, Section 15308, as an action taken to assure the protection of the environment, where the regulatory process involves procedures for protection of the environment, and pursuant to Section 15061(b)(3), since it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment.

Linkage to the County of San Diego Strategic Plan
The County's five-year strategic plan includes an Environment Initiative to ensure environmental preservation and enhance quality of life. Proposed new Rule 67.20.1 will reduce emissions that contribute to smog formation without negatively impacting the local business community. The rule balances air quality preservation, public health protection, and economic development needs.

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Respectfully submitted,

CHANDRA L. WALLAR
Deputy Chief Administrative Officer

ROBERT KARD
Air Pollution Control Officer

ATTACHMENT(S)

Attachment A – Resolution Adopting New Rule 67.20 and Repeal of Rule 67.20
Attachment B – Socioeconomic Impact Assessment
Attachment C – Comparative Analysis
Attachment D – Incremental Cost Effectiveness Analysis
Attachment E – Workshop Report
Attachment F – Existing Rule 67.20 to be Repealed

SUBJECT: NOTICED PUBLIC HEARING – ADOPTION OF RULE 67.20.1 – MOTOR VEHICLE AND MOBILE EQUIPMENT COATING OPERATIONS, AND REPEAL OF EXISTING RULE 67.20 – MOTOR VEHICLE AND MOBILE EQUIPMENT REFINISHING OPERATIONS (District: All)

AGENDA ITEM INFORMATION SHEET

REQUIRES FOUR VOTES: [] Yes [X] No

PREVIOUS RELEVANT BOARD ACTIONS:
November 13, 1996 (APCB #3), Adoption of Rule 67.20 – Motor Vehicle and Mobile Equipment Refinishing Operations.

BOARD POLICIES APPLICABLE:
N/A

BOARD POLICY STATEMENTS:
N/A

ORACLE AWARD NUMBER(S) AND CONTRACT AND/OR REQUISITION NUMBER(S):
N/A

ORIGINATING DEPARTMENT: [Click here & type]

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AGENDA ITEM INFORMATION SHEET
(continued)

CONCURRENCE(S):

COUNTY COUNSEL REVIEW	[X]	Yes			
Written Disclosure per County Charter Section 1000.1 Required	[]	Yes	[X]	No	
GROUP/AGENCY FINANCE DIRECTOR	[]	Yes	[X]	N/A	
CHIEF FINANCIAL OFFICER	[]	Yes	[X]	N/A	
GROUP/AGENCY INFORMATION TECHNOLOGY DIRECTOR	[]	Yes	[X]	N/A	
COUNTY TECHNOLOGY OFFICE	[]	Yes	[X]	N/A	
Group/Agency Human Resources Director	[]	Yes	[X]	N/A	
DEPARTMENT OF HUMAN RESOURCES	[]	Yes	[X]	N/A	

Other Concurrence(s): N/A

AUTHORIZED REPRESENTATIVE:

ROBERT J. KARD
Air Pollution Control Officer

ATTACHMENT A

Resolution of the San Diego County
Air Pollution Control Board
Resolution No. **10-099**
Meeting Date: **6/30/10 (AP1)**

RESOLUTION ADOPTING NEW RULE 67.20.1 – MOTOR VEHICLE AND MOBILE EQUIPMENT COATING OPERATIONS, AND REPEAL OF RULE 67.20 – MOTOR VEHICLE AND MOBILE EQUIPMENT REFINISHING OPERATIONS OF REGULATION IV OF THE RULES AND REGULATIONS OF THE SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT

On motion of Member **Jacob**, seconded by Member **Cox**, the following resolution is adopted:

WHEREAS, the San Diego County Air Pollution Control Board, pursuant to Section 40702 of the California Health and Safety Code, adopted Rules and Regulations of the Air Pollution Control District of San Diego County; and

WHEREAS, said Board now desires to amend said Rules and Regulations; and

WHEREAS, notice has been given and a public hearing has been held relating to the amendment of said Rules and Regulations pursuant to Section 40725 of the Health and Safety Code; and

WHEREAS, pursuant to section 40727 of the Health and Safety Code, the San Diego County Air Pollution Control Board makes the following findings:

(1) (Necessity) The adoption of proposed new Rule 67.20.1 is necessary in order to implement all feasible control measures to achieve the ambient air quality standards for ozone by further reducing emissions of Volatile Organic Compounds in the County of San Diego;

(2) (Authority) The adoption of proposed new Rule 67.20.1 is authorized by Health and Safety Code section 40702;

(3) (Clarity) The proposed new Rule 67.20.1 can be easily understood by persons directly affected by it;

(4) (Consistency) The adoption of proposed new Rule 67.20.1 is in harmony with, and not in conflict with or contrary to, existing statutes, court decisions, and State and federal regulations;

(5) (Non-duplication) The adoption of proposed new Rule 67.20.1 will not duplicate existing District, State or federal requirements;

(6) (Reference) The adoption of proposed new Rule 67.20.1 is necessary to comply with Health and Safety Code Section 40914(b)(2), that requires adoption of every feasible control measure to reduce ozone precursor emissions;

WHEREAS, the Air Pollution Control Board further finds pursuant to Health and Safety Code Section 40001 that proposed new Rule 67.20.1 will facilitate the attainment of ambient air quality standards; and

WHEREAS, the Air Pollution Control Board further finds that an assessment of socioeconomic impacts of the proposed new Rule 67.20.1, as required by Section 40728.5 of the Health and Safety Code, has been prepared and has been made available for public review and comment, and that the socioeconomic impacts of the proposed new rule have been actively considered and the proposed new rule will not have adverse socioeconomic impacts; and

WHEREAS, the Air Pollution Control Board further finds that an analysis comparing proposed new Rule 67.20.1 with applicable requirements of federal and local regulations has been prepared pursuant to Health and Safety Code Section 40727.2; and

WHEREAS, the Air Pollution Control Board further finds that an incremental cost-effectiveness analysis pursuant to Health and Safety Code Section 40920.6(a) has been prepared for proposed new Rule 67.20.1 and has been made available for public review and comment, and has been actively considered.

NOW THEREFORE IT IS RESOLVED AND ORDERED by the San Diego County Air Pollution Control Board that the Rules and Regulations of the Air Pollution Control District of San Diego County be and hereby are amended as follows:

1. Existing Rule 67.20 is repealed in its entirety.

2. Proposed new Rule 67.20.1 is to read as follows:

RULE 67.20.1 MOTOR VEHICLE AND MOBILE EQUIPMENT COATING OPERATIONS (Adopted & Effective *[date of adoption]*)

(a) **APPLICABILITY**

(1) Except as otherwise provided in Section (b), this rule is applicable to:

(i) All motor vehicle and mobile equipment coating operations including finishing or refinishing of motor vehicles, mobile equipment, non-motorized models, and their associated parts and components.

(ii) All cleaning operations associated with motor vehicle and mobile equipment coating operations.

(iii) Any person who supplies, sells, offers for sale, manufactures, or distributes any automotive coating or associated cleaning material for use within San Diego County.

(2) This rule is not applicable to:

(i) Coating of motor vehicles, mobile equipment, non-motorized models, or their associated parts and components, as identified by the original equipment manufacturer's (OEM) parts list, during original manufacture on an assembly line.

(ii) Coating of mobile homes. Rule 67.0 shall apply to such operations.

(iii) Coating of radiators or engine components. Rule 67.3 shall apply to such operations.

(iv) Solvent cleaning, stripping or degreasing operations conducted in a tank, drum or other container, except for those pertaining to cleaning of coating application equipment. Rules 67.6.1 or 67.6.2, as appropriate, shall apply to such operations.

(v) Touch-up coatings packaged in containers with a capacity of 2.0 fluid ounces or less.

(vi) Coating operations on military tactical support vehicles and equipment that use chemical agent resistant coatings and are performed on site at installations owned or operated by the U.S. Department of Defense or the National Guard. Rule 67.3 shall apply to such operations.

(3) Rule 66, 66.1 or 67.3 shall not apply to motor vehicle and mobile equipment coating operations which are subject to or exempt from this rule.

(b) **EXEMPTIONS**

(1) The provisions of this rule shall not apply to the following:

(i) Any person who supplies, sells, offers for sale, manufactures, or distributes any automotive coating or associated cleaning material exclusively for use outside the District or for shipment to other manufacturers for reformulation or repacking. It shall be the responsibility of any person claiming this exemption to maintain records as specified in Section (g), and Subsections (h)(3) and (h)(4).

(ii) Motor vehicle and mobile equipment coating operations conducted with non-refillable hand-held aerosol spray containers.

(2) The provisions of Subsections (d)(3) through (d)(6), Section (e), Subsections (f)(1) and (f)(2), and Sections (h) through (j) shall not apply to motor vehicle and mobile equipment coating operations performed by any individual at his/her residence for the purpose of finishing or refinishing that individual's personal vehicles.

(3) The provisions of Subsections (d)(1), (d)(2), (d)(4)(i) and (d)(5) shall not apply to motor vehicle coating operations that are a part of a motor vehicle restoration process provided that:

(i) Not more than 25 gallons per calendar year of all noncompliant automotive coatings are used at the stationary source; and

(ii) Not more than 15 vehicles are restored per calendar year at the stationary source; and

(iii) No other motor vehicle or mobile equipment finishing or refinishing operations occur at the same stationary source.

It shall be the responsibility of any person claiming this exemption to maintain monthly records of the number of vehicles restored, and the coating usage along with a copy of the records provided by the manufacturer or supplier as specified in Section (g). These records shall be retained on site for at least three years and made readily available to the District upon request.

(4) The provisions of Subsection (d)(3) shall not apply to:

(i) The application of underbody coatings or truck bed liner coatings, graphic design applications, or

(ii) Any coating use in the amount of one fluid ounce (29.6 milliliters) or less per application.

(5) The provisions of Subsections (d)(4)(iii) and (d)(4)(iv) shall not apply to cleaning of coating application equipment provided that the cleaning material does not contain any exempt compounds and the VOC content of cleaning material does not exceed 25 grams per liter (0.21 lbs/gal).

(6) The provisions of Subsection (d)(5) shall not apply to any cleaning material used for the removal of dust, wax, grease, tar, or bugs provided that:

(i) The VOC content of cleaning material does not exceed 780 grams per liter (6.5 lbs/gal), and

(ii) The cleaning material is applied by non-aerosol, hand-held spray container, and

(iii) Not more than 20 gallons per calendar year of such cleaning material are used at the stationary source.

(c) **DEFINITIONS**

For the purposes 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) **"Aircraft Ground Support Equipment"** means any vehicle used to support aircraft activities at airports, including, but not limited to, engine stands, corrosion control stands, hydraulic test stands, maintenance stands, prop dollies, nitrogen and oxygen carts, gas turbines, crash dollies, air conditioning units, light stands, bomb racks, luggage carriers, auxiliary power units, and aircraft boarding ramps,

(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 Cleaning Material**" means any cleaning material that is used in conjunction with motor vehicle and mobile equipment coating operations, for either surface preparation, surface cleaning or application equipment cleaning.

(5) "**Associated Parts and Components**" means, 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. This definition does not include circuit boards.

(6) "**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. These activities do not include metal plating.

(7) "**Automotive Coating Component**" means any constituent of a coating, which is supplied for or used in an automotive coating, including, but not limited to, a reducer or thinner, toner, hardener, and coating additive, which is recommended by any person to distributors or end-users for use in an automotive coating operation.

(8) "**Automotive Refinishing Facility**" means any shop, business, location, or parcel of land where motor vehicle or mobile equipment coating operations take place. This

does not include the OEM plant where the motor vehicles or mobile equipment are completely assembled.

(9) "**Cleaning Material**" means any VOC containing substance which is liquid at atmospheric pressure and ambient temperature and which is used as a cleaning agent, surface preparation agent, or for other similar purposes.

(10) "**Cleaning Operations**" means the removal of loosely held uncured adhesives, inks, coatings, or other contaminants, including, but not limited to, dirt, soil, or grease, from motor vehicles, mobile equipment, associated parts and components, products, tools, machinery, equipment, or general work areas.

(11) "**Clear Coating**" means any coating that contains no pigments and is labeled and formulated for application over a color coating or another clear coating.

(12) **"Coating"** means a VOC containing material which can be applied to a surface and which forms a film in order to beautify, preserve, repair and/or protect the surface. This includes, but is not limited to, any primer, paint, varnish, stain, lacquer, enamel, shellac, sealer or maskant, but excludes adhesive.

(13) **"Coating Additive"** means a VOC containing material that is mixed with a coating to modify the coating properties. Coating additives include, but are not limited to, catalysts, retarders, accelerators, activators, plasticizers, flex agents, elastomeric additives, fisheye preventers, flop adjusters, texture additives, and flattening agents.

(14) "**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, adhesion promoter, or another color coating. Color coatings include metallic/iridescent coatings.

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

(16) **"Electrostatic Spray Application"** means the application of charged atomized coating droplets which are deposited by electrostatic attraction.

(17) **"Exempt Compound"** means the same as defined in Rule 2.

(18) **"Existing Motor Vehicle and Mobile Equipment Coating Operation"** means any such coating operation that is not a new motor vehicle and mobile equipment coating operation.

(19) **"Finishing"** means the original coating of motor vehicles, mobile equipment, non-motorized models, or their associated parts and components, excluding coating performed at an OEM plant.

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

(21) **"Graphic Design Application"** means the application of logos, letters, numbers, or graphics to a painted surface by brush, roller, or airbrush.

(22) **"Hand Application Method"** means a coating application method accomplished by applying a coating by manually held, non-mechanically operated equipment. Such equipment includes but is not limited to paint brushes, hand rollers, rags, and sponges.

(23) **"High-Volume Low-Pressure (HVLP) Spray"** means a coating application method using a spray applicator and pressurized air which is designed to be operated and which is operated at an atomizing pressure between 0.1 and 10.0 psig, measured dynamically at the center of the applicator's air cap and at the applicator's air horns.

(24) **"Metallic/Iridescent Coating"** means any topcoat which contains more than 5 grams per liter (0.042 lb/gal) of metal or iridescent particles, as applied, where such particles are visible in the dried film.

(25) **"Military Tactical Support Vehicle and Equipment"** means any vehicle and equipment, that meets military specifications, owned by the U.S. Department of Defense, the National Guard, and/or the U.S. military services or its allies, and is used in combat, combat support, combat service support, tactical or relief operations, or training for such operations.

(26) **"Mobile Equipment"** means any device, which may be drawn and/or driven on a roadway or rails, including, but not limited to, truck bodies, truck trailers, utility bodies, camper shells, locomotives, railcars, trolleys, military vehicles, aircraft ground support equipment, mobile cranes, bulldozers, street cleaners, and implements of husbandry.

(27) **"Mobile Home"** means a structure that is transportable in one or more sections, is eight body feet or more in width, or 40 body feet or more in length, in the traveling mode, or, when erected onsite, is 320 or more square feet, is built on a permanent chassis and designed to be used as a single-family dwelling with or without a foundation system when connected to the required utilities, and includes the plumbing, heating, air conditioning, and electrical systems contained therein. Mobile homes do not include recreational vehicles or buses.

(28) **"Motor Vehicle"** means a vehicle which is self-propelled including, but not limited to cars, trucks, buses, golf carts, vans, motorcycles, tanks, and armored personnel carriers and excluding self-propelled wheelchairs, invalid tricycles or quadricycles.

(29) **"Motor Vehicle and Mobile Equipment Coating Operation"** means the finishing or refinishing of motor vehicles or mobile equipment, including non-motorized models, and associated parts and components.

(30) **"Motor Vehicle Restoration"** means a process that includes, but is not limited to, disassembling a whole vehicle or a part of the vehicle, repairing or replacing damaged metal, mechanical, electrical components and inside cabin fixtures, and then reassembling the whole vehicle and applying automotive coatings to restore the vehicle to its original appearance at the time it was delivered from the OEM plant.

(31) **"Multi-Color Coating"** means any coating that is applied over a primer or adhesion promoter and which exhibits more than one color in the dried film after a single application and is packaged in a single container.

(32) "**New Motor Vehicle and Mobile Equipment Coating Operation**" means any such coating operation for which a complete application for an Authority to Construct in San Diego County was submitted after *[date of adoption]*.

(33) **"Non-motorized Model"** means a non-motorized vehicle designed to represent a new concept of future motor vehicles for display purposes.

(34) "**Person**" means the same as defined in Rule 2.

(35) **"Pigmented Coating for Military Tactical Support Vehicles and Equipment"** means any pigmented coating applied to military tactical support vehicles and equipment that meets military specifications and does not require a subsequent clear coating.

(36) **"Pretreatment Coating"** means any coating which contains a minimum of 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.

(37) **"Primer"** means any pigmented or non-pigmented coating, which is labeled and formulated for application to a substrate to provide a bond between the substrate and subsequent coats, corrosion resistance, a smooth substrate surface, or resistance to penetration of subsequent coats, and on which a subsequent coating is applied.

(38) **"Primer Sealer"** means any coating which is labeled and formulated to be used prior to application of a color coating for the purpose of color uniformity, or to promote the ability of the underlying coating to resist penetration by the color coating.

