**AIR POLLUTION CONTROL DISTRICT**
**COUNTY OF SAN DIEGO**

**PROPOSED NEW RULE 66.1 – MISCELLANEOUS SURFACE COATING OPERATIONS AND OTHER PROCESSES EMITTING VOLATILE ORGANIC COMPOUNDS**

# WORKSHOP REPORT

A workshop notice was mailed to all companies and government agencies in San Diego County that may be subject to proposed new Rule 66.1 – Miscellaneous Surface Coating Operations and Other Processes Emitting Volatile Organic Compounds. Notices were also mailed to all Economic Development Corporations and Chambers of Commerce in San Diego County, the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (ARB), and other interested parties.

The workshop was held on May 6, 2009, and was attended by 17 people. Written comments were also received before and after the workshop. The workshop comments and District responses are as follows:

## 1. WORKSHOP COMMENT

Does Rule 66.1 apply to solvent cleaning of small parts in a container?

### DISTRICT RESPONSE

No. Solvent cleaning of small parts or other objects conducted in a container is regulated by Rule 67.6.1 – Cold Solvent Cleaning and Stripping Operations. In contrast, Rule 66.1 applies to solvent cleaning as part of surface preparation or wipe cleaning operations which are conducted outside a container.

## 2. WORKSHOP COMMENT

The District should consider using the maximum incremental photochemical reactivity (MIR) of volatile organic compounds instead of the current VOC definition.

### DISTRICT RESPONSE

The term "volatile organic compound (VOC)" as defined by EPA is codified in the Code of Federal Regulations 40 CFR 51.100 and applies across the country. While the MIR concept appeared in some ARB regulations for Consumer Products, it is technically challenging to develop and implement this concept. It was explicitly avoided in ARB's most recent Consumer Products rulemaking and it is not used in any state or local rules regulating VOC emissions at stationary sources. Therefore, at this time, the District will continue to use the current VOC definition.

**3. WORKSHOP COMMENT**

Will the District exempt other compounds that are not currently exempt by the EPA?

**DISTRICT RESPONSE**

No. Determining the photochemical reactivity of a compound is a complex process. EPA is responsible for evaluating the photochemical reactivity of volatile organic compounds and deciding on their exemption status. The District does not have the authority or the expertise to conduct such evaluations.

**4. WORKSHOP COMMENT**

What is the current definition of a VOC in Europe?

**DISTRICT RESPONSE**

The European Union defines a VOC, for rules regulating paints, as "an organic compound having an initial boiling point lower than or equal to 250$^{o}$C (482$^{o}$F) at atmospheric pressure." A VOC, for solvent emissions, is defined as "an organic compound having a vapor pressure of 0.075 mmHg or more at 20$^{o}$C."

**5. WORKSHOP COMMENT**

Would artificial skin manufactured for prosthetic limbs be considered a medical device as defined in Rule 66.1?

**DISTRICT RESPONSE**

Yes, artificial skin manufactured for prosthetic limbs complies with the definition of a medical device because it can be qualified as "an implant that is intended to be used in the treatment of a disease."

**6. WORKSHOP COMMENT**

Are dip tanks with a liquid surface area of less than one square foot subject to Rule 66.1?

**DISTRICT RESPONSE**

No, Rule 66.1 is not applicable to cleaning operations conducted in such dip tanks, as provided in Section (a) of the rule. These dip tanks are also exempt from Rule 67.6.1 and permitting requirements.

**7. WORKSHOP COMMENT**

Are there any anticipated changes to the exemption of small dip tanks in Rule 67.6.1?

**DISTRICT RESPONSE**

No, at this time, the District does not anticipate making any changes to Rule 67.6.1.

**8. WORKSHOP COMMENT**

Methyl ethyl ketone (MEK) is presently used to clean spraying equipment in thermal spraying operations. Last year, only 5 gallons of MEK were purchased. How does a facility maintain monthly records to qualify for the 20 gallon per year usage exemption in Subsection (b)(1)(ii)?

