AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN DIEGO

October 15, 1996

TO: Rule 67.20 Workshop Participants and Other Interested Parties

FROM: Richard J. Smith
Deputy Director

ADDENDUM TO THE WORKSHOP REPORT PROPOSED NEW RULE 67.20 - MOTOR VEHICLE AND MOBILE EQUIPMENT REFINISHING OPERATIONS

WRITTEN COMMENTS ON SOCIOECONOMIC IMPACT ASSESSMENT

A draft socioeconomic impact assessment (SIA) and a revised draft of proposed new Rule 67.20 - Motor Vehicle and Mobile Equipment Refinishing Operations, were mailed to all interested parties on June 21, 1996. The revised draft rule would raise volatile organic compound (VOC) limits for primers (primers, primer surfacers, and primer sealers) to mitigate adverse economic impacts identified in the SIA. Written comments received on the revised draft rule and draft SIA, and District responses are as follows:

1. WRITTEN COMMENT

The SIA finding that 11% of the automotive refinishing shops in San Diego County will cease operations as a result of the rule adoption is not very reliable because it is based on a very small sample of businesses. Therefore, no changes in the rule should be made.

DISTRICT RESPONSE

The District disagrees. The SIA's conclusion of an adverse economic impact is based on a survey of 36 shops, approximately 10% of the automotive refinishing shops in San Diego. The District believes this is a reasonable sample on which to base general conclusions. From a purely statistical point of view, assuming this represents a random sample, there is an approximate 95% probability that the percentage of shops that would have to cease operations lies between 3% and 25%. Even if the actual percentage of shops ceasing operations were only 3%, this would indicate an adverse economic impact of concern that should be mitigated if possible.

2. WRITTEN COMMENT

The survey results in the SIA are biased because businesses respond with a worst-case estimate when asked about the impact of regulations. Therefore, the SIA exaggerates the adverse economic impact and the rule should not have been revised to mitigate the impact.

DISTRICT RESPONSE

The District disagrees. Although the actual amount of such bias is unknowable, survey respondents who indicated they would cease operations as a result of the rule were contacted again to verify their response. In addition, during analysis of the survey results, available financial information was examined to see if factors other than the proposed rule's impact would cause the businesses to cease operations. As a result of these efforts, the number of sampled businesses recorded as ceasing operations as a result of the rule was reduced from seven to four. The District believes this effort removed much of the worst-case bias.

3. WRITTEN COMMENT

Market forces, not regulatory actions, are primarily responsible for driving most automotive refinishing shops out of business. Raising the VOC limit for primers based on the adverse impacts identified in the SIA is unwarranted.

DISTRICT RESPONSE

The District disagrees. It is true that other social and economic factors besides proposed Rule 67.20 may adversely impact automotive refinishing shops. However, in any economic climate, some marginal shops may have to cease operations because of the cost impacts of the original proposed Rule 67.20. Since the District can achieve essentially the same emission reductions with a higher VOC limit for primers, there is no reason not to mitigate the potential adverse impact of the rule on these businesses. In addition, the proposed changes to Rule 67.20 will reduce costs for all shops—not just those in marginal financial condition—and achieve emission reductions in the most cost effective manner.

4. WRITTEN COMMENT

There is only one Best Available Retrofit Control Technology (BARCT) guidance for automotive refinishing and other districts have adopted this BARCT guidance with no catastrophic loss in automotive refinishing businesses. Therefore, there is no need to revise the primer VOC limits.

DISTRICT RESPONSE

The District disagrees. BARCT guidance for automotive refinishing is currently being revised because some coating VOC limits are not technologically or economically feasible. The District does not know of any air district's rules that strictly follow the current BARCT guidance. Except for the proposed primer VOC limits, the VOC limits in proposed new Rule 67.20 correspond to the less stringent of two proposed revised BARCT guidance standards that are under review by the Air Resources Board (ARB). Several other districts have adopted one of these proposed revised BARCT standards. The District has contacted some of these districts to assess the economic impact of their automotive refinishing rules. While there has probably been no catastrophic loss of

businesses, the districts contacted do not track how many automotive refinishing shops have ceased operations as a result of their rules. Business losses on the order of 10%, as estimated in the SIA, may not be noticed.