(39) **"Refinishing"** means any coating of motor vehicles 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 OEM plant.

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

(41) "**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.

(42) "**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).

(43) **"Stationary Source"** means the same as defined in Rule 2.

(44) **"Surface Preparation"** means the removal of contaminants such as dust, soil, oil, grease, etc, prior to application of automotive coatings or prior to any other steps involved in motor vehicle and mobile equipment coating operations.

(45) **"Temporary Protective Coating"** means any coating which is labeled and formulated for the purpose of temporarily protecting areas from overspray or mechanical damage.

(46) **"Touch-up Coating"** means a coating applied by brush, by aerosol containers, or any non-atomizing application method that is used to cover minor imperfections.

(47) **"Transfer Efficiency"** means the ratio of the weight or volume of coating solids adhering to the part being coated to the weight or volume of coating solids applied in the application process, expressed as a percentage.

(48) "**Truck Bed Liner Coating**" means any coating, labeled and formulated for application to a truck bed to protect it from surface abrasion. It does not include clear, color, multi-color and single-stage coatings.

(49) **"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.

(50) **"Uniform Finish Coating or Blender"** 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.

(51) **"Volatile Organic Compound (VOC)"** means the same as defined in Rule 2.

(52) **"VOC Content of Coatings, Actual"** means the same as "VOC Content per Volume of Material" as defined in Rule 2.

(53) **"VOC Content of Coatings, Regulatory"** means the same as "VOC Content per Volume of Coating, Less Water and Less Exempt Compounds" as defined in Rule 2.

(54) **"VOC Content per Volume of Coating, Less Water and Less Exempt Compounds"** means the same as defined in Rule 2.

(55) **"VOC Content per Volume of Material"** means the same as defined in Rule 2.

(d) **STANDARDS**

(1) VOC Content Limits:

A person shall not conduct any motor vehicle and mobile equipment coating operation by using any coating with a VOC content in excess of the following limits:

Coating Category	**VOC content limit per volume of coating as applied, less water and less exempt compounds (VOC content of coatings, regulatory)**	
	gram/liter	(lb/gal)
Adhesion Promoter	540	4.5
Clear Coating	250	2.1
Color Coating	420	3.5
Multi-Color Coating	680	5.7
Pigmented Coating for Military Tactical Support Vehicles and Equipment	420	3.5
Pretreatment Coating	660	5.5
Primer	250	2.1
Primer for Military Tactical Support Vehicles and Equipment	420	3.5
Primer Sealer	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 Finish Coating or Blender	540	4.5
Any other coating type	250	2.1

(2) Most Restrictive VOC Content Limit

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

(3) Coating Application Equipment

A person shall conduct motor vehicle and mobile equipment coating operations by using only the following coating application methods:

(i) Electrostatic spray application; or

(ii) Flow coat application; or

(iii) Dip coat application; or

(iv) Roll coat; or

(v) Hand application methods; or

(vi) High-volume low-pressure (HVLP) spray. Facilities using an HVLP spray gun shall have available on site pressure gauges in proper operating condition to measure the air cap pressure or have available manufacturer's technical information regarding the correlation between the handle air inlet pressure and the air cap pressure. If the correlation option is used to demonstrate compliance, a handle air inlet pressure gauge will be required on site in proper operating condition to measure the handle air inlet pressure; or

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

(4) Cleaning of Coating Application Equipment

A person shall not clean coating application equipment used in motor vehicle and mobile equipment coating operations unless:

(i) The VOC content of cleaning material does not exceed 25 grams per liter (0.21 lbs/gal), as applied; and

(ii) The cleaning material is flushed or rinsed through the application equipment, including paint lines, without exposure to air, into a container which has in place a lid that completely covers the container and has no visible holes, breaks or openings; and either

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

(iv) A system is used that totally encloses the component parts being cleaned during the washing, rinsing, and draining process.

(5) Surface Preparation and Other Cleaning Operations

A person shall not use any material for surface preparation or any other surface cleaning unless its VOC content is 25 grams or less per liter of material (0.21 lbs/gal), as applied.

(6) Waste Disposal

A person shall not use coating application equipment or any other means to dispose of waste coatings, coating components, surface preparation materials, or cleaning materials by spraying into the air, except when momentarily purging coating material from a spray applicator cap immediately before or after applying the coating material.

(e) **CONTROL EQUIPMENT**

(1) In lieu of complying with the provisions of Subsection (d)(1) through (d)(5) a person may elect to use an air pollution control system which:

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

(ii) Includes an emission collection system which captures emissions generated from coating, surface preparation, and/or application equipment cleaning and transports the captured emissions to an air pollution control device; and

(iii) Has an overall control efficiency of at least 85% by weight.

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

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

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

(3) Upon approval of the Operation and Maintenance Plan by the Air Pollution Control Officer, the person shall comply with the provisions of the approved plan thereafter.

(f) PROHIBITIONS

(1) Prohibition of Manufacture or Sale

A person shall not manufacture, blend, repackage for sale, supply, sell, offer for sale, or distribute for use within the District any automotive coating or associated cleaning material with a VOC content in excess of the limits specified in Subsections (d)(1), (d)(4) and (d)(5), except as provided in Subsections (b)(3), (b)(6) or for use with control equipment specified in Section (e).

(2) Prohibition of Specification

A person shall not solicit or require the use, or specify the application, of any automotive coating or associated cleaning material, if such use or application results in a violation of any provisions of this rule, except as provided in Subsections (b)(3), (b)(6) or for use with control equipment specified in Section (e). This prohibition is applicable to any written or oral contract, including, but not limited to, job orders, under the terms of which any coating or cleaning material subject to this rule is to be used or applied within San Diego County.

(3) Prohibition of Possession

A person shall not possess at any automotive refinishing facility any automotive coating or associated cleaning material with a VOC content in excess of the limits specified in Subsections (d)(1),(d)(4) and (d)(5), except as provided in Subsections (b)(3), (b)(6) or for use with control equipment specified in Section (e).

(g) MANUFACTURER AND SUPPLIER INFORMATION

Any person, who manufactures, sells, offers for sale, or supplies any coating, coating component, or associated cleaning material for use in motor vehicle and mobile equipment coating operations in or outside of San Diego County shall provide the following information to customers:

(1) The manufacturer's name and identification of each coating or coating component, components mix ratio, surface preparation and cleaning material; and

(2) The applicable coating category(ies) as specified in Subsection (d)(1) and the VOC content of coatings, actual and VOC content of coatings, regulatory, as supplied, expressed in grams per liter or pounds per gallon and printed on a coating container label and/or manufacturer data sheet for each automotive coating, and automotive coating component.

(3) The VOC content of each cleaning material as supplied, expressed in grams per liter or pounds per gallon, and printed on the cleaning material's container label.

(h) **RECORDKEEPING**

Any person subject to the provisions of this rule shall maintain records, as applicable, in accordance with the following:

(1) Automotive Coating and Cleaning Materials

Except as otherwise provided in Subsection (b)(2), any person subject to any of the provisions of Subsections (d)(1) through (d)(5) shall:

(i) Maintain a current list of coatings, coating components, and cleaning materials in use. This list shall provide all the data necessary to evaluate compliance, including, but not limited to:

(A) Material name, manufacturer and manufacturer identification.

(B) Type and applicable coating category specified in Subsection (d)(1) of each coating used and the specific mix ratio.

(C) VOC content of coatings, actual and VOC content of coatings, regulatory, as applied, and VOC content of cleaning material, as used.

(ii) Maintain monthly purchase records of coatings and cleaning materials identifying the coating category specified in Subsection (d)(1), name and volume of material purchased.

(iii) Maintain monthly or daily records showing the manufacturer, manufacturer identification, and amount of each coating, coating components, and cleaning material used. For coatings used, the records must also contain the applicable coating category(ies) as specified in Subsection (d)(1).

(iv) Maintain current manufacturer specification sheets, material safety data sheets, product data sheets, or technical bulletins, which list the VOC content of coatings, actual and VOC content of coatings, regulatory, and the VOC content of automotive coating components and of each cleaning material.

(2) Control Equipment

Any person using control equipment pursuant to Section (e) of this rule shall:

(i) Maintain records in accordance with Subsection (h)(1); and

(ii) For all coating, cleaning, and/or surface preparation materials not in compliance with Subsections (d)(1), (d)(4) and (d)(5), maintain daily records of the amount of each coating or each coating component, surface preparation and cleaning material used; and

(iii) Maintain daily records of key system operating parameters as approved in the Operation and Maintenance Plan. Such records shall be sufficient to document continuous compliance with Subsection (e)(1)(iii) during periods of emission producing activities.

(3) Manufacturer and Supplier Records

Any person subject to the provisions of Sections (f) or (g) of this rule shall maintain records of all automotive coatings, coating components, and associated cleaning materials sold for use in, or delivery to, San Diego County, or sold for use or delivery outside of San Diego County. For each material sold, these records shall show the name and business address of the purchaser, the material manufacturer and manufacturer identification, and the type and amount of material sold.

(4) All records specified in this Section (h) shall be retained on site for at least three years and made readily available to the District upon request.

(i) TEST METHODS

When more than one test method or set of test methods are specified in this Section, 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.

(1) Measurements of the VOC content of coatings subject to Subsection (d)(1) shall be conducted in accordance with EPA Test Method 24 (40 CFR 60, Appendix A) "Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings".

(2) Measurements of the content of metal or iridescent particles in metallic/iridescent coatings as defined in Subsection (c)(24) shall be conducted in accordance with the South Coast Air Quality Management District (SCAQMD) Test Method 318-95 "Determination of Weight Percent of Elemental Metal in Coatings by X-ray Diffraction".

(3) Measurements of acid content of pretreatment coating as defined in Subsection (c)(36) shall be conducted in accordance with the most current version of ASTM Standard Test Method D 1613-06, or its current version, "Acidity in Volatile Solvents and Intermediates Used in Paint, Varnish, Lacquer and Related Products".

(4) Measurements of the VOC content of surface preparation and cleaning materials subject to the requirements of Subsections (d)(4) and (d)(5) shall be conducted by the SCAQMD Methods 313 (Determination of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry) or 308 (Quantitation of Compounds by Gas Chromatography).

(5) Measurements of transfer efficiency pursuant to Subsection (d)(3)(vii) shall be conducted in accordance with the SCAQMD's "Spray Equipment Transfer Efficiency Test Procedure for Equipment User," as it exists on (*date of adoption*). The equivalency of coating application equipment pursuant to Subsection (d)(3)(vii) shall be determined by the SCAQMD "Guidelines for Demonstrating Equivalency with District Approved Transfer Efficient Spray Guns" as they exist on (*date of adoption*).

(6) The overall control efficiency pursuant to Subsection (e)(1)(iii) shall be determined by multiplying the capture efficiency of the emission collection system by the control efficiency of the air pollution control device. The control efficiency of the air pollution control device shall be determined using EPA Methods 25A, and/or 18, (40 CFR 60, Appendix A) and in accordance with a protocol approved by the Air Pollution Control Officer. Capture efficiency shall be determined according to EPA Test Method 204 and technical document, "Guidelines for Determining Capture Efficiency", January 9, 1995. Subsequent to the initial compliance demonstration period, appropriate key system operating parameters as determined by the Air Pollution Control Officer may be used as indicators of the performance of the emission control system.

(7) The content of methyl acetate, acetone, and parachlorobenzotrifluoride shall be determined in accordance with the ASTM Test Method D6133-02 (2008) (Standard Test Method for Acetone, p-Chlorobenzotrifluoride, Methyl Acetate or t-Butyl Acetate Content of Solventborne and Waterborne Paints, Coatings, Resins, and Raw Materials by Direct Injection Into a Gas Chromatograph), or its most current version.

(8) Measurements of exempt compound content, other than determined in accordance with Subsection (i)(7), shall be conducted in accordance with SCAQMD Test Method 303-91 (Determination of Exempt Compounds).

(9) Other test methods which are determined to be equivalent or better than the test methods specified in this rule and approved, in writing, by the Air Pollution Control Officer, California Air Resources Board, and EPA may be used in place of the test methods specified in this rule.

(j) **COMPLIANCE SCHEDULE**

(1) All new motor vehicle and mobile equipment coating operations shall comply with the applicable requirements of this rule upon initial startup.

(2) All existing motor vehicle and mobile equipment coating operations shall comply with the applicable requirements of this rule not later than *[one year from date of adoption]*.

(3) Any person who is electing to use control equipment to comply with the requirements of Subsection (d)(1), (d)(4), or (d)(5) for existing operations shall meet the following increments of progress:

(i) By *[3 months from date of adoption]*, submit to the Air Pollution Control Officer an application for Authority to Construct and Permit to Operate an air pollution control system meeting the requirements of Section (e).

(ii) By *[6 months from date of adoption]*, issue purchase orders for the basic control device and other long delivery time components necessary to comply with Section (e).

(iii) By *[one year from date of adoption]*, demonstrate compliance with Section (e).

IT IS FURTHER RESOLVED AND ORDERED that Rule 67.20.1 of Regulation IV shall take effect *(date of adoption)*.

IT IS FURTHER RESOLVED AND ORDERED that the repeal of Rule 67.20 of Regulation IV shall take effect 12 months after *(date of adoption)*.

PASSED AND ADOPTED by the Air Pollution Control Board of the San Diego County Air Pollution Control District, State of California, this 30th day of June, 2010, by the following votes:

AYES: Cox, Jacob, Slater-Price, Roberts, Horn

APPROVED AS TO FORM AND LEGALITY
COUNTY COUNSEL

BY: _____
SENIOR DEPUTY

STATE OF CALIFORNIA)
County of San Diego)[SS]

I hereby certify that the foregoing is a full, true and correct copy of the Original Resolution entered in the Minutes of the Air Pollution Control Board.

THOMAS J. PASTUSZKA
Clerk of the Air Pollution Control Board

By: _____
Catherine Santos, Deputy

Resolution No. 10-099
Meeting date: 6/30/10 (AP1)

ATTACHMENT B

SOCIOECONOMIC IMPACT ASSESSMENT

PROPOSED NEW RULE 67.20.1 – MOTOR VEHICLE AND MOBILE EQUIPMENT COATING OPERATIONS

March 2010

Prepared by

San Diego County Air Pollution Control District
in collaboration with Applied Development Economics

SOCIOECONOMIC IMPACT ASSESSMENT

PROPOSED NEW RULE 67.20.1 - MOTOR VEHICLE AND MOBILE EQUIPMENT COATING PERATIONS

TABLE OF CONTENTS

EXECUTIVE SUMMARY

This report presents the results of a socioeconomic impact assessment (SIA) of the San Diego County Air Pollution Control District's (District) proposed new Rule 67.20.1 – Motor Vehicle and Mobile Equipment Coating Operations. The SIA was conducted by the District in collaboration with the Applied Development Economics, Inc.

The purpose of this rule is to bring the VOC emission limits for paints and cleaning materials and other requirements for the auto refinishing operations in San Diego County in compliance with the Suggested Control Measure for Automotive Coatings adopted by the Air Resources Board. The new rule will supersede current District Rule 67.20 (Motor Vehicle and Mobile Equipment Refinishing Operations) which was first adopted in 1996.

The new rule will require converting the majority of auto refinishing operations to waterborne technology, i.e., using water-based paints that inherently have significantly lower volatile organic compounds (VOC) content. These paints are widely available in the market place. The rule also includes the lower VOC content limits for cleaning materials and prohibits the sale, distribution or possession of non-complying paints and solvents.

The principal businesses affected by the new rule are about 400 Automotive Body, Paint, and Interior Repair and Maintenance shops (NAICS 811121). The majority of shops (more than 70 %) are small businesses with less than 10 employees. It is expected that to comply with the rule, many shops will purchase additional equipment (such as air moving and heating systems and stainless steel painting guns), new water-based paints and cleaning materials, and train their personnel in using painting techniques suitable for the application of water-based paints.

When implemented, the rule will reduce VOC emissions from motor vehicle and mobile equipment refinishing operations in San Diego County by 373 tons per year, or by 65%. In addition, the proposed new rule will contribute to the statewide uniformity of emission control requirements for the automotive refinishing industry and manufacturers of paint and cleaning materials.

The cost-effectiveness of the rule for the majority of small businesses will be between $1.3 and $2.5 per pound of VOC reduced. This does not exceed the District's threshold for the cost-effectiveness of rules controlling VOC emissions ($6/lb). For large and medium size companies, there will be no additional costs for the VOC emission reductions.

The District has estimated the annual cost of compliance as a share of annual profits for three categories of businesses -large, medium and small. As expected, this share depends on the business size. This report shows that for large and medium businesses this share is within the Air Resources Board guidance (not more than 10% of the profits will be spent on rule compliance). The small businesses may incur significant expenses, which will most likely result in somewhat higher charges to their customers. However, the maximum cost increase attributed to the proposed rule compliance is less than one percent of the average cost of the customary

service charge by the automotive refinishing businesses. Therefore, it is not expected that the increase in the cost would be significant for consumers, or that it would drive a small company out of business. Considering also the additional health and environmental benefits for employees using less organic solvents in the workplace, and the lower VOC emissions to the atmosphere, it can be concluded that proposed new Rule 67.20.1 is not expected to have a significant socioeconomic impact on the affected industry or general public.