**DISTRICT RESPONSE**

As initially proposed, the 20-gallon exemption from the VOC limits of Subsection (d)(2) applies only to surface coatings but not to cleaning materials. However, in response to the comments received from a number of affected sources, the District revised the proposed rule. Subsection (b)(2) now provides exemptions for a stationary source using 20 gallons per consecutive 12-months or less of non-compliant cleaning materials or where VOC emissions from such materials do not exceed 150 lbs per consecutive 12-months.

**9. WORKSHOP COMMENT**

Does the rule consider acetone to be an exempt compound?

**DISTRICT RESPONSE**

Yes, acetone is a low-reactive volatile organic compound and is exempt by EPA and by the District according to the definition of exempt compounds in Rule 2.

**10. WORKSHOP COMMENT**

How does the use of acetone affect air quality in comparison to the use of a water-based cleaner in compliance with the VOC content limit specified in the rule?

**DISTRICT RESPONSE**

The concentration of VOCs in compliant water-based cleaners is very low, 50 g/l or less, so the use of even large volumes of such cleaners will result in a comparatively small amount of VOC emissions and consequently a small impact on air quality.

On the other hand, while acetone is an exempt compound, it does not have zero photochemical reactivity, as some other exempt compounds. This means that acetone reacts in the atmosphere to form ozone, albeit at a much slower rate than other solvents. In addition, acetone has a high volatility even at room temperature (its boiling point is 56$^{o}$C or 133$^{o}$F). Therefore, a careless use of relatively large volumes of acetone will result in its accumulation in the atmosphere and in subsequent smog formation. Facilities using acetone as a cleaning material should be aware of these facts.

**11. WORKSHOP COMMENT**

Is each process line considered to be a separate operation?

**DISTRICT RESPONSE**

Yes. The Rule 2 definition of a process line is essentially equivalent to the Rule 66.1 definition of an operation. Therefore, each process line is considered to be a separate operation.

**12. WORKSHOP COMMENT**

The surface cleaning of components used in laser optics should be exempt from Rule 66.1.

**DISTRICT RESPONSE**

The District agrees. The proposed rule has been revised as suggested because laser optics can be classified as precision optics.

**13. WORKSHOP COMMENT**

Does Rule 66.1 change any permit requirements?

**DISTRICT RESPONSE**

No, the rule itself does not affect any permit requirements.

**14. WORKSHOP COMMENT**

The rule should consider the use of biodegradable solvents with a low vapor pressure.

**DISTRICT RESPONSE**

Subsection (d)(2) specifies that any cleaning material with a total VOC vapor pressure of 8 mm Hg at 20$^{o}$C or less can be used in operations subject to Rule 66.1.

## 15. WORKSHOP COMMENT

What resources are available to learn more about VOC emission control technologies?

**DISTRICT RESPONSE**

The EPA website (http://www.epa.gov/ttncatc1/products.html) has information on the latest VOC emission control technologies for various operations. The South Coast AQMD website (http://www.aqmd.gov/rules/cas/prolist.html) provides a list of manufacturers that make compliant cleaning materials for various applications.

## 16. WORKSHOP COMMENT

If a facility uses a solvent that complies with the VOC content limit of 50 g/l, what is the rationale for requiring monthly usage records?

**DISTRICT RESPONSE**

Monthly usage records are required in order for a facility or the District to estimate the amount of VOC emissions per a specified period of time (day, month or year) from all operations at a facility, as required by permit conditions or for emission inventory purposes. See also District response to Comment #18.

## 17. WORKSHOP COMMENT

Why are solvent cleaning operations excluded in Subsection (d)(1)? The language needs further clarification.

**DISTRICT RESPONSE**

The requirements for solvent cleaning operations are listed separately in Subsection (d)(2). A facility can use a cleaning material with a VOC content not higher than 50 g/l or with a total VOC vapor pressure of 8 mm Hg at 20$^{o}$C or less.

Subsection (d)(1), in its entirety, only specifies the requirements for surface coating or other VOC emitting operations and excludes solvent cleaning operations. It has been revised to clarify this.

**18. WORKSHOP COMMENT**

The District should consider allowing facilities to use purchase records, for surface preparation and cleaning materials, in addition to or instead of actual usage records to demonstrate compliance with Rule 66.1.