5. WRITTEN COMMENT

Rule 67.20 is less stringent than the automotive refinishing BARCT guidance and, therefore, is not approvable by ARB.

DISTRICT RESPONSE

Recently adopted provisions of state law (H&S Code, Section 40920.6(b)) make it clear that the District may establish BARCT based on identifying potential control options and assessing the cost effectiveness of those options and local environmental, energy, and economic impacts.

6. WRITTEN COMMENT

The revised rule does not represent BARCT and cannot be approved for inclusion in the State Implementation Plan (SIP).

DISTRICT RESPONSE

District rules approved in the SIP do not necessarily have to correspond to BARCT because BARCT is not required by federal law. As was discussed in the response to the previous comment, the District can establish BARCT based on specific local conditions. Moreover, at this time, the District does not plan to include Rule 67.20 in the SIP because San Diego County can meet federal Clean Air Act mandates without including the rule in the SIP.

7. WRITTEN COMMENT

Organic solvent-borne primers and primer surfacers with a 250 g/l (2.1 lb/gal) VOC limit exist. They do not necessarily require a precoat and raising the primer and primer surfacer VOC limit to 420 g/l (3.5 lb/gal) is not justified.

DISTRICT RESPONSE

The District disagrees. Discussion with industry representatives indicate that existing organic solvent-borne primers that can meet a 250 g/l VOC limit do not perform satisfactorily for general use. In at least two cases, organic solvent-borne primers that meet a 250 g/l VOC limit also require precoats with a high VOC content—as do water-borne primers—to function adequately on all bare metal surfaces.

8. WRITTEN COMMENT

Raising the primer and primer surfacer VOC limit to 420 g/l from 250 g/l will not improve productivity.

DISTRICT RESPONSE

The District disagrees. District discussions with coating manufacturers and suppliers indicate that there are significant productivity differences in using organic solvent-borne primers and primer surfacers that can meet a 420 g/l VOC limit compared to water-borne primers and primer surfacers. Water-borne coatings dry slower than organic solvent-borne coatings, especially when ambient humidity is high. Also, water-borne primers must be dried very thoroughly to prevent trapping water and causing subsequent failure of organic solvent-borne topcoats. Because of San Diego County's warm climate, automotive refinishers do not generally possess equipment such as heated spray booths and portable infrared heaters necessary to overcome these disadvantages of water-borne primers. Finally, organic solvent-borne primers and primer surfacers meeting a 420 g/l VOC limit do not require a precoat when used on bare metal. This eliminates one step in the automotive refinishing process and reduces VOC emissions from precoat application.

9. WRITTEN COMMENT

There is only one manufacturer supplying primer surfacers at the 420 g/l VOC limit. Manufacturers who supply primer surfacers with a lower VOC content at a higher price per gallon (but at an equivalent price per gallon of solids) will be at a competitive disadvantage because automotive refinishers purchase on a gallon price basis.

DISTRICT RESPONSE

At least two manufacturers that supply a large fraction of the automotive refinishing paint used in San Diego County have indicated no concerns to the District about a 420 g/l primer VOC limit. The District also believes that automotive refinishers understand the concept of surface coverage and will consider it along with other factors when purchasing paint.

10. WRITTEN COMMENT

The proposed primer standard of 420 g/l in Rule 67.20 is different from the three other levels of control in California and also different from EPA's proposed national rule. To introduce this different standard will greatly complicate paint manufacturers' ability to distribute appropriate compliant coatings in California.

DISTRICT RESPONSE

The District is sensitive to the desire of paint manufacturers to have uniform coating regulations throughout California and the nation. However, the District must also consider the economic and environmental impact of air pollution control rules on affected businesses and air quality in San Diego County. Raising the primer VOC limit to 420 g/l will significantly mitigate the economic impact of Rule 67.20 on automotive refinishing operations in San Diego County while achieving the same environmental benefits.

11. WRITTEN COMMENT

The availability of 420 g/l primers and primer surfacers will give San Diego County automotive refinishing shops an unfair competitive advantage with areas outside the County because of lower paint costs, lower capital costs, and improved productivity.