I. INTRODUCTION

California law requires air pollution control districts (excluding those with populations of less than 500,000 people) to perform a socioeconomic impact assessment (SIA) when adopting, amending, or repealing rules and regulations that will significantly affect air quality and emission limitations. This report presents the results of a socioeconomic impact assessment of San Diego Air Pollution Control District's (District) proposed new Rule 67.20.1 – Motor Vehicle and Mobile Equipment Coating Operations.

The Health and Safety Code Section 40728.5 specifies the following elements to be included in the socioeconomic impact assessment:

1. The necessity of adopting, amending, or repealing the rule or regulation in order to attain State and federal ambient air quality standards.

2. The type of business, including small business, affected by the rule or regulation.

3. The range of probable costs, including costs to industry or business, including small business, of the rule or regulation.

4. The emission reduction potential of the rule or regulation.

5. The impact of the rule or regulation on employment and the economy of the region affected by the adoption of the rule or regulation.

6. The availability and cost-effectiveness of alternatives to the rule or regulation.

II. NECESSITY OF ADOPTING NEW RULE 67.20.1

San Diego County does not meet the National and State Ambient Air Quality Standards for ozone and is classified as an ozone nonattainment area. Both federal and State laws require the District to implement rules that regulate emissions of ozone precursors – volatile organic compounds (VOC) and nitrogen oxides.

VOC emissions from motor vehicle and motor equipment refinishing (coating and recoating) operations are currently regulated by Rule 67.20 (Motor Vehicle and Mobile Equipment Refinishing Operations). The rule was adopted in 1996 pursuant to the State law that requires implementing the best available retrofit control technology and every feasible measure to control VOC emissions. Since then, the automotive paint technology underwent significant changes mostly related to the environmental concerns regarding the use of organic solvents as paint components. The latest low VOC content paints are waterborne, i.e., they are solutions or emulsions of liquid resins and other paint components in water. While organic solvents are effectively replaced by water, automotive refinishing coatings also contain a small amount of such solvents that are necessary to make resins soluble or dispersible in the aqueous phase and provide better pigment wetting[1].

In 2005, the California Air Resources Board (ARB) adopted a Suggested Control Measure (SCM) [2] to promote waterborne technology that results in lower VOC and toxic compound emissions and in addition, provide consistency among automotive refinishing rules of local air districts throughout the state. ARB estimated that SCM implementation will result in 65% VOC emissions reduction from automotive refinishing operations in California, or about 13.4 tons/day. ARB also recommended that every air district in the state that does not attain the state air quality standard for ozone adopt a rule containing similar VOC limits and other requirements of the SCM.

As mentioned above, current Rule 67.20 was adopted more than 10 years ago and reflected automotive painting technology existing at that time. Amending this rule would require significant changes in its language that would be quite confusing for the public in the rule development process. Therefore, Rule 67.20 will be replaced by new Rule 67.20.1 (Motor Vehicle and Mobile Equipment Coating Operations) that will become effective for existing sources a year after the date of adoption. Future new sources will have to comply upon initial startup with all Rule 67.20.1 requirements after the date of adoption.

The new rule will also help to fulfill the District's commitment in the San Diego County Regional Air Quality Strategy to implement all feasible emission control measures as required by State law.

III. SUMMARY OF PROPOSED RULE 67.20.1

New Rule 67.20.1 will accomplish the following:

- Apply to any person who conducts motor vehicle and/or mobile equipment coating operations, and associated cleaning operations, as defined.

- Apply to any person who supplies, sells, offers for sale, manufactures, or distributes any automotive coating or cleaning material for use within San Diego County.

- Eliminate the separation of vehicle types into Group I and Group II categories and instead provide uniform VOC limits for coatings used on passenger vehicles, heavy-duty vehicles, and mobile equipment.

- Eliminate the composite VOC limit for multistage systems and the corresponding averaging calculations of the VOC content for such systems, and instead provide separate VOC limits for clear coatings and color coatings.

- Combine some coating categories and replace the specialty coating category with a number of separate categories.

- Specify lower VOC limits for nearly all coating categories.

- Specify a VOC limit of 25 grams/liter for any cleaning material used for motor vehicle and mobile equipment coating operations.

- Prohibit the manufacture or sale for use in San Diego County of any automotive coating or cleaning material with VOC content in excess of the limits specified in the rule.

- Prohibit the specification in job orders and contracts of any automotive coating or cleaning material for use in San Diego County if such use or application results in a violation of any provisions of the rule.

- Prohibit the possession of any automotive coating or cleaning material with a VOC content in excess of the limits specified in the rule at any automotive refinishing facility subject to such limits.

- Specify labeling requirements for manufacturers and suppliers of any automotive coating or associated cleaning material, and require that documentation such as product data sheets be provided by manufacturers or suppliers to customers.

- Specify monthly or daily recordkeeping requirements of automotive coatings and cleaning materials purchased and used at any automotive refinishing facility.

- Provide a one-year period after the date of adoption of new Rule 67.20 for an affected existing facility to comply with all the applicable requirements. New facilities will be required to comply with the rule at the time of initial startup.

- Add and revise some definitions of terms used in the rule.

- Update the test methods for determining compliance.

Additionally, the rule contains the following exemptions:

- Completely exempt are: touch-up coatings, operations conducted with non-refillable hand-held aerosol spray containers; manufacture and sale of automotive coatings for use outside the District.

- Coating operations performed by individuals at their residences for the purpose of finishing or refinishing their personal vehicles are exempt from all rule provisions, except for VOC content limits of coatings and cleaning materials.

- Coating operations performed on military tactical support vehicles and equipment are exempt from the entire rule provided that they comply with the requirements of Rule 67.3.

- Motor vehicle coating operations that are part of a vehicle restoration process are exempt from the VOC content limits for coatings and cleaning materials and application equipment requirements, provided that the specified conditions are met and the specified records are kept.

- Applications of underbody coatings, truck bed liner coatings and graphic design and any coating use in the amount of one fluid ounce or less per application are exempt from a requirement to use high transfer efficiency coating application equipment.

IV. TYPE OF INDUSTRIES AFFECTED BY RULE 67.20.1

The following table presents the list of establishments and their North American Industry Classification System (NAICS) codes that are subject to the proposed new Rule 67.20.1.

Table 1. NAICS Classification of Affected Establishments

Type of Operations	NAICS Code
Automotive Body, Paint, and Interior Repair and Maintenance	811121
Automobile Dealers	44110, 44120
Motor Vehicle Paints Manufacturing	325510
Paint, Varnish, and Supplies Merchant Wholesalers	42495
All Other Miscellaneous Store Retailers (except Tobacco Stores)	453998

The vast majority of sources directly affected by the proposed rule are automotive refinishing facilities that conduct painting operations, sometimes in combination with collision repairs (NAICS 811121 classification for these operations is Automotive Body, Paint and Interior Repair and Maintenance). These facilities are either small independent operations or those owned by car dealerships, bigger businesses such as rental companies, or public agencies. In addition, other companies that will be affected by the rule are paint manufacturing companies that sell or distribute automotive paints or related products containing VOCs in San Diego County, and wholesale and retail stores that sell such products. These entities will be affected by the rule's prohibition of sale of non-compliant coating and cleaning materials in San Diego County and the requirements to keep specific records. It should be noted that there are no auto paint manufacturing companies in San Diego County.

V. REGIONAL ECONOMIC AND DEMOGRAPHIC TRENDS

1. Demographic Trends in San Diego County vs. State of California

   The amount of motor vehicles in use and subsequently the frequency of their repair and refinishing are related to the size of population in any given area. Table 2 below traces San Diego County's annual population growth over the years 2000-2008 and compares it with the same data for the state.

Table 2. Population and Household Growth Trends, 2000-2008[3, 4]

California

	2000	2008	Percent Change
Population	34,430,970	38,292,687	11.2
Households	11,502,871	12,733,414	10.7
Average Household Size	2.99	3.01	0.7

San Diego County

	2000	2008	Percent Change
Population	2,864, 539	3,173,407	10.8
Households	994,677	1,099,130	10.5
Average Household Size	2.88	2.89	0.3

Table 2 shows that between 2000 and 2008 San Diego County population grew by 10.8%, slightly slower than the state. It may be expected that the amount of cars owned by businesses and private persons also increased, and so did auto refinishing business conducted in the county.

2. Regional Economic Trends

San Diego County's diverse economy is relatively advanced, and includes major biotechnology and health-related industries, communications and computer science industries. In addition, San Diego County has a sizeable manufacturing industry, which includes "the only large shipbuilding industry on the West Coast".[5] Table 3 provides information on the regional and economic trends in San Diego County vs. State of California between 2003 and 2008 based on the employment data[3].

TABLE 3
REGIONAL ECONOMIC TRENDS: SAN DIEGO COUNTY VS. STATE OF CALIFORNIA, 2003-2008

	San Diego County					California				
	2003		2008			2003		2008		
	Jobs	Distribution	Jobs	Distribution	Percent Change 2003-2008	Jobs	Distribution	Jobs	Distribution	Percent Change 2003-2008
Ag, Natural Resources	11,096	0.9%	10,624	0.8%	-4.3%	377,944	2.6%	391,950	2.5%	3.7%
Mining	337	0.0%	342	0.0%	1.5%	20,406	0.1%	26,337	0.2%	29.1%
Utilities	6,103	0.5%	6,882	0.5%	12.8%	55,239	0.4%	58,490	0.4%	5.9%
Construction	79,207	6.3%	76,039	5.8%	-4.0%	784,565	5.3%	782,466	5.0%	-0.3%
Manufacturing	106,200	8.5%	102,258	7.8%	-3.7%	1,532,004	10.3%	1,414,056	9.1%	-7.7%
Wholesale	40,464	3.2%	44,924	3.4%	11.0%	645,987	4.4%	705,361	4.6%	9.2%
Retail	141,155	11.3%	142,354	10.8%	0.8%	1,588,998	10.7%	1,635,790	10.6%	2.9%
Transport Warehousing	20,970	1.7%	22,006	1.7%	4.9%	406,254	2.7%	430,081	2.8%	5.9%
Information	37,053	3.0%	38,605	2.9%	4.2%	471,860	3.2%	467,864	3.0%	-0.8%
Finance and Insurance	51,432	4.1%	46,278	3.5%	-10.0%	610,777	4.1%	571,945	3.7%	-6.4%
Real Estate	28,939	2.3%	29,499	2.2%	1.9%	273,325	1.8%	274,897	1.8%	0.6%
Prof Technical Services	102,344	8.2%	114,183	8.7%	11.6%	909,716	6.1%	1,079,275	7.0%	18.6%
Management of Companies	19,238	1.5%	15,203	1.2%	-21.0%	255,557	1.7%	205,591	1.3%	-19.6%
Admin and Support Svc	77,747	6.2%	82,481	6.3%	6.1%	895,653	6.0%	903,513	5.8%	0.9%
Waste Services	2,235	0.2%	2,935	0.2%	31.3%	35,462	0.2%	41,312	0.3%	16.5%
Private Educational Services	17,445	1.4%	22,900	1.7%	31.3%	227,601	1.5%	272,083	1.8%	19.5%
Health Services	102,725	8.2%	111,960	8.5%	9.0%	1,269,614	8.6%	1,408,488	9.1%	10.9%
Arts, Entertainment, Rec.	21,228	1.7%	25,403	1.9%	19.7%	235,375	1.6%	252,895	1.6%	7.4%
Accommodations	25,596	2.0%	31,326	2.4%	22.4%	191,168	1.3%	210,541	1.4%	10.1%
Food Services	93,355	7.5%	105,823	8.0%	13.4%	970,001	6.6%	1,097,595	7.1%	13.2%
Other Services	50,896	4.1%	57,343	4.4%	12.7%	641,046	4.3%	738,468	4.8%	15.2%
Unclassified	195	0.0%	5,562	0.4%	N/A	48,534	0.3%	70,293	0.5%	44.8%
Local Govt., excluding education.	63,915	5.1%	64,695	4.9%	1.2%	765,714	5.2%	825,052	5.3%	7.7%
Local Govt., Education	76,909	6.1%	77,447	5.9%	0.7%	896,512	6.1%	920,810	5.9%	2.7%
State, ALL	35,085	2.8%	38,587	2.9%	10.0%	443,212	3.0%	462,487	3.0%	4.3%
Federal, ALL	41,166	3.3%	41,618	3.2%	1.1%	255,134	1.7%	247,273	1.6%	-3.1%
Total All (private and public)	**1,253,035**		**1,317,277**		**5.1%**	**14,807,658**		**15,494,913**		**4.6%**

Source: ADE, Inc., based on California EDD LMID

As shown in this table, Retail, Health Services, Professional Technical Services and Food Services provide between 8 and 10 percent of the total employment in San Diego County. These sectors also grew during the 2003-2008 period, with the Professional Technical Services sector growing by 11.6%. County-wide manufacturing employment (7.8%) while sizeable, actually contracted by 3.7% following the statewide trend. In San Diego County, this is related to the departure of a large part of the aerospace manufacturing industry after the end of the cold war in early 2000, and to the outsourcing of manufacturing business abroad.

Total federal employment in the county is about 3.3%, twice as much as the percentage of the federal workers in California (1.6 %). This is the result of the large presence of military establishments in San Diego County, the headquarters of the US Pacific fleet and home to a number of US military bases.

Industries providing various services that include automotive repair and refinishing shops employ the most workers as a proportion of total employment in the region. These industries comprise 82 percent of all jobs, including public sector positions. Excluding the public sector, service-rendering jobs accounted for 65 percent of total jobs in the county in 2008.

As noted previously, the growth of the total population in San Diego County between 2000 and 2007 was close to 11%. It may be expected that the amount of cars owned by businesses and private persons also increased, and so did auto refinishing business and its employment conducted in the county. Accordingly, Table 4 below shows that the total number of auto refinishing facilities, while fluctuating from year to year, followed approximately the same trend, with about 10 % increase between 1998 and 2007 with the employment increase by about 12%.

Table 4. Employment and Number of Auto Refinishing Shops in San Diego County, 1998-2007[4]

Year	Total Number of Establishments	Total Employment, Workers
1998	279	2,139
1999	294	2,250
2000	299	2,469
2001	296	2,534
2002	292	2,569
2003	302	2,602
2004	324	2,676
2005	296	2,595
2006	307	2,717
2007	296	2,548

VI. SIZE OF BUSINESSES AFFECTED BY THE RULE INCLUDING SMALL BUSINESS

Any auto refinishing facility that uses more than 20 gallons of paint per year or emits more than 150 pounds of VOCs per year is required to obtain a District permit to operate. In addition, there

are smaller sources not requiring a permit that conduct auto refinishing operations. Both permitted and non-permitted facilities are presently subject to Rule 67.20 requirements and also will be subject to the proposed Rule 67.20.1.

There are 371 permitted auto refinishing facilities in San Diego County that will be affected by the proposed new rule; 316 of them are independent businesses. There are also 55 facilities where auto refinishing is not the primary line of business. These are car dealerships, government facilities including military bases and car rental companies that also conduct auto refinishing operations. They all will be affected by the proposed rule.

To determine how many facilities can be categorized as small businesses, it is necessary to consider various definitions of this term as they are used by the federal, state or other public entities. There are several definitions of a small business used by the federal Small Business Administration, Federal Clean Air Act, California Government Code and Health and Safety Code and by the South Coast Air Quality Management District. Some of these definitions are provided below.

1. Title V, Section 507 of the Federal Clean Air Act defines a small business as one that "employs 100 or fewer individuals; is a small business concern as defined in the Small Business Act; is not a major stationary source and does not emit 50 tons or more per year of any regulated pollutant; and emits less than 75 tons per year of all regulated pollutants."

2. California Government Code defines a small business as an entity that is independently owned and operated and not dominant in its field of operation. In addition, to qualify as a small business a facility must not have more than two million dollars in its annual gross receipts.

3. California Health and Safety Code classifies a facility as a "small business stationary source" if it meets all of the following criteria:

   (a) The source is owned or operated by a person who employs 100 or fewer individuals.

   (b) The source is a small business as defined under the federal Small Business Act (15 U.S.C. Sec. 631, et seq.).

   (c) The source emits less than 10 tons per year of any single pollutant and less than 20 tons per year of all pollutants.

4. SCAQMD defines a small business in Rule 102 as a business that is independently owned and operated, employs 10 or fewer persons and earns less than $500,000 in annual gross receipts.

All these definitions have a few features in common: to qualify as a small business the entity should be independently owned and operated, and not affiliated with a bigger company. Based on different definitions described above the District considered a small business to be a company that is owned and run by an independent operator responsible for complying with environmental

regulations. Therefore, it is safe to assume that none of the auto refinishing shops located at public institutions such as military bases, or shops belonging to car dealerships or rental companies can be classified as small businesses.