**DISTRICT RESPONSE**

The District agrees. Language has been added to Subsection (f)(2)(ii) to allow the use of purchase records to satisfy the monthly recordkeeping requirements.

**19. WORKSHOP COMMENT**

The District should consider clarifying that those operations subject to the NOx emission control rules are not subject to Rule 66.1.

**DISTRICT RESPONSE**

The District agrees. Language has been added to Subsection (a)(1) as suggested.

**20. WRITTEN COMMENT**

Digital printing is not subject to District Rule 67.16 (Graphic Arts Operations) or other rules listed in Subsection (a)(1) of Rule 66.1. Therefore, the proposed changes to Rule 66.1 may be read as applying to digital printing. Rule 66.1 should identify digital printers and digital printing operations as exempt from its requirements.

**DISTRICT RESPONSE**

The District agrees that digital printing operations are not subject to Rule 66.1. Section (b) has been revised to add a specific exemption for digital printing operations.

**21. WRITTEN COMMENT**

The District should consider exempting surface preparation and surface cleaning operations for precision welding of stainless steel parts used in the manufacture of gas turbine engines. Specifications require surfaces to meet a high purity prior to welding on stainless steel turbomachinery parts in order to meet the stringent X-ray quality control requirements of national codes as well as international codes.

**DISTRICT RESPONSE**

The District agrees and has added an exemption to Subsection (b)(2) limiting the total amount of cleaning materials used for such operations.

**22. WRITTEN COMMENT**

The District should consider exempting surface preparation and surface cleaning of turbomachinery parts for thermal spraying operations. In this case, precision cleaning that does not leave any impurities is required in order to prevent the separation of the thermal spraying coating from the component.

**DISTRICT RESPONSE**

The District agrees and has added an exemption to Subsection (b)(2) limiting the total amount of cleaning materials used for such operations.

**23. WRITTEN COMMENT**

Subsection (d)(1)(iii) requires surface coating operations to use air-dried coatings with a VOC content not higher than 420 grams/liter (3.5 lbs/gal). It is hard to find coatings for plastic parts that comply with this VOC limit. Are there any other companies having a problem finding compliant coatings?

**DISTRICT RESPONSE**

The District is not aware of this problem. Other districts in California such as the South Coast and Bay Area air districts have for a long time had rules regulating plastic products coating operations. These rules have significantly lower VOC limits than those required by Rule 66.1. However, if a facility cannot find compliant coatings suitable for a particular coating operation, the proposed Rule 66.1 provides two alternatives for meeting the requirements of Section (d)(1). They are specified in Subsection (d)(1)(i) - Ensuring that the total VOC emissions from the operation subject to the rule are less than 5 tons per calendar year (excluding emissions from cleaning operations), and Subsection (d)(1)(ii) - Using add-on air pollution control equipment.

**24. WRITTEN COMMENT**

The District should remove the word "exclusively" from Subsection (b)(1)(i) to clarify that the use of all hand-held non-refillable aerosol spray containers is exempt from Rule 66.1.

**DISTRICT RESPONSE**

The District agrees. Subsection (b)(1)(i) has been revised.

**25. WRITTEN COMMENT**

Subsection (d)(2) should clarify that the vapor pressure limit applies to the "total *VOC* vapor pressure".

**DISTRICT RESPONSE**

The District agrees. Subsection (d)(2) has been clarified as suggested.

**26. WRITTEN COMMENT**

Are surface preparation and solvent cleaning operations subject to both Subsections (d)(1) and (d)(2)? As the rule is currently written, Subsection (d)(1) applies to "any operation that may result in emissions of volatile organic compounds," which includes solvent cleaning and surface preparation operations.

**DISTRICT RESPONSE**

No, surface preparation and solvent cleaning operations are not subject to both Subsections (d)(1) and (d)(2). The rule has been revised to clarify that these operations are only subject to Subsection (d)(2).

**27. WRITTEN COMMENT**

Are solvent wipe cleaning operations, currently exempt from permit requirements per Rule 11 Subsection (d)(16)(viii), considered new or existing operations?