DISTRICT RESPONSE

The District develops rules and regulations based on the environmental and socioeconomic impact on San Diego County and is committed to achieve emission reductions in the most cost effective manner.

The South Coast Air Quality Management District (SCAQMD), which borders San Diego County, has more stringent VOC limits in its automotive refinishing rule in several coating categories because of the more severe air quality problems in that district. To require San Diego County to have the same rules and regulations as SCAQMD would pose an economic burden on the County out of proportion to the environmental benefits.

12. WRITTEN COMMENT

Removal of the precoat category from the rule is counterproductive as it prevents the use of environmentally beneficial and less toxic water-borne primers which require a precoat when used over bare metal. There would be no incentive for automotive refinishers to use, or paint manufacturers to develop, such products. Adding a precoat category would allow the use of water-borne coatings.

DISTRICT RESPONSE

The District agrees. Although, water-borne primers may also contain toxic materials, allowing precoat use with low VOC coatings gives additional flexibility to automotive refinishing operations with no impact on emission reductions. The District compliance staff also believes there are sufficient safeguards in the rule to prevent the use of precoats to circumvent the requirement to use low VOC primers, as has happened in other air districts. Accordingly, the proposed rule is being revised to allow the use of precoats with primers or primer surfacers having VOC contents of 250 g/l (2.1 lb/gal) or less.

13. WRITTEN COMMENT

A primer VOC limit of 575 g/l (4.8 lb/gal), which is proposed by EPA in the national automotive refinishing rule, is a better alternative than a primer limit of 420 g/l. There would be no loss of productivity and the District rules would be consistent with the national rule.

DISTRICT RESPONSE

The District disagrees. The presently proposed VOC limits in Rule 67.20 for primers and primer surfacers result in only about 2.5 tons of excess VOC emissions (about 0.5% of the total estimated emission reductions achieved by the rule) compared to a 250 g/l limit, when the latter limit is met with water-borne primers requiring a precoat. However, primer VOC limits identical to the EPA's proposed national rule would increase estimated VOC emissions under the rule by about 19 tons per year or about 4%. Since San Diego County is a "serious" ozone nonattainment area, the California Clean Air Act requires the District to adopt all feasible measures to reduce ozone precursors, including VOCs. Rule 67.20, as currently proposed, is a feasible measure and overall rule cost effectiveness is comparable to the cost effectiveness of other recently adopted VOC control measures. It is also consistent with state Best Available Retrofit Control Technology (BARCT) recommendations.

14. WRITTEN COMMENT

The rule would be more effective if a provision prohibiting sale of coatings violating VOC limits were added.

DISTRICT RESPONSE

The District disagrees. As the District previously discussed in the report for the June 15, 1995, workshop (see response to Workshop Comment No. 12), a prohibition of sale cannot be included in the rule because of rule exemptions and the complexity of automotive coating systems. However, as a result of this workshop and discussions with automotive refinishing industry representatives, the District has added a provision to the rule requiring suppliers to maintain records of automotive coating sales. This provision is an effective method to ensure uniform application of the rule and overall rule effectiveness.

15. WRITTEN COMMENT

The District has underestimated the cost impact of the rule on consumers. If 11% of the automotive refinishing shops cease operations as a result of the rule, the laws of supply and demand will drive up the price for automotive refinishing much more than the maximum of 3% estimated in the SIA. Prices for automotive refinishing are currently much higher in the Los Angeles area, which has an automotive refinishing rule, than in San Diego County.

DISTRICT RESPONSE

The District disagrees. As discussed in the SIA, most automotive refinishing shops cannot freely raise prices because of insurance industry constraints. The Los Angeles area automotive refinishing rule is more stringent than proposed new Rule 67.20 and would be expected to have more severe economic impacts. In addition, the District believes that current changes to proposed Rule 67.20 to mitigate adverse economic impacts will significantly reduce the number of shops ceasing operations and potential price increases.

16. WRITTEN COMMENT

The compliance costs of the rule will be passed on to insurance companies and raise the cost of automobile insurance. This will increase the number of uninsured motorists, a serious socioeconomic impact.