In the previous socioeconomic impact assessments for several proposed rules, the District also used the following criteria to define a small business:

1. The business is independently owned and operated. (California Government Code, Section 11342.610, Small Business definition)

2. Not dominant in its field of operation. (Same)

3. Gross annual receipts not more than $500,000. (SCAQMD, Rule 102)

4. Ten or less employees. (SCAQMD Rule 102)

5. Total annual VOC emissions less than 10 tons. (H&S Code, Section 42323, and Small Stationary Source).

VII. SOURCES IN SAN DIEGO COUNTY SUBJECT TO THE NEW RULE

Table 5 below shows the latest available data from the US Census Bureau[4] and the Small Business Administration[6] that present interesting details related to the distribution of Employment in San Diego County's automotive refinishing businesses, in a 10-year period between 1998 and 2007. It is clear from this table that about 50% of auto refinishing facilities have four or fewer workers, and about 70% have between 1 and 9 workers.

Table 5. Distribution of Employment in Auto Refinishing Industry- San Diego County (1998-2007)[4]

Year	Number of Workers per Establishment					Total Establishments
	1-4	5-9	10-19	20-49	50-99	
1998	140	68	62	24	0	294
2000	134	67	69	28	1	299
2002	136	57	62	37	0	292
2004	152	71	63	36	2	324
2006	147	59	63	34	4	307
2007	142	60	57	37	0	296

Table 6 shows the latest employment data (2008) obtained by Applied Development Economics, Inc. (ADE)[3]. The facilities are separated into two categories according to their operations either as independent entity or as an entity belonging to another, larger establishment. In each category, the auto refinishing facilities are grouped by the number of employees per facility.

Table 6. 2008 Distribution of Employment in Independent and Other Auto Refinishing Businesses in San Diego County

No. of Workers Per Establishment	Independent Business Establishments	Percent of Independent Establishments	Other Establishments (military, public, car dealerships)	Percent of Other Establishments
1-9	234	74.0	15	27.3
10-19	48	15.2	8	15.2
20-49	29	9.1	8	15.2
50-99	5	1.7	8	15.2
100-249	0	0	14	24.1
250-499	0	0	2	3.0
Total	316	100	55	100

Based on the criteria for small businesses described in the previous section and the data in this table, the District estimates that 234 facilities or approximately 74% of the total independent auto refinishing shops can be categorized as small businesses. Together, both tables show the predominance of small businesses in the auto refinishing industry.

VIII. VOC EMISSIONS AFFECTED BY THE PROPOSED RULE AND EMISSION REDUCTION POTENTIAL

Table 7 displays the latest District data on the total number of sources in San Diego County subject to the proposed rule, their distribution according to the annual coating usage and corresponding VOC emissions.

Table 7. Annual Coating Usage vs. Number of Businesses and Their VOC Emissions

Annual Coating Usage (gal/yr)	No. of Facilities	Cumulative Total of Facilities	% of Total Facilities	Cumulative % of Facilities	Total VOC Emissions (tpy)	% of Total VOC Emissions	Cumulative % of Emissions
<=20	9	9	2.4	2.4	0.2	<0.1	<0.1
21 - 50	8	17	2.0	4.0	0.7	0.1	0.2
51 - 100	47	63	12.6	17%	9.9	1.7	1.9
101 - 200	53	116	14.2	31	22.5	3.9	5.8
201 - 300	54	170	14.6	46	38.5	6.7	12.5
301 - 400	42	213	11.4	57	41.9	7.3	19.8
401 - 500	30	243	8.1	65	39.4	6.9	26.7
501 - 550	9	252	2.4	68	14.0	2.4	29.2
551 - 600	14	265	3.7	72	22.8	4.0	33.1
601 - 700	17	282	4.5	76	31.8	5.5	38.7
701 - 1000	32	314	8.5	85	76.6	13.4	52.0
1000- 1500	29	342	7.7	92	106.3	18.5	70.6

Table 7 - continued

1501- 2000	21	363	5.7	98	107.6	18.8	89.4
2001- 3000	5	368	1.2	99	32.9	5.7	95.1
>3000	3	371	0.8	100	28.2	4.9	100.0
Total	371		100		573.3	100	

This table shows that the total VOC emissions from the auto refinishing facilities (required to have District permits) are approximately 573 tons per year. About 72% of these facilities are using less than 600 gal/yr of coatings and are responsible for 33% of total VOC emissions from this source category. The rest of the facilities (28%) are responsible for 67% of total emissions.

As noted, ARB estimated[2] that full implementation of the Suggested Control Measure in California is expected to reduce annual VOC emissions from auto refinishing operations by 65% from the current emission level. Correspondingly, adoption of Rule 67.20.1 will result in approximately 373 tons per year of VOC emissions reduction in San Diego County.

Table 8 provides a similar distribution of independent businesses (NAICS 811121) in relation to their number and emissions. The table shows that there are 316 independent businesses or 73.4% of the total that have combined VOC emissions of 472 tons per year. According to this table, there are 232 facilities that use 600 gallons of coatings or less per shop (shaded area). Also, as shown in Table 6, there are 234 independent facilities in San Diego County that employ less than 10 workers. It is reasonable to assume, therefore, that the facilities that use annually 600 gallons or less of coatings can be classified as small businesses according to the District accepted criteria (p.11). Similarly, the businesses with an annual coating usage between 600 and 1500 gallons can be considered medium size businesses and the rest with an annual usage greater than 1500 gallons can be classified as large businesses. There are also 5 small companies that use annually 20 or less gallons of coatings. These companies will be addressed separately.

Table 8. Annual Coating Usage vs. Number of Independent Businesses and their VOC Emissions.

Annual Coating Usage (gal/yr)	No. of Businesses	Cumulative No. of Businesses	% of Independent Businesses	Cumulative % of Independent Businesses	Total VOC Emissions (tpy)
<=20	5	5	1.4	1.4	0.1
21 - 50	6	11	1.9	3.4	0.6
51 - 100	41	52	13.0	16.4	8.7
101 - 200	47	99	15.0	31.4	20.8
201 - 300	49	148	15.5	46.9	34.2
301 - 400	35	183	11.1	58.0	35.0
401 - 500	29	212	9.2	67.1	37.9
501 - 550	8	220	2.4	69.6	11.8
551 - 600	12	232	3.9	73.4	20.4
601 - 700	15	247	4.8	78.3	29.3
701 - 1000	26	273	8.2	86.5	62.2
1001 - 1500	18	292	5.8	92.3	68.3
1501 - 2000	18	310	5.8	98.1	92.4
2001 - 3000	3	313	1.0	99.0	21.9

Table 8 - continued

Annual Coating Usage (gal/yr)	No. of Businesses	Cumulative No. of Businesses	% of Independent Businesses	Cumulative % of Independent Businesses	Total VOC Emissions (tpy)
>3000	3	315	1.0	100.0	28.5
Total	316		100%		472.0

As shown in Table 8, presently there are 232 small, 60 medium size and 24 large independent businesses in San Diego County.

IX. COST-EFFECTIVENESS OF THE PROPOSED RULE

Table 9 shows the District estimates of the total and annualized rule compliance costs for the majority of small, medium and large companies and the cost-effectiveness of the proposed rule for these companies. In addition, the annualized costs and cost effectiveness of the rule was determined for a few companies that do not presently have a spray booth, but operate in the open air. The cost estimates listed in Table 9 were developed through discussions with equipment vendors, manufacturers, suppliers, and shop owners. This information has provided the probable costs that are required for the conversion of automotive refinishing operations to waterborne technology. In addition, based on the permit data available to the District, some additional factors were taken into consideration such as the number of spray booths at the facility, the necessity of installing additional air purifying or air moving equipment, etc. Accordingly, for most cases, these costs reflect an upper limit estimate of actual costs because not all of the listed capital expenditures may be necessary for compliance with the proposed rule. The actual costs will depend on the requirements specific to each facility.

Table 9. Annualized Cost and Cost-effectiveness Values for Small Businesses

Options	Weighted Ave. Coating Usage, gal/yr	No. of Spray Booths	Annualized Costs (Capital Cost + O&M)	Savings for Coating & Cleaning Materials	Net Annualized Costs (Savings)	Emission Reductions lb VOC/yr	Cost-Effectiveness, $/lb VOC
A – existing air purifying & compressors	Small	1	1,159	(1,425)	(265)	673	(0.39)
	253	2	2,319	(1,425)	894	673	1.33
B – install air purifying & compressors	Small	1	3,087	(1,425)	1,663	673	2.47
	253	2	6,174	(1,425)	4,750	673	7.05

The District's cost-effectiveness threshold for adopting the rules regulating VOC emitting sources is $6/lb of emissions reduced. Tables 9 and 10 show that Rule 67.20.1 cost-effectiveness values for all medium and large businesses and for small businesses with one spray booth are well within the District guidelines. Moreover, large and some medium size businesses (Table 10 on the next page) will actually have some savings when they convert from solvent-based to water-based paints due to the comparatively better coverage of water-based paints, and the

resulting reduction in the use of solvent-based paints and cleaning materials and lower cost of the disposal of contaminated water vs. the disposal of organic solvents.

The only cost-effectiveness value that exceeds the District guidelines is for those small businesses that have two spray booths and have to refurbish both of them with air moving and purifying equipment. It should be noted, however, that the vast majority of small businesses (at least 72%) have only one spray booth.

Table 10. Annualized Cost and Cost-effectiveness for Medium and Large Businesses (*Option B – Installation of Air Purifying Equipment + Compressors*)

Weighted Ave. Coating Usage, gal/yr	No. of Booths	VOC Emission Reduction, lb/yr	Annualized Cost (Capital + O&M), $/yr	Savings in Materials, $/yr	Net Annualized Cost (Savings), $/yr	Cost-Effectiveness, $/lb
Medium 953	1	2,541	3,087	(5,374)	(2,287)	(0.90)
	2	2,541	6,174	(5,374)	800	0.31
	3	2,541	9,261	(5,374)	3,887	1.53
Large 2009	1	5,355	3,087	(11,327)	(8,240)	(1.54)
	2	5,355	6,174	(11,327)	(5,153)	(0.96)
	3	5,355	9,261	(11,327)	(2,066)	(0.39)

X. RANGE OF PROBABLE COSTS TO INDUSTRY INCLUDING SMALL BUSINESS

1. ADE Survey

   ADE staff [3] has surveyed a variety of businesses that will be affected by the proposed new rule, including collision repair and auto refinishing facilities and paint manufacturers.

   Many persons working in the auto refinishing industry have expressed their belief that the industry is already moving to adopt new waterborne technology and new techniques necessary to apply waterborne coatings. It will be done with or without new regulations from the District. According to one respondent, waterborne coatings are superior to solvent based coatings in many ways, including a better looking finish, better coverage and less damaging to the environment and workers health. The most frequent and strongly made argument against the proposed changes was that of timing and the current recession. The burden of investments being forced upon small businesses at a time when the economy is weak seems to be a worry widely felt and obvious to all. The real problem in the opinion of many businesses was the size of the initial investment in new equipment such as spray guns and paint lines resistant to water corrosion, spray gun cleaners and separate equipment for hazardous waste for contaminated water. They emphasized that the industry is very competitive, making affordability of the required equipment the key variable impacting the chances of keeping business doors open, particularly small businesses. An additional worry

for one establishment was that insurance companies will attempt to ignore the regulation and refuse to accept the increase in cost for repairs. That could increase cost to the collision repair facilities. However, in conversations with suppliers, it became evident that a number of suppliers willingly finance end-users and provide significant help in acquiring the necessary equipment and painter's education in an attempt to maintain product demand and customer loyalty. Presently, according to recent District data, at least 30 facilities including a number of small businesses in San Diego County have already converted their operations to the waterborne technology.

It is not expected that the proposed rule will affect the manufacturers of automotive coatings and other related products. Many of them, especially the international companies, already have many waterborne paints on the market. This can be explained by the fact that since 2000, the European Union countries have mandated the use of low VOC content paints in auto refinishing operations, mostly waterborne or water-reducible, or high solid paints[1]. In addition, as mentioned above, following the adoption of the ARB Suggested Control Measure in 2005, many air districts in California have already adopted new rules requiring the use of waterborne technology. One manufacturer surveyed by ADE[3] said that "he sees the proposed changes as an opportunity." The representative described the cost of the waterborne products to be very much in line with those used of current practices, and believes their product to be simply better, providing a more consistent finish.

2. Employment Profile of Auto Refinishing Business in San Diego County

According to the federal Census Bureau data as shown in Table 5, the majority of the companies in auto refinishing business have 1-4 employees, followed by companies having between 5 and 9 employees. These results were confirmed by an analysis conducted by the Bay Area Economics (BAE) company for Bay Area air district (BAAQMD)[7]. It is fair to assume that approximately the same is true for San Diego County. While the District does not have specific information on the number of companies with between 1-4 and 5-9 employees in the county, the percent of companies having 1-9 employees as shown in Table 6 is about 70% of all businesses in the NAICS Code 811121. This is consistent with approximately 68% as shown in Table 11 below.

Table 11. Distribution of Auto Refinishing Industry Employment in San Diego County based on the U.S. Bureau Census Data[4]

Year	1-4 Workers	5-9 Workers	Total Shops with 1-9 Workers	All Shops	% (1-9) of All Shops
1998	140	68	208	294	70.7
1999	135	58	193	279	69.2
2000	134	67	201	299	67.2
2001	142	60	202	296	68.2
2002	136	57	193	292	66.1
2003	141	58	199	302	65.9
2004	152	71	223	324	68.8
2005	163	65	228	326	69.9
2006	147	59	206	307	67.1

Table 11 - continued

Year	1-4 Workers	5-9 Workers	Total Shops with 1-9 Workers	All Shops	% (1-9) of All Shops
2007	163	65	228	326	69.9
Average					68.3%

3. Economic Profile of Auto Refinishing Industry in San Diego County

Table 12 provides the District estimates for the sales and profits of independent automotive refinishing businesses in San Diego County. In the absence of available similar information in San Diego County, the average annual sales in this table and the return on sales are based on a survey of a sample of the auto refinishing business (40 % of all facilities) in the Bay Area air district[7] conducted by the BAE in 2008 and using the Internal Revenue Service return on sales ratio.

Table 12. Estimated Sales and Profits of Independent Automotive Refinishing Facilities[7]

No. of Employees	Ave. Sales (Revenue) per Firm, $/yr	Ave. Return on Sales, %	Ave. Profit per Firm, $/yr
1-9	217,142	4.2	9,120
10-19	945,857	4.2	39,726
20-49	2,161,936	4.2	90,801
50-99	2,766,667	4.2	116,200

The District used these estimates to evaluate the annual compliance cost of the proposed rule vs. annual profits of small, medium and large auto refinishing businesses. The ARB considers that "reduction of more than 10 percent in profitability indicates a potential for significant adverse economic impacts"[2].

Tables 13 and 14 show the District estimated annual cost of compliance with the proposed rule for various business sizes as compared to their annual profits.

Table 13. Annual Cost of Compliance as a Share of Medium and Large Companies Annual Profit (Option B)

Company Size	No. of Spray Booths	Net Annualized Cost (Savings) per Firm, $/yr	Average Profit per Firm, $/yr	% of Company Profit
Medium	1	(2,287)	39,726	n/a
	2	800		2.0
	3	3,887		9.8
Large	1	(8,240)	90,801	n/a
	2	(5,153)		n/a
	3	(2,066)		n/a

As shown in Tables 13 and 14, the cost of compliance with the proposed rule depends on a company size. For example, Table 13 (last column) shows that the rule will have no detrimental impact on the profitability of all large and medium size businesses with only one

spray booth. For the medium size companies having two or three spray booths, the percent of company profits that would be spent on the rule compliance is within the ARB guidance.

However, while the large and medium independent businesses, and those belonging to bigger entities or public agencies, may financially benefit by the technology conversion from predominant usage of solvent-based paints and cleaning materials to water-based ones, the small independent companies will incur significant expenses.

Table 14. Annual Cost of Compliance as a Share of a Small Company Annual Profit (Options A or B)

No. of Booths	Net Annualized Cost (Savings), $/yr/Firm		Ave. Profit Per firm, $	Rule Compliance Cost to Profit Ratio, %	
	Option A	Option B		Option A	Option B
1	(265)	1,663	9,120	n/a	18.2
2	894	4,750	9,120	9.8	52.1

These expenses will swallow their profits, especially the profit of the small companies that have to refurbish two or even three spray booths. One way to avoid extra expenses in this case would be to use only one spray booth for water-based coatings and to leave other booth(s) for the work with solvent based products. Another possibility is to remove one of the spray booths and do all the coating applications in one location.

In addition, as discussed earlier, many distributors and suppliers of automotive coatings will subsidize their customers by providing them some necessary equipment to convert to waterborne technology for free. In exchange, the customers commit themselves to buy equipment and material supplies from their benefactors. As previously stated, the actual costs for the rule compliance in this case will depend on the specifics of an individual facility.

Still, the economic impact for the small automotive refinishing firms is disproportionally high, more than 18% of their profit, even if a company has only one spray booth. In order to mitigate these impacts, such firms would need to increase their charges to consumers. BAE calculated that the charges will increase between $1 and $18 per job, with a $6 average increase[7]. According to ARB estimates, the average charge for a job in the auto refinishing industry is about $2,200[3], so the maximum increase would be less than 1%.