**DISTRICT RESPONSE**

Solvent wipe cleaning operations that are exempt from permit requirements per Rule 11 before the date of proposed Rule 66.1 adoption are considered "existing operations". Facilities conducting such operations will have one year from the date of adoption to comply with Rule 66.1. Subsection (c)(11), definition of "Existing Operation", has been revised to clarify this. These facilities are exempt from permitting requirements but must comply with Rule 66.1.

**28. WRITTEN COMMENT**

The District should consider exempting solvent cleaning used in tile installation or repair in conjunction with passive countermeasure systems (PCMS). This work is conducted in accordance with Naval Sea Systems (NAVSEA) Standards. The NAVSEA Command Standards Item 009-78 and Repair Installation Method 05T1-99 Rev B require the metal surface to be lightly abraded and then wiped down with a 1:1 mixture of isopropyl alcohol and distilled water prior to the installation of the tiles.

**DISTRICT RESPONSE**

This exemption is not necessary. The installation or repair of PCMS tiles and all associated surface preparation and solvent cleaning operations are regulated by Rule 67.21 – Adhesive Material Application Operations. Rule 66.1 is not applicable to these operations as provided in Section (a) – Applicability.

**29. WRITTEN COMMENT**

The District should consider exempting wipe cleaning operations associated with aluminum welding onboard Navy vessels. NAVSEA quality assurance standards require the base metal to be wiped with acetone or denatured alcohol. The company written procedure does not allow the use of acetone onboard ships during welding operations because of safety concerns. Therefore, denatured alcohol must be used during this process.

**DISTRICT RESPONSE**

The District agrees and has added an exemption to Subsection (b)(2).

**30. WRITTEN COMMENT**

Tertiary-butyl acetate (TBAC) was excluded from the VOC definition by the EPA in 2004 and has since been exempt in 49 states and a growing number of California counties. The District should consider exempting TBAC from Rule 66.1 and add it to Table 1 in Rule 2 as a "Low Photochemically Reactive Organic Compound."

**DISTRICT RESPONSE**

At this time, the District will not exclude TBAC from the VOC definition. While it is exempt by EPA, there is still an uncertainty about the toxicity of TBAC and its metabolite - tertiary butyl alcohol. The District does not have the expertise to address this problem and therefore prefers not to add TBAC to the list of exempt compounds until this uncertainty is resolved by the state agencies. Although some air districts have a limited exemption for TBAC, manufacturers are not likely to use TBAC in materials made just for the regions where it is exempt from the VOC definition.

**31. WRITTEN COMMENT**

The District should consider delaying the implementation date of new Rule 66.1.

**DISTRICT RESPONSE**

The District disagrees. The proposed rule is presently projected to be presented to the Air Pollution Control Board for adoption sometime in the beginning of 2010. The implementation

date for the affected facilities is one year after the date of adoption. Considering that the cleaning materials in compliance with the rule's new VOC limits are widely available and other rule emission standards remain essentially the same, there is no reason to delay the implementation date of the proposed rule.

**32. WRITTEN COMMENT**

The District should consider adding an exemption for operations involved in the manufacture of biotechnology pharmaceutical and bio-agricultural products that are exempt from the District's permit to operate requirements by Rule 11, Section (d).

**DISTRICT RESPONSE**

The District agrees and has added an exemption to Subsection (b)(1).

**33. ARB COMMENT**

There were no comments from the Air Resources Board.

**34. EPA COMMENT**

Subsection (h)(3) should include the full title and date of the referenced ASTM test method for calculating the total VOC vapor pressure of a cleaning material.

**DISTRICT RESPONSE**

The District agrees. Subsection (h)(3) has been revised as suggested.

**35. EPA COMMENT**

Section (h) should be clarified, specifying that in a case when multiple test methods are listed, a rule violation can be determined by any one of those test methods.

**DISTRICT RESPONSE**

The District agrees. Section (h) has been clarified as suggested.