DISTRICT RESPONSE

The District disagrees. Most automotive refinishing shops cannot at this time freely raise prices or pass their costs on to the insurance companies. In time, some compliance costs may be passed on to insurance companies, but the District does not believe the effect on insurance cost would be significant. Nationally, refinishing only accounts for about 30% of all automotive repair costs. In addition, actual repair costs account for only a small portion of automotive accident insurance premiums, which also cover personal injury awards, litigation costs, and medical expenses. If insurance costs were to rise as a result of a 3% rise in the cost of refinishing operations, they would rise much less than 1%.

17. WRITTEN COMMENT

The District's estimate of a 500 ton per year VOC reduction is optimistic.

DISTRICT RESPONSE

The District's emission reduction estimate is based on the best information currently available including information on coating usage in the District's permit files, emission inventory data, and a survey of coating use by coating category in the Los Angeles area conducted before coating VOC content was regulated there.

18. WRITTEN COMMENT

The District should wait until the revised automotive refinishing Best Available Retrofit Control Technology (BARCT) is available to develop the rule so that its recommendations can be considered during rule development.

DISTRICT RESPONSE

The District disagrees. Although the revised automotive refinishing BARCT has not been formally approved by ARB, Rule 67.20 incorporates most of the recommendations of the proposed revised BARCT. In addition, the District's Regional Air Quality Strategy committed to achieve emission reductions from automotive refinishing operations before the end of 1997, and, therefore, the District cannot wait for formal approval of the revised automotive refinishing BARCT before adopting Rule 67.20.

19. WRITTEN COMMENT

Input from local educational institutions would be useful since they may train new automotive refinishing painters.

DISTRICT RESPONSE

The District attempted to solicit comments from as many groups as possible during the rule development process. Representatives of local educational institutions were invited to attend the workshops for Rule 67.20, and those who expressed interest were provided copies of the workshop reports and the SIA.

20. WRITTEN COMMENT

Without heating, how does the drying time for compliant coatings compare to conventional coatings? Many shops may not have adequate space to change their process to allow for longer drying times.

DISTRICT RESPONSE

The unheated drying time for compliant coatings is highly variable, depending on the coating and ambient conditions. Under some conditions, it is possible that the drying time for some compliant coatings could be several hours longer than for conventional coatings.

Individual shops must decide, based on their operations and local conditions, whether to use supplemental heating or use available space to allow for longer drying times. The SIA addressed this question and the associated cost for the automotive refinishing shops in the survey sample.

21. WRITTEN COMMENT

The assumed lifetime for high volume low pressure (HVLP) spray guns in the SIA may be optimistic.

DISTRICT RESPONSE

Most spray gun parts are replaceable and the SIA capital cost estimates include the cost of replacement parts. The annualized capital costs are based on the assumption that capital recovery will occur over 10 years with a 10% investment rate. The annualized capital cost of HVLP spray guns represents only about 5% of the total annual compliance cost for small shops and much less than 5% for medium and large shops. The SIA results would not be significantly affected if spray guns must be replaced every 5 years.

22. WRITTEN COMMENT

There are many cases where the cost of recordkeeping is burdensome, especially for small businesses. Is considering the cost of recordkeeping insignificant in the SIA justified?

DISTRICT RESPONSE

Automotive refinishing shops are currently regulated by District Rule 66 - Organic Solvents, which requires recordkeeping similar to Rule 67.20. Also, many shops are subject to New Source Review limitations on their permits and are required to keep daily records. The SIA considered the difference in the recordkeeping costs between Rule 67.20 and Rule 66 to be insignificant but did not consider the overall cost of recordkeeping to be insignificant.

The District has made its best efforts to minimize recordkeeping requirements of the rule while ensuring compliance can be readily determined through records. It should also be noted that, the District is not submitting this rule to EPA for approval because the District does not believe EPA's recordkeeping policy is appropriate for the automotive refinishing industry.

23. WRITTEN COMMENT

The cost impacts of the rule will disproportionately impact smaller shops. This may create a barrier to small shops entering the automotive refinishing business and reduce competition.