There are also two other groups of small businesses that may also incur significant expenses – one of them includes businesses that presently do not have a spray booth (7 companies). According to District estimates, the cost of installing a spray booth for the facilities that presently do not have an existing one represents the largest part of the initial capital costs attributed to rule compliance. However, the recent National Emission Standards for Hazardous Air Pollutants (NESHAP HHHHHH) requires all auto refinishing facilities, regardless of their size, to have spray booths if the coatings they use contain hazardous metals such as cadmium, chromium, lead, manganese, or nickel. Since many automotive color coatings contain these metals, it is a very likely that small facilities that do not have

spray booths will be required by the federal regulation to install them by 2011, the same year that proposed Rule 67.20.1 will become effective.

Another group consists of five small companies which use on average less than 20 gallons of coatings per year. These companies are mostly applying touch-up coatings sold in small containers (0.5-1.0 fluid ounces) which are exempt from the rule.

XI. AVAILABILITY AND COST-EFFECTIVENESS OF ALTERNATIVES

There are no available alternatives to the emission standards and other requirements of the proposed new Rule 67.20.1. As noted previously, the rule is consistent with the ARB Suggested Control Measure for the auto refinishing industry. One of the reasons ARB strongly urged[8] that all air districts in California adopt rules similar to the SCM was to create uniformity of air pollution control regulations for the auto refinishing industry throughout the state. In addition, this uniformity will provide paint manufacturers, suppliers and distributors the ability to sell or distribute the same paints, cleaning solvents, and paint application and cleaning equipment statewide.

REFERENCES

1. European Commission, Final Report, Reducing VOC emissions from the Vehicle Refinishing Sector, Final Report, August 2000.

2. California Air Resources Board, Suggested Control Measure for Automotive Refinish Coatings, Staff Report, 2005.

3. Applied Development Economics, Inc., Socioeconomic Impact Analysis of Proposed Amendments to Rule 67.20 (Motor Vehicle Refinishing), January 10, 2010.

4. U.S. Census Bureau, San Diego County Business Patterns (NAICS), 2000-2007, http://censtats.census.gov/cgi-bin/cbpnaic/cbpdetl.pl

5. Los Angeles County Economic Development Corporation, San Diego County Profile, 2008.

6. US Small Business Administration, Office of Advocacy and Statistics, http://www.sba.gov/advo/research/data.html

7. Bay Area Economics (BAE), Socio-Economic Impact Study Prepared for the Bay Area Air Quality Management District, September, 2008.

8. Letter from Robert Fletcher, Chief of the Stationary Source Division, California Air Resources Board, June 6, 2007.

ATTACHMENT C

COMPARATIVE ANALYSIS

RULE 67.20.1 – MOTOR VEHICLE AND MOBILE EQUIPMENT COATING OPERATIONS

STATUTORY REQUIREMENTS

Prior to adopting, amending, or repealing a rule or regulation, California Health and Safety Code Section 40727 requires findings of necessity, authority, clarity, consistency, non-duplication, and reference. As part of the consistency finding to ensure proposed rule requirements do not conflict with or contradict other District or federal regulations, Health and Safety Code Section 40727.2(a) requires the District to perform a written analysis identifying and comparing the air pollution control standards and other provisions of proposed new Rule 67.20.1 with existing or proposed District rules and guidelines and existing federal rules, requirements, and guidelines applying to the same source category.

ANALYSIS

Proposed Rule 67.20.1 applies to any person who conducts motor vehicle and/or mobile equipment coating operations, and associated cleaning operations. The rule also applies to any person who supplies, sells, offers for sale, manufactures, or distributes any automotive coating or cleaning material for use within San Diego County. There are two federal regulations that apply to these processes: 40 CFR Part 59, Subpart B - National Volatile Organic Compound Emission Standards for Automobile Refinish Coatings (National Rule) and Subpart HHHHHH of the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources. Table 1 contains a comparison of the new rule with the National Rule and the NESHAP, Subpart HHHHHH.

In addition, District New Source Review (NSR) Rule 20.2 - Non-Major Stationary Sources, also applies to any new or modified automotive coating operation that would be subject to new Rule 67.20.1. Rule 20.2 requires that any non-major new or modified emission unit that has a post-project potential to emit of 10 lbs/day of volatile organic compounds (VOC) or more be equipped with Best Available Control Technology (BACT). For automotive coating operations, BACT is identified as either use of add-on emission control system, or if such system is demonstrated to be not cost-effective, compliance with the requirements of current Rule 67.20. Proposed new Rule 67.20.1 will go into effect for new or modified sources immediately after the date of rule adoption. Since Rule 67.20.1 contains more stringent standards than Rule 67.20 in order to reflect the recent changes in automotive coating and cleaning technology, new Rule 67.20.1 will become the new BACT requirements.

CONCLUSION

As shown in Table 1, there are no conflicts or contradictions between proposed new Rule 67.20.1 and the National Rule and NESHAP. There are also no contradiction between the proposed rule and the District's NSR Rule 20.2 BACT requirements.

TABLE 1 – Comparative Analysis

Items for Comparison	Proposed New Rule 67.20.1	National Rule	NESHAP Subpart HHHHH
Applicability	1. All motor vehicle and mobile equipment coating operations. 2. All cleaning operations associated with motor vehicle and mobile equipment coating operations. 3. Any person who supplies, sells, offers for sale, manufactures or distributes any automotive coating or associated cleaning material for use in SD County. The rule does not apply to the following: 1. Original equipment manufacturer's (OEM) motor vehicles, mobile equipment, non-motorized models, or their associated parts and components. 2. Coating of mobile homes. 3. Coating of radiators or engine components. 4. Solvent cleaning, stripping or degreasing operations conducted in a tank, drum or other container. 5. Touch-up coatings. 6. Coating of military tactical support vehicles and equipment.	Automotive refinish coatings and coating components manufactured on or after Jan. 11, 1999, for sale or distribution in the United States. The rule does not apply to the following: 1. Coatings or coating components that are manufactured exclusively for sale outside of the United States. 2. Coatings or coating components that are manufactured before January 11, 1999. 3. Coatings or coating components that are manufactured for use by OEMs. 4. Coatings that are sold in non-refillable aerosol containers. 5. Lacquer topcoats or their components. 6. Touch-up coatings.	Motor vehicle and mobile equipment refinishing operations at a source with emissions of less than 10 tpy of any single HAP, or less than 25 tpy of any combination of HAPs (cadmium, chromium, lead, nickel, manganese). The rule does not apply to the following: 1. Surface coating performed on site at installations owned or operated by the Armed Forces of the United States, the National Aeronautics and Space Administration, or the National Nuclear Security Administration. 2. Surface coating of military munitions or equipment directly and exclusively used for the purposes of transporting military munitions. 3. Surface coating performed by individuals on their personal vehicles. 4. Surface coating for research and laboratory activities. 5. Surface coating for quality control activities. 6. Surface coating activities that are covered under another area source NESHAP.

Items for Comparison	Proposed New Rule 67.20.1	National Rule	NESHAP Subpart HHHHH
Exemptions	Exempt from the rule: 1. Any person who supplies, sells, offers for sale, manufactures or distributes any automotive coating or associated cleaning material for use outside of SD County or for shipment to other manufacturers for reformulation or repacking. 2. Use of non-refillable hand-held aerosol spray containers. Exempt from all provisions of the rule, except for the VOC content limits of coatings and the prohibition of possession: 1. Coating operations performed on an individual's personal vehicles at his/her residence. Exempt from the VOC content limits: 1. Motor vehicle coating operations that are part of a restoration process. Exempt from the application equipment requirement: 1. Underbody coatings or truck bed liner coatings, graphic design applications. 2. Any coating use in the amount of one fluid ounce or less per application. Exempt from certain requirements for the cleaning of application equipment: 1. Cleaning material that does not contain exempt compounds and does not exceed 25 g/l. Exempt from the VOC content limit for surface preparation or other cleaning materials:	NONE	Any motor vehicle and mobile equipment refinishing operation that petitions for an exemption from the NESHAP by demonstrating that the coatings used do not contain any target HAPs.

Items for Comparison	Proposed New Rule 67.20.1	National Rule	NESHAP Subpart HHHHH
	1. Cleaning material used for the removal of dust, wax, grease, tar or bugs.		
VOC Content Standards	VOC content limits for the various coating categories reflecting the latest water-based technology	All the VOC content limits for the various coating categories are less stringent than those in Rule 67.20.1	NONE
Coating Application Equipment	1. Electrostatic spray application. 2. Flow coat application. 3. Dip coat application. 4. Roll coat. 5. Hand application methods. 6. High-volume low-pressure (HVLP). 7. Other application method with an equivalent transfer efficiency.	NONE	1. HVLP 2. Electrostatic spray application. 3. Airless spray gun. 4. Air assisted airless spray gun. 5. Other application method with an equivalent transfer efficiency.
Work Practice	1. Coating application equipment cleaning procedures, including 25 g/l VOC content limit for cleaning materials. 2. Surface preparation and other cleaning materials not to exceed 25g/l VOC content limit.	NONE	1. All spray-applied coating operations must be conducted in a spray booth, preparation station or mobile enclosure. 2. Spray booths, preparation stations or mobile enclosures must have filters with 98%

Items for Comparison	Proposed New Rule 67.20.1	National Rule	NESHAP Subpart HHHHH
	3. Waste disposal procedures.		capture efficiency. 3. Spray booths and preparation stations for complete coating of motor vehicles or mobile equipment has full roof, 4 complete walls or side curtains and ventilated at negative pressure, or if fully enclosed, positive pressure of no more than 0.05 inches w.g. 4. Spray booths and preparation stations used for parts and products of motor vehicles or mobile equipment must have full roof, 3 complete walls or side curtains and ventilated at negative pressure. 5. No atomization or spraying of cleaning material allowed outside of a container when cleaning spray gun.
Add-On Emission Control Requirements	Use of add-on control equipment (85% control efficiency) in lieu of paints or cleaning materials complying with VOC content limits	NONE	NONE
Prohibitions	Manufacture, sale, specification, or possession of any automotive coating or associated cleaning material that exceeds the VOC content limits of the rule are prohibited.	NONE	NONE
Manufacturer and Supplier Information	Manufacturers and suppliers of any coating, coating component, or associated cleaning material must provide customers with the VOC content of the material, as well as any other information necessary for the user to comply with the standards of the rule.	Manufacturers must display on each automotive refinish coating or coating component container or package, the date the product was manufactured, or a code indicating such date.	NONE
Recordkeeping	Current list of each coating or associated cleaning material used with the VOC content,	Each regulated entity must submit an initial report within 180 days of the date	1. Certification that each painter completed training.

Items for Comparison	Proposed New Rule 67.20.1	National Rule	NESHAP Subpart HHHHH
	monthly purchase records, and monthly or daily usage records. Records must be kept for at least 3 years.	that the regulated entity first manufactures or imports automobile refinish coatings or coating components.	2. Documentation of filter efficiency. 3. Documentation of transfer efficiency from spray gun manufacturer for each spray gun with a cup capacity equal to or greater than 3.0 ounces, and is not one of the approved spray application methods. 4. Initial Notification 5. Notification of Compliance Status 6. Annual Notification of Changes Report 7. Records must be maintained for at least 5 years.
Test Methods	1. EPA Test Method 24 2. SCAQMD Method 313 3. Various test methods for determining metal content, acid content, transfer efficiency, control efficiency, and exempt compound content.	1. ASTM Test Method D 1613-96 2. ASTM Test Method D 523-89	NONE

ATTACHMENT D

COUNTY OF SAN DIEGO
AIR POLLUTION CONTROL DISTRICT

INCREMENTAL COST-EFFECTIVENESS ANALYSIS

PROPOSED NEW RULE 67.20.1 – MOTOR VEHICLE AND MOBILE EQUIPMENT COATING OPERATIONS

Health and Safety Code Section 40920.6(a) requires air districts to identify one or more potential control options that achieve at least the same benefit as the proposed rule, assess the cost-effectiveness of those options, and calculate the incremental cost-effectiveness of each identified option. Incremental cost-effectiveness is defined as the difference in control costs divided by the difference in emission reductions between two potential control options achieving the same emission reduction goal.

San Diego County does not attain federal and State standards for ozone. Volatile Organic Compounds (VOC) are ozone precursors. The main goal in proposing new Rule 67.20.1 is to achieve additional VOC emission reductions and make the rule consistent with the Suggested Control Measure for Automotive Coatings (SCM) developed by the Air Resources Board.

The SCM achieves substantial VOC emission reductions by lowering VOC content limits of automotive paints and cleaning solvents through the use of waterborne technology, and simplifies previously cumbersome coating categories. It also provides an opportunity for local air districts to adopt similar rules and to subsequently achieve a statewide uniformity that is important for the districts and the automotive coating industry. All necessary coatings and cleaning materials are now available in the marketplace and are already used by many affected businesses. The proposed rule will result in VOC emission reductions by approximately 65%.

There are no potential control options other than the use of significantly more expensive add-on emission control systems that will achieve the comparable VOC emission reductions. Both cost-effectiveness and incremental cost-effectiveness of such control options will be extremely high and therefore not feasible. In addition, the rule would not be consistent with the SCM or the rules already adopted by air districts throughout California.

ATTACHMENT E

AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN DIEGO

PROPOSED NEW RULE 67.20.1 –
MOTOR VEHICLE AND MOBILE EQUIPMENT COATING OPERATIONS

WORKSHOP REPORT

A workshop notice was mailed to owners and operators of automotive refinishing facilities, manufacturers, suppliers, and distributors of automotive coatings or cleaning materials in San Diego County. Notices were also mailed to the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (ARB), all Economic Development Corporations and Chambers of Commerce in San Diego County, and other interested parties.

The workshop was held on July 15, 2009, and was attended by 59 people. Written comments were also received before and after the workshop. The workshop comments and District responses are as follows:

1. WORKSHOP COMMENT

Will tertiary butyl acetate (TBAC) be exempted from the rule? There is no clear coat with a VOC content of 2.1 grams/liter that is equivalent in quality to products with a VOC content of 3.5 grams/liter. It is possible, however, to reformulate the current clear coat into an equivalent product with the use of TBAC that complies with the proposed rule requirements.

DISTRICT RESPONSE

No, the District will not exempt the use of TBAC in Rule 67.20.1 at this time. There is still much uncertainty about the impact of TBAC on human health.

In 2004, EPA determined that TBAC has a low photochemical reactivity and thus its contribution to ozone formation is negligible. Consequently, EPA exempted the compound from the federal list of VOCs. In 2005, ARB developed a Suggested Control Measure (SCM) for Automotive Coatings, and performed a collaborative analysis with other relevant State agencies of the potential adverse health impacts of an exemption for TBAC. In studies with rats, TBAC has been shown to substantially metabolize to tertiary butyl alcohol (TBA), which can induce tumors in rats and mice. It was considered that the TBA carcinogenicity data may not have been relevant to human cancer risk assessment. However, the data was insufficient to allow for this determination. ARB therefore concluded that TBAC may pose a potential cancer risk to humans and left the decision on the TBAC exemption to local air districts.

Some of the districts have since provided either a complete or partial exemption for the use of TBAC in their automotive coating rules, while others have not exempted TBAC at all. It seems unlikely that manufacturers will use TBAC in materials made only for the regions where TBAC is exempt.

The District does not presently have the resources to conduct its own risk assessment to make a definitive determination in regards to the carcinogenicity of TBAC or of its metabolites. In consideration of the uncertainty of the potential health effects from exposure to TBAC, and that there are coatings currently available which do not contain TBAC and comply with the proposed VOC limits, the District has decided not to exempt TBAC at this time.

2. WORKSHOP COMMENT

Does the rule mandate the use of waterborne coatings? Can solvent based products be used if they can be reformulated to comply with the lower proposed limits?

DISTRICT RESPONSE

No, the rule does not mandate the use of waterborne coatings. Either solvent based or waterborne coatings may be used provided that their VOC contents comply with the VOC content limits in the rule.

3. WORKSHOP COMMENT

How will the proposed rule affect mobile coating operations?

DISTRICT RESPONSE

Similar to current Rule 67.20, proposed Rule 67.20.1 applies to all motor vehicle and mobile equipment coating operations, including stationary and mobile operations. While a mobile coating operation may be exempt from the District permit requirement per Rule 11 (Exemptions from Rule 10 Permit Requirements), if in a consecutive 12-month period it uses 20 gallons or less of coatings, or emits 150 pounds or less of VOC emissions, it would still be subject to Rule 67.20.1. Thus, as with a source operating under a District permit, a mobile coating operation that is exempt from permit requirements must still comply with the provisions of Rule 67.20.1, such as the VOC content limits and the various requirements for application equipment, cleaning materials and recordkeeping.

4. WORKSHOP COMMENT

South Coast Air Quality Management District (SCAQMD) exempts facilities that use no more than a total of 22 gallons/month of solvent based coatings and associated VOC containing cleanup solvents, while the limit for exemption from permit requirements in the District is 20 gallons/year. Are there any plans to revise this limit for consistency with the SCAQMD?