NY:AD:jlm
10/01/09

**RULE 66.1 MISCELLANEOUS SURFACE COATING OPERATIONS AND OTHER PROCESSES EMITTING VOLATILE ORGANIC COMPOUNDS** (Adopted *(date of adoption)*; Effective *(12 months after date of adoption)*)

(a) **APPLICABILITY**

(1) This rule is applicable to all surface coating, solvent cleaning or other operations or processes that may result in emissions of volatile organic compounds (VOCs) and are not subject to or exempt from, the following rules:

67.0 - Architectural Coatings;
67.2 - Dry Cleaning Equipment Using Petroleum Based Solvents;
67.3 - Metal Parts and Products Coating Operations;
67.4 - Metal Container, Metal Closure and Metal Coil Coating Operations;
67.5 - Paper, Film and Fabric Coating Operations;
67.6.1 - Cold Solvent Cleaning and Stripping Operations;
67.6.2 - Vapor Degreasing Operations;
67.9 - Aerospace Coating Operations;
67.10 - Kelp Processing and Bio-Polymer Manufacturing Operations;
67.11 - Wood Products Coating Operations;
67.11.1 - Large Coating Operations for Wood Products;
67.12 - Polyester Resin Operations;
67.15 - Pharmaceutical and Cosmetic Manufacturing Operations;
67.16 - Graphic Arts Operations;
67.18 - Marine Coating Operations;
67.19 - Coatings and Printing Inks Manufacturing Operations;
67.20 - Motor Vehicle and Mobile Equipment Refinishing Operations;
67.21 - Adhesive Materials Application Operations;
67.24 - Bakery Ovens;
61.1 through 61.8 – Vapor Recovery Rules;

<u>68 through 69.4.1 – Rules Regulating Combustion Sources.</u>

(2) Section (g) of this rule is applicable to any manufacturer, seller or supplier of any coating, coating component, solvent cleaning material, or any other VOC containing material that is used in an operation that may be subject to this rule.

(b) **EXEMPTIONS**

(1) This rule shall not apply to the following:

(i) ~~Surface coating or cleaning operations exclusively using~~ <u>Surface coatings, surface preparation or solvent cleaning materials applied using</u> hand-held non-refillable aerosol spray containers.

(ii) Any surface coating operation where 20 gallons or less of surface coatings are applied per consecutive 12-month period. To claim applicability of this exemption monthly coating usage records shall be maintained on site for three years and ~~shall be~~ made available to the District upon request.

(iii) Any surface coating or other VOC emitting operation where the total VOC emissions, excluding emissions from cleaning or surface preparation materials, are 150 lbs or less per consecutive 12-month period. To claim applicability of this exemption all records necessary to calculate VOC emissions shall be maintained on site for three years and ~~shall be~~ made available to the District upon request.

(iv) The use of pesticides, including insecticides, rodenticides or herbicides.

(v) Research and development operations or testing for quality control or quality assurance purposes.

(vi) Operations involved in the manufacture of biotechnology pharmaceutical and bio-agricultural products that are exempt from the District permit to operate requirements by Rule 11, Section (d).

(vii) Laboratory operations located at secondary schools, colleges, or universities and used exclusively for instruction.

(vi~~i~~i) Touch-up operations.

(ix~~vii~~) Stripping of cured inks, coatings and adhesives.

(x) Digital printing operations.

(xi) Any solvent cleaning, including wipe cleaning, or surface preparation of electrical or electronic components, medical devices, laser optics or precision optics components.

(2) Subsection (d)(2~~1~~)(~~ii~~) and Section (f) shall not apply to

(i) Any solvent cleaning, including wipe cleaning, of aerospace components not associated with a surface coating operation and provided that the cleaning material complies with the requirements of Rule 67.9, Subsection (d)(4).

~~(ii) Any solvent cleaning, including wipe cleaning, or surface preparation of electrical or electronic components, medical devices, or precision optics components.~~

(ii) Any solvent cleaning, including wipe cleaning, performed in conjunction with welding of 5XXX series aluminum structures for Navy ships and in accordance with quality assurance standards for such structures.

(iii) Any cleaning or surface preparation operation, including wipe cleaning, necessary to achieve the required purity of surfaces for precision welding or thermal spray operations used in the manufacture of gas turbine engines, provided that the combined total amount of such cleaning materials used for these operations at the stationary source does not exceed 50 gallons per consecutive 12-months.