DISTRICT RESPONSE

Although capital compliance costs associated with Rule 67.20 will vary widely depending on existing equipment and types of work, the average capital cost per facility is estimated to be $6,600 for small shops, $10,000 for medium shops, and $14,000 for large shops. The SIA analysis could not determine the equity available for each size category of shops so the exact impact of these compliance costs cannot be estimated. However, there was no indication, except as noted in the SIA, that they would be forced to cease operations due to these compliance costs.

Richard J. Smith

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AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN DIEGO

August 28, 1996

TO: Rule 67.20 Workshop Participants and
Other Interested Parties

FROM: Richard J. Smith
Deputy Director

FINAL DRAFT OF PROPOSED NEW RULE 67.20 - MOTOR VEHICLES AND MOBILE EQUIPMENT REFINISHING OPERATIONS

On August 21, 1996, the District held a public meeting to discuss comments received on the draft socioeconomic impact assessment for the proposed new Rule 67.20 and suggested measures to mitigate the economic impact of the rule. Meeting participants included local owners and operators of automotive refinishing shops and representatives from local suppliers and national automotive coating manufacturers.

Based on comments received prior to the meeting the following three options for the VOC limits of primers and primer surfacers and the use of precoats were considered at the meeting:

- A primer/primer surfacer VOC limit of 250 g/l and limited use of a precoat with a VOC limit of 500 g/l, as was initially proposed in the rule.
- A primer/primer surfacer VOC limit of 420 g/l and no precoat use allowed.
- A primer/primer surfacer VOC limit of 420 g/l and limited precoat use, but only with primers and primer surfacers having a VOC content of 250 g/l or less.

Meeting participants reached a consensus that the third option represented the most viable alternative. It will provide users of automotive refinishing coatings additional options in using compliant coatings and significantly mitigate adverse economic impacts identified in the socioeconomic impact assessment. Retaining a precoat coating category with a VOC limit of 600 grams per liter will allow the use of low VOC primers and primer surfacers (VOC content less than 250 grams per liter) and provide maximum flexibility for coating users and manufacturers. The environmental impact associated with raising the VOC content limit for primers and primer surfacers is negligible (VOC emission reductions are decreased by less than 1%). There is also no decrease in emission reductions if precoat usage is restricted to 25% of the low VOC primer or primer surfacer usage.

Accordingly, the final draft of the rule includes a VOC limit of 420 grams per liter for primers and primer surfacers and allows the use of a precoat in combination with low VOC primers or primer surfacers. The rule restricts precoat use to 25% of each source's total low VOC primer and primer surfacer usage. For clarity, the rule also includes a new definition of low VOC primers or primer surfacers limiting their VOC content to 250 grams per liter or less.

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Attached for your review is the final draft of proposed new Rule 67.20—Motor Vehicle and Mobile Equipment Refinishing Operations. Final revisions to Rule 67.20 subsequent to the draft supplied with the workshop report are indicated by italics and double underlining. The rule will likely be scheduled for public hearing in November 1996. If you have any questions or comments concerning the proposed new Rule 67.20, please call Steven Moore at (619) 694-3198, Natalie Zlotin at (619) 694-3312, or me at (619) 694-3303.

Natalie Zlotin

for RICHARD J. SMITH
Deputy Director

RJSm:NZ:SM:jo

Attachment

PROPOSED NEW RULE 67.20

New Rule 67.20 is to read as follows:

RULE 67.20 MOTOR VEHICLE AND MOBILE EQUIPMENT REFINISHING OPERATIONS (*Effective nine months after adoption*)

(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 (*date of adoption*).

(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) **"Mobilehome"** 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. Mobilehomes 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 hand-held, 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 a 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:

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	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° C (374° F) or greater; or

(C) The material has a total VOC vapor pressure of 20 mm Hg or less, at 20° C (68° 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° C (374° F) or greater; or

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

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

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

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

(vii) Other application equipment cleaning methods that are demonstrated to be as effective as any of the equipment described above in minimizing the emissions of VOC to the atmosphere, provided that the device has been 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) ~~or (d)(2)~~ 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.

~~(B)~~*(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 Subsections (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 metthylated 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 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".

(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 (*nine months after 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 (*eighteen months after 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 (*thirty months after date of adoption*), 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.