DISTRICT RESPONSE

No, at this time, the District does not have any plans to revise Rule 11 (Exemption from Rule 10 Permit Requirements). This rule provides an exemption from the permit requirement for any portable or stationary coating application operation that uses 20 gallons or less of coatings in a consecutive 12-month period, or has VOC emissions 150 pounds or less in the same period. It should also be noted that while facilities may be exempt from permit requirements per Rule 11, they will still be subject to the requirements of Rule 67.20.1 unless specifically exempted by the proposed rule.

5. WORKSHOP COMMENT

What is the difference between the exemption from permit requirements for operations using 20 gallons/year of coatings and the exemption in Rule 67.20.1 for operations using 25 gallons/year of coatings?

DISTRICT RESPONSE

District Rule 11 provides an exemption from the requirement for a permit to operate for any coating operation, including any automotive refinishing operation, which uses 20 gallons or less of coatings, or emits 150 pounds or less of VOC emissions in a consecutive 12-month period.

Proposed Rule 67.20.1 provides a limited exemption specifically for vehicle restoration activities, provided that no more than 25 gallons of noncompliant coatings are used in a calendar year. This exemption also limits the number of vehicles restored per year to 15 and applies only to certain provisions of the rule, namely the VOC content limits for coatings, materials for surface preparation or other surface cleaning, and cleaning materials for application equipment. All other provisions of Rule 67.20.1 will still apply.

6. WORKSHOP COMMENT

The cost of compliance with the rule can be passed onto consumers, but only to a limited extent, through an increase in the price of refinishing a vehicle. This is because the amount charged for refinishing work is controlled in large part by the insurance industry. If the cost of converting to waterborne products cannot be fully absorbed through increased prices to consumers, it will be even more difficult for automotive refinishing shops to comply with the new requirements of the rule.

DISTRICT RESPONSE

ARB estimates that the average cost to automotive refinishing facilities in California to comply with the requirements of the SCM will be about $3,400 per year. If the entire cost of compliance were passed on to consumers, ARB estimates that the average price for a repair or refinish would increase by about $11.

The District has contracted a consulting firm to prepare a Socioeconomic Impact Assessment Report (SIA) that will study the social and economic impact for businesses in San Diego County due to SCM implementation through adoption of proposed Rule 67.20.1. The analysis will recommend ways to minimize any significant adverse impacts to the local business community.

7. WORKSHOP COMMENT

How can a distributor sell non-compliant products for residential use, which is exempt in the rule, if the rule prohibits the sale of such products? This will cause a distributor to lose revenue from the lack of sales of non-compliant products.

DISTRICT RESPONSE

In response to ARB comment (please see Comment No. 38), the proposed rule was revised to specify that coatings applied on personal vehicles at private residences are required to meet the VOC content limits in Table 1. Thus, consistent with the requirements of the SCM, the prohibition of sale of non-compliant coatings for use in San Diego County will also apply to residential use. Consumers may also be discouraged from using non-compliant coatings to paint their own cars since additional efforts will be required to obtain non-compliant materials outside of San Diego County and California. Considering that the majority of cars manufactured in the U.S. are now painted with waterborne coatings, it is likely that such individuals will adapt to using the new products that comply with the rule.

8. WORKSHOP COMMENT

Does the prohibition of sale apply to those coatings that will be used outside of San Diego County?

DISTRICT RESPONSE

No, the prohibition of sale of non-compliant products only applies to those coatings that are sold for use in San Diego County.

9. WORKSHOP COMMENT

Why was the definition for “flop adjuster” added to the rule? Flop adjuster is company-specific and is not a generic industry term. The definition should be revised to “effect additive” for better clarity.

DISTRICT RESPONSE

The term “flop adjuster” was added for clarification since it is listed in the definition for “coating additive.” The definition is not substantial to the rule and thus has been removed.

10. WORKSHOP COMMENT

Will the District consider revisions to the VOC content limits proposed in the rule?

DISTRICT RESPONSE

No. For consistency throughout California, the District must implement the VOC content limits specified in the State SCM by incorporating them in Rule 67.20.1.

11. WORKSHOP COMMENT

Is there a penalty assessment chart for violations of the rule? What are the criteria for the assessment and are they available to the public?

DISTRICT RESPONSE

The factors considered by the District when determining penalty amounts for violations of air pollution laws, District rules, or permit conditions are specified in State law (Health and Safety Code Section 42400 et seq.) and include the extent of harm caused by the violation, the nature and persistence of the violation, and the violation duration. A summary of maximum penalties and other information regarding violations is available on the District's website at www.sdapcd.org/comply/violation/VSProg.html.

12. WORKSHOP COMMENT

Does a site need to maintain the manufacturer's technical information regarding the correlation between the handle air inlet pressure and air cap pressure for each brand and model high-volume low-pressure (HVLP) spray gun? Is information stamped on the spray gun itself adequate to show compliance?

DISTRICT RESPONSE

If the correlation option is used to demonstrate compliance, then a site must maintain the manufacturer's technical information regarding the correlation between the handle air inlet pressure and air cap pressure for each brand and model of spray gun used. Information stamped on the spray gun would not be adequate by itself to demonstrate compliance due to the extent of information that is required.

13. WORKSHOP COMMENT

Can equipment be purchased and used if the information mentioned above is not provided by the manufacturer?

DISTRICT RESPONSE

The rule does not prohibit the purchase of coating equipment for which supporting technical documentation is not available. However, operation of such equipment in San Diego County would violate the rule because there would be no method to demonstrate that the equipment is compliant.

14. WORKSHOP COMMENT

Are purchase and usage records, MSDS and data sheets required to be kept in the vehicle for mobile coating operations?

DISTRICT RESPONSE

Yes. These records are required to be maintained in the vehicle in order to demonstrate compliance with the rule.

15. WORKSHOP COMMENT

Does the District provide a standard recordkeeping form to make it easier for facilities to track their coating usage?

DISTRICT RESPONSE

Yes. Forms have been created by the District to assist regulated sources to comply with the recordkeeping requirements of Rule 67.20.1. These forms can be accessed from the District website at http://www.sdapcd.org/comply/SBA/recordkpng.html. Alternatively, businesses can contact the District Small Business Assistance Specialist at (858) 586-2656. It also should be noted that paint distributors or suppliers quite often provide recordkeeping forms reflecting the necessary information for the paints they sell.

16. WORKSHOP COMMENT

Is recordkeeping still required if a facility uses a cleanup solvent that has a VOC content that is less than 50 grams/liter, e.g., waterborne cleaners that have zero VOC content?

DISTRICT RESPONSE

The use of cleaning materials with zero VOC content would not require recordkeeping, as specified in the rule. However, the container label of the cleaning product, technical data sheet, or other supporting document should specify that the material does not contain any VOCs. The recordkeeping is required for all other compliant cleaning materials with a VOC content of 25 grams/liter or less as provided in Section (h) of the rule.

17. WORKSHOP COMMENT

Is a gun washer required if the solvent is not atomized and released to the air during the cleaning process?

DISTRICT RESPONSE

No. The proposed rule allows the option of either 1) the application equipment or equipment parts are cleaned in a container which is open only when being accessed for adding, cleaning, or removing application equipment or when cleaning material is being added, or 2) a system is used that totally encloses the component parts during the cleaning process, such as a gun washer.

18. WORKSHOP COMMENT

Does the rule require the use of both a gun washer and a cleanup solvent with a VOC content that is less than 50 grams/liter? For example, the San Joaquin Valley air district does not require the use of a gun washer if the VOC content does not exceed 25 grams/liter.

DISTRICT RESPONSE

The present draft of the rule has the option of using either a container which is open only when being accessed, or a totally enclosed system, such as a gun washer.

However, in response to ARB Comment No. 43, the proposed rule has been revised to reduce the VOC content limit for cleaning material to 25 grams/liter for consistency with the SCM. Also, if a cleaning material with a VOC content of 25 grams/liter or less does not contain any exempt compounds, the revised rule does not require any additional equipment to reduce emissions.

19. WORKSHOP COMMENT

Will it be required that an application to modify a permit to operate be submitted to the District if portable air dryers are installed in a spray booth to help with the drying process?

DISTRICT RESPONSE

No. An application for a permit modification will not be required for the installation of portable air dryers in a spray booth. These devices are typically attached to a facility's compressed air lines and used to provide additional air flow at localized areas of a vehicle's coated surface. Such devices are not a source of VOC emissions, nor would their use affect a change in emissions.

20. WORKSHOP COMMENT

Will the use of certain coatings that contain small amounts of nickel require an assessment for health risk at a facility that uses such coatings?

DISTRICT RESPONSE

Based on State guidance on industry-wide generic risk assessments for automotive refinishing facilities, the District currently does not conduct a health risk assessment for such sources provided that certain work practices are maintained, such as coatings are applied in a spray booth, and no coatings are applied that contain hexavalent chromium, cadmium or lead. In addition, automotive refinishing facilities are also subject to the federal requirements of the National Emission Standards for Hazardous Air Pollutants, Subpart HHHHHH. This federal rule regulates the use of coatings that contain compounds of chromium, cadmium, lead, nickel or manganese and similarly requires specific work practices intended to minimize emissions of these hazardous air pollutants.

However, in consideration of currently available waterborne coatings that comply with the proposed VOC content limits, and the composition of these products, especially their content of heavy metals and other toxic compounds, further evaluation by the District may be needed to determine if a generic health risk assessment would be warranted for a typical automotive refinishing facility.

21. WRITTEN COMMENT

Does "Zolatone 20 Multicolor" comply with the definition of "multi-color coating" or can it be classified as a "polychromatic" basecoat in which the appearance of paint's changes depending on how it's viewed?

DISTRICT RESPONSE

Multi-color coating, also known as spatter paint or spatter finish, is defined in the rule as a coating that exhibits more than one color once dried. A product such as Zolatone 20, which exhibits this property, is considered a multi-color coating.

Polychromatic paint is considered a metallic coating whereby the metal or iridescent particles in the paint cause the visual effect of changing the appearance of the paint, depending on the angle at which the paint is viewed. The rule defines “color coating” to include metallic/iridescent coatings.

22. WRITTEN COMMENT

What coating category will apply to automotive body fillers?

DISTRICT RESPONSE

Automotive body filler, also generally referred to as bondo, is categorized in the rule under "any other coating type."

23. WRITTEN COMMENT

What coating category will apply to graphic design applications?

DISTRICT RESPONSE

Any coating that complies with the VOC content limits of the rule can be used. Graphic design applications are only exempt from the requirement to use high transfer efficiency coating application equipment.

24. WRITTEN COMMENT

Some paint manufacturers currently do not list the VOC content on the container label.

DISTRICT RESPONSE

Other air districts in California have already adopted revisions to their automotive refinishing rules in order to implement the SCM requirements. The majority of these rules require, beginning this year, that manufacturers list the VOC content on the container label. Therefore, most paint manufacturers should either already comply with the labeling requirement of these rules, or work towards achieving compliance by late 2009. By the time the proposed Rule 67.20.1 takes effect, the requirement to identify the VOC content of paint on the container label will apply throughout California.

25. WRITTEN COMMENT

Are handheld aerosols used for surface preparation exempt from the rule?

DISTRICT RESPONSE

Handheld aerosols used for surface preparation are not exempt from the rule. However, the rule has been revised to allow solvent usage for the removal of dust, wax, grease, tar, or bugs from a surface provided that the solvent is applied with a non-aerosol handheld spray bottle, the VOC content does not exceed 780 grams/liter, and no more than 20 gallons of the solvent are used per calendar year.

26. WRITTEN COMMENT

The language in Subsection (h)(1) suggests that recordkeeping is only required for any person subject to all the requirements of Subsections (d)(1) through (d)(5). For clarification, Subsection (h)(1) should be revised to "Any person subject to any of the provisions of Subsections (d)(1) through (d)(5)."

DISTRICT RESPONSE

The District agrees. The rule has been revised as suggested.

27. WRITTEN COMMENT

Subsection (h)(1)(i)(C) seems grammatically incorrect. Does it mean "actual and regulatory" VOC content of coatings?

DISTRICT RESPONSE

The subsection has been revised for clarification.

28. WRITTEN COMMENT

Will operation of an HVLP spray gun in excess of 10 psig result in enforcement action by the District?

DISTRICT RESPONSE

The rule defines HVLP as operating at an atomizing pressure between 0.1 and 10.0 psig. Thus, operation outside of this pressure range would be a violation of the rule that is subject to District enforcement action.

29. WRITTEN COMMENT

Some facilities apply only truck bed liner coatings that have zero VOC content. Are such operations still subject to Rule 67.20.1?

DISTRICT RESPONSE

No. Rule 67.20.1 defines a coating as a VOC containing material. Thus, application of zero VOC content material would not be subject to the rule. However, a facility shall still maintain records to demonstrate that all the materials applied at that facility do not contain VOCs.

30. WRITTEN COMMENT

The PPG Envirobase High Performance waterborne system has all the colors formulated for late model vehicles only as far back as 1999. If a customer requests an original color that predates 1999, a color match must be done in our shop or requested from PPG, which could take between one to two weeks to complete. Two possible resolutions to this issue would be: 1) the District allows us the use of solvent based coatings only for vehicles requiring a color match prior to 1999, and the use of waterborne coatings on all other vehicles if an OEM formula is available, or 2) the District allows us to operate as a restoration shop so that our facility will be exempt from the VOC content limits and other provisions in the rule.

DISTRICT RESPONSE

The proposed rule reflects requirements of the statewide SCM. The objective of this measure is to maximize the level of VOC emission reductions that may feasibly be attained through uniform use of lower VOC content automotive coatings in California, along with phasing out the manufacture and sale of non-compliant materials. Thus, the District cannot allow an exemption for the use of non-compliant coatings as suggested in cases where a color match using compliant coatings is not immediately available because such an exemption would be inconsistent with the requirements and intent of the SCM and corresponding rules throughout California.

In addition, the facility described above cannot be classified as a restoration shop and thereby be exempted from, among other requirements, the VOC content limits of the rule. The operations conducted at the facility do not comply with the limits specified for a restoration process, such that the amount of coatings used does not exceed 25 gallons per calendar year, not more than 15 vehicles are restored per calendar year, and no automotive refinishing operations other than vehicle restorations are conducted at the same facility.

31. WRITTEN COMMENT

Does the exemption from a permit to operate provided in District Rule 11 for coating operations that emit 150 pounds or less of VOCs per consecutive 12-month period also apply to mobile operations?

DISTRICT RESPONSE

Yes. The intent of Rule 11 is to exempt from the requirement for a permit any coating or adhesive application operation at a portable or stationary source where VOC emissions are 150 pounds or less in a consecutive 12-month period. If a mobile operation moves from one stationary source to another and wishes to be exempt from the requirement for a permit, its total VOC emissions should not be more than 150 pounds per 12-month period irrespective of the number of sources at which it operated.

32. WRITTEN COMMENT

Can there be an allowance in the rule for the use of non-compliant coatings specifically for touch-up applications only? The coatings would be stored in a separate and distinct kit, comprised of a few 1-2 ounce bottles of paint toners along with application and removal materials.

DISTRICT RESPONSE

Yes. The rule has been revised to include an exemption for touch-up coatings from the rule. In consideration that only minimal amounts of coatings are used for touch-up applications, and that touch-up applications are conducted with non-atomizing application methods, the District anticipates any difference in VOC emissions to be negligible.

33. WRITTEN COMMENT

Will the District require mobile operators to register their operations for a nominal fee, similar to what Bay Area AQMD Regulation 8, Rule 45, requires? The benefits of a registration program for mobile coating operations would be to increase awareness by the industry of the rule requirements, better enable the District to regularly inspect such operations, and thereby improve the level of compliance for all mobile operations.

DISTRICT RESPONSE

At this time, the District does not plan to require registration of mobile automotive coating operations due to limited District resources to implement and enforce such a program. However, all mobile automotive coating operations, whether or not operating under a District permit, are subject to Rule 67.20.1 and must comply with the requirements of the rule. As provided by District Rule 11, coating operations that use 20 gallons or less, or emit 150 pounds or less of VOC emissions in a consecutive 12-month period are exempt from the permit requirement with the District. See also response to Comment No. 3.

34. WRITTEN COMMENT

Does the rule allow for a transition period in which coatings manufactured after a certain date would be required to display the actual or "as supplied" VOC content on the container label?

DISTRICT RESPONSE

Upon the date of rule adoption, manufacturers must comply with the labeling requirements of the rule. The District anticipates submitting proposed Rule 67.20.1 to the Air Pollution Control Board for adoption in early 2010. This should be an adequate transition period considering that other air districts in California have already adopted new automotive refinishing rules that are, or soon will be, in effect and implement similar labeling requirements as those in Rule 67.20.1.

35. WRITTEN COMMENT

Can a manufacturer provide the regulatory or "as applied" VOC content in a technical data sheet or product bulletin instead of displaying the content on the container label as the proposed rule requires?

DISTRICT RESPONSE

Yes. Subsection (g)(2) of the propose rule has been revised to allow that the regulatory VOC content of coatings be printed on either the container label or manufacturer data sheet.

36. WRITTEN COMMENT

Military facilities have separate and additional standards for coatings and solvents applied to military tactical support vehicles and equipment to ensure equipment compatibility and functionality in combat. To make certain these combat-driven standards are met, products undergo an extensive evaluation process before they can be included on the Qualified Products List (QPL) for each military-specific operation. Only those products that meet military specifications (mil-specs) and are included in the QPL are approved for use by the U.S. Department of Defense.

For a number of military-specific operations, there currently are no mil-spec approved coatings and solvents that meet the proposed VOC standards in Rule 67.20.1. Adoption of the proposed new rule will result in adverse impacts to those coating and cleaning operations on military installations within San Diego County that maintain military equipment in support of training and combat activities crucial to national security. Therefore, it is requested that the VOC content limits for coatings and associated cleaning materials not apply to coating operations for U.S. military tactical vehicles and equipment.

DISTRICT RESPONSE

The District agrees. Rule 67.20.1 has been revised to exempt coating operations for military tactical support vehicles and equipment from the rule's VOC content limits only. However, this limited exemption will be allowed provided that the coatings and associated cleaning materials used at these operations comply with the VOC content standards of current Rule 67.20. Coating operations for tactical support vehicles and equipment will remain subject to all other provisions of Rule 67.20.1.

In addition, in accordance with the limited exemption described above, the provisions in Rule 67.20.1 that prohibit the manufacture or sale, specification, and possession of non-compliant coatings have been revised to allow for the sale and use of coatings that don't comply with the standards of Rule 67.20.1 for military coating operations.

37. WORKSHOP COMMENT

Why are coating operations conducted at a residence exempt from the rule? These individuals should also be subject to the rule in order to maximize the amount of emissions that are reduced.

DISTRICT RESPONSE

Please see response to the following ARB Comment No. 38.

38. ARB COMMENT

Subsection (b)(1)(i) should be revised to require that individuals who apply coatings on their personal vehicles at their own residence use products that meet the VOC limits specified in Subsection (d)(1).

DISTRICT RESPONSE

The District agrees. The rule has been revised as suggested.

39. ARB COMMENT

Subsections (a)(2) and (a)(3) should be moved to Section (b).

DISTRICT RESPONSE

The District disagrees. Section (b) – Exemptions, describes the processes that are exempt, either from all or only specific provisions of Rule 67.20.1. While a process may be exempted from the rule per Section (b), the rule nevertheless still applies to that process in general. Subsections (a)(2) and (a)(3) describe the operations to which the rule does not apply. Therefore, it is more appropriate to keep the language of Subsections (a)(2) and (a)(3) in Section (a) – Applicability.

40. ARB COMMENT

The exemption provided for motor vehicle restoration activities in Subsection (b)(3) should be removed from the rule. Districts that have revised their rules for Motor Vehicle and Mobile Equipment Coating operations to reflect the SCM do not have this exemption. Removing the exemption would provide consistency with other district rules, e.g., South Coast AQMD and San Joaquin Valley Unified APCD, and maximize the emission reduction benefits.

DISTRICT RESPONSE

The District disagrees. Subsection (b)(3) provides a limited exemption from certain provisions of the rule, namely the VOC content limits for coatings and surface preparation or cleaning materials, and coating application equipment requirements. However, all other provisions of the

rule will still apply. The exemption applies specifically for motor vehicle restoration facilities provided that no more than 25 gallons of noncompliant automotive coatings are used per calendar year, no more than 15 vehicles are restored per calendar year, and no other refinishing operations are conducted at the facility. The exemption would be necessary to allow the use of non-compliant coatings during the restoration process of an antique or classic vehicle (to restore the vehicle to its original appearance) if a color match is not available using products with the lower VOC content.

To date, there is only one permitted facility in San Diego County that conducts motor vehicle restoration work and to which the exemption in Subsection (b)(3) would apply. Due to the lengthy restoration process (about one year or more per vehicle) and the few vehicles that are restored in a year, the VOC emissions from this one facility account for only about 0.2 tons per year, or 0.03% of the total annual emissions from all permitted automotive refinishing operations in the county. Thus, the level of emission reduction benefit that may result by the removal of this exemption from the rule will be minimal.

41. ARB COMMENT

A definition for "assembly line" as provided in the SCM should be added to Section (c).

DISTRICT RESPONSE

The District agrees. The rule has been revised as suggested.

42. ARB COMMENT

The definition for "automotive refinishing facility" in Subsection (c)(7) should be revised to "…where motor vehicle or mobile equipment coating operations take place."

DISTRICT RESPONSE

The District agrees. The rule has been revised as suggested.

43. ARB COMMENT

The VOC content limit for cleaning material used for cleaning of coating application equipment or surface preparation should be reduced from 50 grams/liter to 25 grams/liter. Other districts have successfully implemented a 25 grams/liter limit for cleaning materials used in these activities.

DISTRICT RESPONSE

The District agrees. The rule has been revised as suggested.

44. EPA COMMENT

All of the test methods specified in the SCM should be added to Section (i).

DISTRICT RESPONSE

The District added the most recent test methods necessary to ensure compliance with the proposed rule.

45. EPA COMMENT

Exemptions from the proposed rule for operations performed at a residence, and motor vehicle restoration processes should be removed.

DISTRICT RESPONSE

Please see responses to ARB Comment Nos. 38 and 40.

46. EPA COMMENT

The solvent limit in Subsections (d)(4)(i) and (d)(5) should be reduced from 50 grams/liter to 25 grams/liter.

DISTRICT RESPONSE

Please see response to ARB Comment No. 43.

47. EPA COMMENT

Subsection (g)(2) should include the following items to provide sufficient information for determining VOC content and to improve demonstration of compliance: weight percentage of volatiles, water and exempt compounds; volume percentage of water and exempt compounds; and the density of material in grams per liter.

DISTRICT RESPONSE

The District disagrees. The additional information listed above is not necessary to demonstrate compliance with the rule provided that the mix ratio and the VOC content of coatings (actual and regulatory) are provided on the coating label or supporting data sheet.

48. EPA COMMENT

The following should be added in Subsection (h)(1)(i): application method, and specification of material as a coating or solvent.

DISTRICT RESPONSE

The District disagrees. It is not necessary to require the specification of material as a coating or solvent because Subsection (h)(1)(i) already requires that the type and applicable coating category of each coating be listed. In addition, listing of application method for each coating is not necessary because the majority of automotive refinishing facilities operating in San Diego County use HVLP spray guns.

RR:NY:RC
02/11/10

ATTACHMENT F

RULE 67.20 – MOTOR VEHICLE AND MOBILE EQUIPMENT REFINISHING OPERATIONS is to be deleted in its entirety.

RULE 67.20. MOTOR VEHICLE AND MOBILE EQUIPMENT REFINISHING OPERATIONS (Adopted November 13, 1996 / Effective August 13, 1997)

(a) **APPLICABILITY**

(1) Except as otherwise provided in Section (b), this rule is applicable to all motor vehicle and mobile equipment refinishing (coating) operations, including the refinishing or finishing of motor vehicles, mobile equipment, bicycles, nonmotorized models, and their component parts.

(2) Finishing and refinishing operations which are subject to the provisions of this rule shall not be subject to Rule 66 or Rule 67.3.

(b) **EXEMPTIONS**

(1) The provisions of this rule shall not apply to coating of motor vehicle, mobile equipment, bicycle, or nonmotorized model component parts or accessories, as identified by the original equipment manufacturer's (OEM) parts list, during original manufacture. Rules 66, 67.3, 67.11, or 67.12 shall apply to such coating operations, as applicable.

(2) The provisions of this rule shall not apply to noncommercial motor vehicle and mobile equipment refinishing operations performed by any individual at his/her residence for the purpose of finishing or refinishing that individual's personal vehicles.

(3) The provisions of this rule shall not apply to the following:

(i) Touch-up coatings.

(ii) Graphic design applications.

(iii) Coatings applied using non-refillable hand-held aerosol spray containers.

(iv) Body fillers.

(v) Bedliner coatings.

(4) The provisions of this rule shall not apply to coating of radiators or engine components. Rule 67.3 shall apply to such coating operations.

(5) The provisions of Subsections (d)(1), (d)(2), and (d)(3) shall not apply to coatings which are used exclusively for the purpose of restoring motor vehicles provided:

(i) Not more than 50 gallons per year of all such noncompliant coatings are used at the stationary source; and

(ii) Not more than 30 vehicles are restored in whole or in part per calendar year at the stationary source; and

(iii) Each vehicle restoration takes not less than sixty days; and

(iv) No other motor vehicle or mobile equipment finishing or refinishing operations occur at the same stationary source.

It shall be the responsibility of any person claiming this exemption to maintain monthly records of the number of vehicles restored, the number of days required for each restoration, and the coating usage along with a copy of the records provided by the manufacturer or supplier as specified in Subsection (d)(10). These records shall be retained on site for at least three years and made readily available to the District upon request.

(6) The provisions of Subsections (d)(1), (d)(2), (d)(3), (d)(5), and (f)(1)(ii) shall not apply to underbody coatings and topcoat sealants.

(7) The provisions of this rule shall not apply to equipment that is subject to Rule 67.6 and is used for surface preparation during motor vehicle and mobile equipment refinishing operations.

(8) The provisions of this rule shall not apply to the coating of mobile-homes. Rule 67.0 shall apply to such coating operations.

(c) **DEFINITIONS**

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

(1) **"Adhesion Promoter"** means a coating to be used in lieu of sanding a surface to promote adhesion of a refinish topcoat to surfaces such as the original topcoats applied at an OEM plant or thermosetting enamels. Such coatings are primarily used for hard-to-sand areas (including, but not limited to, trim moldings, door locks and door sills) or in the case of spot repairs, to effectively blend in the refinished area into the surrounding unrefinished area. No topcoat, primer, primer sealer, or primer surfacer shall be classified as an adhesion promoter.

(2) **"Aircraft Ground Support Equipment"** means any vehicle used to support aircraft activities at airports, including, but not limited to, engine stands, corrosion control stands, hydraulic test stands, maintenance stands, prop dollies, nitrogen and oxygen carts, gas turbines, crash dollies, air conditioning units, light stands, bomb racks, luggage carriers, auxiliary power units, and aircraft boarding ramps.

(3) **"Antiglare/Safety Coating"** means a low gloss coating which shows a reflectance of 25 or less on a 60° gloss meter and is formulated to eliminate glare for safety purposes on interior surfaces of a vehicle.

(4) **"Bedliner Coating"** means an expandable polymeric foam that is applied to motor vehicles or mobile equipment for abrasion protection. A coating shall not be classified as a bedliner coating if it can also be classified as a topcoat or as part of a multistage topcoat system.

(5) **"Bicycle"** means a device upon which any person may ride, propelled exclusively by human power through a belt, chain, or gears, and having one or more wheels.

(6) **"Body Filler"** means a coating applied to the vehicle body for the purposes of filling in dents or imperfections. A coating shall not be classified as a body filler if it can also be classified as a primer surfacer.

(7) **"Bright Metal Trim Repair Coating"** means a coating applied directly to a metal-plated surface to restore the surface to its original luster and texture.

(8) **"Camouflage Coating"** means a coating applied on motor vehicles or mobile equipment to conceal such vehicles or equipment from detection and/or to provide resistance to chemical agents.

(9) **"Coating"** means a VOC containing material which can be applied to a surface and which forms a solid continuous film in order to beautify and/or protect the surface. This includes, but is not limited to, any primer, paint, varnish, stain, lacquer, enamel, shellac, sealer or maskant, but excludes adhesive.

(10) **"Coating Line"** means the equipment required to apply, dry, cure, and/or bake coatings and associated flash-off areas which is operated in an uninterrupted series in a motor vehicle or mobile equipment refinishing operation.

(11) **"Coating Additive"** means any material containing VOCs that is mixed with a coating material to modify the coating material properties, except thinners and reducers. Coating additives include, but are not limited to, catalysts, retarders, accelerators, hardeners, activators, plasticizers, flex agents, elastomeric additives, antisilicone agents, fisheye preventers, flop adjusters, texture additives, and flattening agents.

(12) **"Color Match"** means the ability of a repair coating to blend into an existing coating so that color difference is not visible.

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

(14) **"Elastomeric Material"** means a coating specifically formulated for application over flexible composite substrates, including but not limited to, filler panels, elastomeric bumpers, and spoilers.

(15) **"Electrostatic Application"** means the application of charged atomized coating droplets which are deposited by electrostatic attraction.

(16) **"Exempt Compound"** means the same as defined in Rule 2.

(17) **"Existing Equipment"** means any coating equipment for which a District Authority to Construct or Permit to Operate was issued before *November 13, 1996*.

(18) **"Finishing"** means the original coating of motor vehicles, mobile equipment, bicycles, nonmotorized models, or their component parts, excluding coating performed at an OEM plant.

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

(20) **"Graphic Design Application"** means the application of logos, letters, numbers, and graphics to a painted surface.

(21) **"Group I Vehicles"** means nonmotorized models, bicycles, recreational vehicles, and private or commercial passenger cars, large/heavy duty truck cabs and chassis, light and medium duty trucks and vans, buses, and motorcycles.

(22) **"Group II Vehicles and Equipment"** means public transit buses and mobile equipment.

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

(24) **"High-Volume Low-Pressure (HVLP) Spray"** means a coating application method using a spray applicator and pressurized air which is designed to be operated and which is operated at a permanent atomizing pressure between 0.1 and 10.0 psig, measured dynamically at the center of the applicator's air cap and at the applicator's air horns.

(25) **"Low VOC Primer or Primer Surfacer"** means a primer or primer surfacer with a VOC content of not more than 250 grams per liter, as applied, less water and exempt compounds.

(26) **"Metallic/Iridescent Topcoat"** means any topcoat which contains more than 5 grams per liter (0.042 lb/gal) of metal or iridescent particles, as applied, where such particles are visible in the dried film.

(27) **"Military Vehicles"** means any vehicles operated by the United States armed forces or National Guard, including, but not limited to, tanks, trucks, tractors, trailers, vans, armored personnel carriers, and artillery pieces.

(28) **"Mobile Equipment"** means any vehicles or equipment, except Group I vehicles, which may be drawn or are capable of being driven on a roadway or rails, including, but not limited to, truck bodies, truck trailers, utility bodies, camper shells, locomotives, railcars, trolleys, military vehicles, aircraft ground support equipment, mobile cranes, bulldozers, street cleaners, golf carts, and implements of husbandry.

(29) **"Mobile Home"** means a vehicle other than a motor vehicle that is designed for human habitation or for human occupancy for industrial, professional or commercial purposes and for being drawn by a motor vehicle and that is in excess of 8.5 feet in width or in excess of 40 feet in overall length measured from the foremost point of the trailer hitch to the rear extremity of the vehicle. Mobile homes do not include recreational vehicles or busses.

(30) **"Motor Vehicle"** means a vehicle which is self-propelled, excluding self-propelled wheelchairs, invalid tricycles, or invalid quadricycles.

(31) **"Motor Vehicle and Mobile Equipment Refinishing Operation"** means the finishing or refinishing of Group I vehicles and Group II vehicles and equipment, including component parts.

(32) **"Multicolored Topcoat"** means a single stage topcoat that exhibits more than one color when applied and that is packaged in a single container.

(33) **"Multicomponent Coating"** means a coating mixed on site from components packaged separately. Coating components include, but are not limited to, thinners/reducers, base components, curing agents, reactive diluents, and coating additives.

(34) **"Multistage Topcoat"** means a topcoat system consisting of either two coating stages (pigmented basecoat, and clear coat), three coating stages (pigmented basecoat, translucent midcoat and clearcoat), or four coating stages (pigmented groundcoat or pigmented primer sealer, pigmented basecoat, translucent midcoat, and clearcoat). Coating stages using the same topcoat or topcoats that differ solely by the addition or removal of thinners, reducers, or coating additives are counted as a single stage for purposes of defining a multistage topcoat. The average VOC content of multistage topcoats shall be used to determine compliance with the VOC content standards in Subsection (d)(1). The average VOC content of multistage topcoats shall be calculated as follows:

$$VOC(2\text{-stage}) = \frac{VOC_{bc} + 2\,VOC_{cc}}{3}$$

$$VOC(3\text{-stage}) = \frac{VOC_{bc} + VOC_{mc} + 2\,VOC_{cc}}{4}$$

$$VOC(4\text{-stage}) = \frac{VOC_{gc} + VOC_{bc} + VOC_{mc} + 2\,VOC_{cc}}{5}$$

where:

VOC(2-stage) = the average VOC content, as applied, of a two-stage coating system.

VOC(3-stage) = the average VOC content, as applied, of a three-stage coating system.

VOC(4-stage)	=	the average VOC content, as applied, of a four-stage coating system.
VOC_{bc}	=	the VOC content, as applied, of a basecoat.
2 VOC_{cc}	=	two times the VOC content, as applied, of a clearcoat.
VOC_{mc}	=	the VOC content, as applied, of a midcoat.
VOC_{gc}	=	the VOC content, as applied, of a groundcoat.

and VOC(2-stage), VOC(3-stage), VOC(4-stage), VOC_{bc}, 2 VOC_{cc}, VOC_{mc}, VOC_{gc} have units of weight per volume of coating less water and exempt compounds.

(35) **"Non-motorized Model"** means a nonmotorized vehicle designed to represent a new concept of future motor vehicles for display purposes.

(36) **"Precoat"** means any coating which is applied to bare metal prior to application of a low VOC primer or primer surfacer and which dries by oxidation or polymerization.

(37) **"Pretreatment Coating (Wash Primer)"** means any coating which contains at least one-half percent by weight of acid to provide surface etching, and is applied directly to bare metal surfaces to provide corrosion resistance and adhesion.

(38) **"Primer"** means any coating applied prior to the application of a topcoat for the purpose of corrosion resistance and adhesion of the topcoat.

(39) **"Primer Sealer"** means any coating applied prior to the application of a topcoat for the purpose of corrosion resistance, adhesion of the topcoat, color uniformity, and to promote the ability of an undercoat to resist penetration by the topcoat.

(40) **"Primer Surfacer"** means any coating applied prior to the application of a topcoat for the purpose of corrosion resistance and adhesion of the topcoat, and which promotes a uniform surface by filling in surface imperfections.

(41) **"Refinishing"** means any coating of motor vehicles, mobile equipment, bicycles, or nonmotorized models, including partial body collision repairs, for the purpose of protection or beautification and which is subsequent to the original coating applied at an OEM plant coating line.

(42) **"Restoring"** means any coating of motor vehicles for the purpose of bringing the vehicles back to the exact original state that existed when the vehicles were delivered from the OEM plant.

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

(44) **"Specialty Coating"** means a coating which is necessary due to unusual job performance requirements and contains VOC in excess of the limits for topcoats specified for Group I vehicles or Group II vehicles and equipment. Such coatings include, but are

not limited to, adhesion promoters, uniform finish blenders, elastomeric material, bright metal trim repair coatings, and anti-glare/safety coatings.

(45) **"Stationary Source"** means the same as defined in Rule 2.

(46) **"Temporary Protective Coating"** means a coating that is applied to protect areas adjacent to the area being finished or refinished from coating overspray and that is removed after the primer or topcoat is applied.

(47) **"Thinner (Reducer)"** means any solvent used to reduce the viscosity of a coating, to improve the ability of applying the coating, to achieve appropriate flash, or to achieve necessary appearance properties in the coating.

(48) **"Topcoat"** means any coating applied over a primer or an original OEM finish for the purpose of protection or appearance. Any multistage coating system shall be considered a topcoat.

(49) **"Topcoat Sealant"** means a nonpigmented coating applied over a topcoat or over an original OEM finish for the purpose of protection or appearance that requires periodic replacement, including waxes, polytetrafluoroethylene coatings, and silicone coatings. A coating shall not be classified as a topcoat sealant if it can also be classified as a topcoat or part of a multistage topcoat system.

(50) **"Touch-up Coating"** means a coating applied by brush or by handheld, non-refillable aerosol cans that is used to cover minor imperfections.

(51) **"Transfer Efficiency"** means the ratio of the weight or volume of coating solids adhering to the part being coated to the weight or volume of coating solids applied in the application process, expressed as a percentage.

(52) **"Underbody Coating"** means a coating that is applied over a topcoat to wheel wells, the inside of door panels or fenders, the underside of a trunk or hood, or the underside of motor vehicles or mobile equipment for the purposes of protection or noise reduction. A coating shall not be classified as an underbody coating if it can also be classified as a topcoat or part of a multistage topcoat system.

(53) **"Uniform Finish Blender"** means a thinner or low solids coating applied in spot or panel repairs for the purpose of blending a paint overspray area of a repaired topcoat to match the appearance of an adjacent existing topcoat.

(54) **"Utility Body"** means 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.

(55) **"Vehicle"** means a device by which any person or property may be propelled, moved, or drawn upon a highway or stationary rails or tracks, excluding any device moved exclusively by human power, except a bicycle.

(56) **"Volatile Organic Compound (VOC)"** means any volatile compound containing at least one atom of carbon excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonates, and exempt compounds which may be emitted to the atmosphere during operations or activities subject to this rule.

(57) **"Water-Based Primer and Water-Based Primer Surfacer"** means any primer or primer surfacer that contains more than 5% water by weight.

(58) **"VOC Content Per Volume of Coating, Less Water and Less Exempt Compounds"** means the same as defined in Rule 2.

(59) **"VOC Content Per Volume of Material"** means the same as defined in Rule 2.

(d) **STANDARDS**

(1) Coating VOC Limits

(i) A person shall not finish or refinish Group I vehicles, or Group II vehicles and equipment where color match is required, using any coating which has a VOC content in excess of the following limits:

	VOC content per volume of coating as applied, less water and less exempt compounds	
Coating Category	gram/liter	(lb/gal)
Pretreatment Coating	780	(6.5)
Precoat	600	(5.0)
Primer/Primer Surfacer	420	(3.5)
Primer Sealer	420	(3.5)
Topcoats		
Metallic/Iridescent	520	(4.3)
Multicolor	685	(5.7)
Multistage	540	(4.5)
Multicolor Multistage	480	(4.0)
All Other Topcoats	420	(3.5)
Specialty Coating	840	(7.0)

(ii) Color match is allowed for roll bars, truck bodies, utility bodies, and camper shells that are installed, or will be installed, on Group I vehicles. Color match is allowed for any other Group II vehicles and equipment provided that a request to allow color match is approved in writing by the Air Pollution Control Officer.

(iii) A person shall not finish or refinish Group II vehicles and equipment where color match is not required, including full body paint jobs, using any coating which has a VOC content in excess of the following limits:

Coating Category	VOC content per volume of coating as applied, less water and less exempt compounds gram/liter	(lb/gal)
Pretreatment Coating	780	(6.5)
Precoat	600	(5.0)
Primer/Primer Surfacer	420	(3.5)
Primer Sealer	420	(3.5)
Topcoats		
Metallic/Iridescent	420	(3.5)
Multicolored	685	(5.7)
Camouflage Coating	420	(3.5)
All Other Topcoats	420	(3.5)
Specialty coating	840	(7.0)

(iv) A person shall not apply temporary protective coatings unless the coating contains 60 grams or less of VOC per liter of material, as applied.

(2) Precoat Usage Limitation

Use of precoats shall not exceed 25% of the aggregate volume, as applied, of all low VOC primers and primer surfacers applied at the stationary source, on a monthly basis.

(3) Specialty Coatings

Use of all specialty coatings except antiglare/safety coatings shall not exceed the larger of the following limits:

(i) Five percent by volume, as applied, of all motor vehicle and mobile equipment refinishing or finishing coatings used at the stationary source, on a monthly basis; or

(ii) Three gallons per month, as applied.

(4) Alternative Emission Control Plan

The requirements of Subsections (d)(1), (d)(2), and (d)(3) may be met using an Alternative Emission Control Plan (AECP) that has been approved pursuant to Rule 67.1.

(5) Application Equipment

A person shall not apply any coating containing VOC to any Group I vehicles or Group II vehicles and equipment except by means of the following application methods:

(i) Electrostatic spray application, or

(ii) High-volume low-pressure (HVLP) spray, or

(iii) Flow coat application, or

(iv) Dip coat application, or

(v) Roll coat, or

(vi) Hand application methods, or

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

(6) Surface Preparation Materials

(i) A person shall not use any material for surface preparation, excluding surface preparation of replacement plastic parts, unless:

(A) The material contains 200 grams or less of VOC per liter of material (1.67 lb/gal), as applied; or

(B) The material has an initial boiling point of 190^{o}C (374^{o}F) or greater; or

(C) The material has a total VOC vapor pressure of 20 mm Hg or less, at 20^{o}C (68^{o}F).

(ii) A person shall not use any material for surface preparation of replacement plastic parts unless it contains 780 grams or less of VOC per liter of material (6.5 lb/gal), as applied, or has a total vapor pressure of VOC of 45 mm Hg or less at 68°F (20°C).

(7) Application Equipment Cleaning

A person shall not use VOC-containing materials to clean coating application equipment used in motor vehicle and mobile equipment refinishing operations unless:

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

(ii) The cleaning material has an initial boiling point of 190^{o}C (374^{o}F) or greater; or

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

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

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

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

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

(8) Waste Disposal

A person shall not use spray application equipment or any other means to dispose of waste coatings, coating components, surface preparation materials, or cleaning materials into the air, except when momentarily purging coating material from a spray applicator cap immediately before or after applying the coating material.

(9) Prohibition of Specification

A person shall not solicit or require the use, or specify the application, of a coating on Group I vehicles or Group II vehicles and equipment if such use or application results in a violation of any provision of this rule. This prohibition is applicable to any written or oral contract under the terms of which any coating subject to this rule is to be applied to any motor vehicle or mobile equipment within San Diego County.

(10) Manufacturer and Supplier Information Requirements:

Any person who manufactures, sells, offers for sale, or supplies any coating, thinner, coating additive, surface preparation material, or cleaning material for use in motor vehicle and mobile equipment refinishing operations in San Diego County shall provide in writing the following information to customers:

(i) The manufacturer and manufacturer identification of each coating or multicomponent coating component, surface preparation material, and equipment cleaning material; and

(ii) The manufacturer recommended mix ratio of components of each coating; and

(iii) For each coating or multicomponent coating component, the weight of VOC per volume of coating less water and exempt compounds and per volume of material (expressed in grams per liter or pounds per gallon), as sold; and

(iv) For each coating, the weight of VOC per volume of coating less water and exempt compounds (expressed in grams per liter or pounds per gallon) for each coating as applied according to the manufacturer's recommendation; and

(v) For each surface preparation or equipment cleaning material, the weight of VOC per volume of material (in grams per liter or pounds per gallon), the total vapor pressure, or initial boiling point, as applicable.

(e) **CONTROL EQUIPMENT**

(1) In lieu of complying with the provisions of Subsections (d)(1), (d)(2), (d)(3), (d)(5), (d)(6), or (d)(7), or any combination thereof, a person may elect to use an air pollution control system which:

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

(ii) Includes an emission collection system which captures the organic gaseous emissions generated from coating, surface preparation, and/or cleaning operations, as applicable, and transports the captured emissions to an air pollution control device; and

(iii) Has an overall control efficiency of at least 85% by weight.

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

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

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

Upon approval of the Operation and Maintenance Plan by the Air Pollution Control Officer, the person shall comply with the provisions of the approved plan thereafter.

(f) **RECORDKEEPING**

All records shall be retained on site for at least three years and made readily available to the District upon request. Any person subject to the provisions of this rule shall maintain records, as applicable, in accordance with the following:

(1) Coating Operations

Any person subject to the provisions of Subsections (d)(1), (d)(2), (d)(3), (d)(6), or (d)(7), or any combination thereof, shall maintain records in accordance with the following:

(i) Maintain a current list of coatings, coating additives, thinners, surface preparation materials and equipment cleaning materials in use. This list shall provide all the data necessary to evaluate compliance, including, but not limited to:

(A) Type and applicable coating category specified in Subsection (d)(1) of each coating used, including manufacturer and manufacturer identification.

(B) Identification of all low VOC primers or primer surfacers as defined in Subsection (c)(25), if any.

(C) Type of each coating additive, thinner, surface preparation material, and equipment cleaning material used, including manufacturer and manufacturer identification.

(ii) Maintain monthly or daily records showing the manufacturer and manufacturer identification and the amount of each coating or coating component used, the actual mix ratio of components used in each coating, the type (Group I or Group II) of motor vehicle or mobile equipment to which each coating was applied, and whether or not color match was required.

(iii) Maintain monthly or daily records showing the manufacturer, manufacturer identification and amount of each surface preparation and equipment cleaning material used.

(iv) Maintain a copy of the records provided by the manufacturer or supplier as specified in Subsection (d)(10).

(2) Control Equipment

Any person using control equipment pursuant to Section (e) of this rule shall:

(i) Maintain records in accordance with Subsection (f)(1); and

(ii) For all coating, cleaning, and/or surface preparation materials not in compliance with Subsections (d)(1), (d)(6), or (d)(7), maintain daily records of the amount of each coating or each coating component for multicomponent coatings, surface preparation and cleaning material used; and

(iii) Maintain daily records of key system operating parameters as approved in the Operation and Maintenance plan. Such records shall be sufficient to document continuous compliance with Subsection (e)(1)(iii) during periods of emission producing activities.

(3) Manufacturer and Supplier Sales

Any person subject to the provisions of Subsection (d)(10) shall maintain records of all coatings, thinners, coating additives, surface preparation materials, or cleaning materials sold for use in, or delivery to, San Diego County. For each material sold, these records shall show the name and business address of the purchaser, the material manufacturer and manufacturer identification, and the amount of material sold.

(g) **TEST METHODS**

(1) Measurements of the VOC content of coatings subject to Subsection (d)(1), surface preparation materials subject to Subsection (d)(6), and cleaning materials subject to Subsection (d)(7) shall be conducted and reported in accordance with EPA Test Method 24 (40 CFR 60, Appendix A).

(2) Perfluorocarbon (PFC) compounds and cyclic, branched, or linear completely methylated siloxanes (VMS) shall be assumed to be absent from a coating, cleaning, or surface preparation material subject to this rule unless a manufacturer of the material or a facility operator identifies the specific individual compound(s) and the amount(s) present in the material and provides an EPA and ARB approved test method which can be used to quantify the specific compounds.

(3) Measurements of the content of metal, other than aluminum, or iridescent particles in metallic/iridescent topcoat as defined in Subsection (c)(26) shall be conducted in accordance with South Coast Air Quality Management District (SCAQMD) Test Method 311-91, "Analysis of Percent Metal in Metallic Coatings by Spectrographic Method". Measurements of the content of elemental aluminum in metallic/iridescent topcoats as defined in Subsection (c)(26) shall be conducted in accordance with the SCAQMD Test Method 318-95 " Analysis of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction".

(4) Measurements of acid content of pretreatment coating as defined in Subsection (c)(37) shall be conducted in accordance with ASTM Standard Test Method D 1613-91 for Determination of Acidity in Volatile Solvents and Intermediates Used in Paint, Varnish, Lacquer and Related Products.

(5) Measurements of the reflectance of anti-glare/safety coating as defined in Subsection (c)(3) shall be conducted in accordance with ASTM Standard Test Method D 523-89 for Specular Gloss.

(6) Calculation of total VOC vapor pressure of surface preparation materials subject to Subsection (d)(6) and cleaning materials subject to Subsection (d)(7) shall be conducted in accordance with the District's "Procedures for Estimating the Vapor Pressure of VOC

Mixtures". If the calculated vapor pressure of the liquid mixture exceeds the limit specified in Subsections (d)(6) or (d)(7), as applicable, then measurements of the vapor pressure shall be conducted in accordance with ASTM Standard Test Method D 2879-86. The solvent composition shall be determined using one of the following ASTM standard recommended practices: E168-92, E169-93, or E260-91. Measurements of the fraction of water and exempt compounds in the liquid phase shall be conducted in accordance with ASTM Standard Test Methods D 3792-91 and D 4457-85, respectively, and shall be used to calculate the partial pressure of water and exempt compounds. The results of vapor pressure measurements obtained using ASTM Standard Test Method D 2879-86 shall be corrected for the partial pressure of water and exempt compounds.

(7) Measurements of the initial boiling point of cleaning and surface preparation materials subject to Subsection (d)(6) or (d)(7) shall be conducted in accordance with ASTM Standard Test Method D1078-86 for the distillation range of volatile organic liquids.

(8) Measurements of solvent losses from alternative application cleaning equipment subject to Subsection (d)(7)(vii) shall be conducted and reported in accordance with the South Coast Air Quality Management District's "General Test Method for Determining Solvent Losses from Spray Gun Cleaning Systems".

(9) Measurements of transfer efficiency pursuant to Subsection (d)(5)(vii) shall be conducted in accordance with the South Coast Air Quality Management District's "Spray Equipment Transfer Efficiency Test Procedure for Equipment User".

(10) The overall control efficiency pursuant to Subsection (e)(1)(iii) shall be determined by multiplying the capture efficiency of the emission collection system by the control efficiency of the air pollution control device. The control efficiency of the air pollution control device shall be determined using EPA Methods 18 and 25 or 25A (40 CFR 60, Appendix A) and in accordance with a protocol approved by the Air Pollution Control Officer. Capture efficiency shall be determined according to EPA's technical document, "Guidelines for Determining Capture Efficiency", January 9, 1995. Subsequent to the initial compliance demonstration period, appropriate key system operating parameters as determined by the Air Pollution Control Officer may be used as indicators of the performance of the emission collection system.

(h) COMPLIANCE SCHEDULE

(1) Any person operating existing equipment who is electing to use control equipment to comply with one or more of the requirements of Subsections (d)(1) through (d)(7) shall meet the following increments of progress:

(i) By *August 13, 1997*, submit to the Air Pollution Control Officer an application for Authority to Construct and Permit to Operate an air pollution control system meeting the requirements of Section (e).

(ii) By *May 13, 1998,* issue purchase orders for the basic control device and other long delivery time components necessary to comply with Section (e).

(iii) By *May 13, 1999*, demonstrate compliance with Section (e).

(2) Any person installing new equipment who is electing to use add-on controls to comply with one or more of the requirements of Subsections (d)(1) through (d)(7) shall comply with the provisions of Section (e) at startup.