(iv) Any cleaning or surface preparation operation, including wipe cleaning, where not more than 20 gallons of cleaning materials are used per consecutive 12-months, provided that the total amount of non-compliant cleaning materials used at the stationary source does not exceed 20 gallons per consecutive 12-months; or

(v) Any cleaning or surface preparation operation, including wipe cleaning, where the VOC emissions from cleaning materials do not exceed 150 lbs per consecutive 12-months, provided that the total VOC emissions from non-compliant cleaning materials used at the stationary source do not exceed 150 lbs per consecutive 12-months.

To claim the applicability of the exemptions in Subsection (b)(2), all records of monthly purchase or usage of cleaning materials, their VOC content, vapor pressure, or any other

data necessary to calculate VOC emissions, as applicable, shall be maintained on site for three years and made available to the District upon request.

(c) **DEFINITIONS**

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

(1) **"Aerospace Component"** means any raw material, partial or completed fabricated part, assembly of parts or completed unit of any aircraft, helicopter, missile or space vehicle, including mockups, test panels and prototypes.

(2) **"Air-Dried Coating"** means any coating that is not heated above 90°C (194°F) for the purpose of curing or drying.

(3) **"Baked Coating"** means any coating that is cured or dried in an oven where the oven air temperature exceeds 90°C (194°F).

(4) **"Coating"** means a material which can be applied as a thin layer to a substrate, and which either dries or cures to form a continuous solid film or impregnates a substrate for protective, decorative, or functional purposes. Such materials include, but are not limited to, paints, varnishes, sealers, lacquers, ~~inks~~ and stains but exclude adhesives.

(5) "**Digital Printing Operation**" means an operation that uses a printing device guided by a computer-driven machine to transfer an electronic image to a substrate through the use of inks, toners, or other graphic materials. Digital printing operations also include associated surface preparation, solvent cleaning, and the cleaning of application equipment.

(~~5~~6) **"Dip Coat"** means a coating application method accomplished by dipping an object into the coating material.

(~~6~~7) **"Electrical Components"** means internal components such as wires, windings, stators, rotors, magnets, contacts, relays, energizers, and connections in an apparatus that generate or transmit electrical energy including, but not limited to, generators, transformers, and electric motors.

(~~7~~8) **"Electronic Components"** means components or assemblies of components including, but not limited to, circuit card assemblies, printed wire assemblies, printed circuit boards, soldered joints, ground wires, bus bars, and other electrical fixtures, except for the cabinet in which the components are to be housed.

(~~8~~9) **"Electrostatic Spray"** means a coating application method accomplished by charging atomized paint particles for deposition by electrostatic attraction.

(~~9~~10) **"Exempt Compound"** means the same as defined in Rule 2.

(~~10~~11) **"Existing Operation or Process"** means a surface coating operation or other process emitting VOCs for which a complete application for an Authority to Construct in San Diego County was submitted before (*date of adoption*). Wipe cleaning operations that are exempt from permit requirements per Rule 11 before (*date of adoption*) are considered existing operations.

(~~11~~12) **"Flow Coat"** means a coating application method accomplished by flowing a stream of coating over an object.

(~~12~~13) **"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, paintbrushes, hand rollers, rags and sponges.

(~~13~~14) **"High-Volume Low-Pressure (HVLP) Spray"** means a coating application method which uses pressurized air at a permanent pressure between 0.1 and 10.0 psig, not to exceed 10.0 psig, measured at the air cap of the coating application system.

(~~14~~15) **"Low-Solids Coating"** means a coating containing one pound of solids or less per gallon of material, as supplied.

(~~15~~16) **"Medical Device"** means an instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent or other similar article including any component or accessory, that is intended for use in the diagnosis of disease or other conditions or in the cure, mitigation, treatment, or prevention of disease, or is intended to affect the structure or any function of the body.

(~~16~~17) **"New Operation or Process"** means a surface coating operation or other process emitting VOCs for which a complete application for an Authority to Construct in San Diego County was submitted on or after (*date of adoption*).

(~~17~~18) **"Organic Solvent"** means any substance containing an organic compound or combination of organic compounds which is liquid at atmospheric pressure and ambient temperature and which is used as a reactant, diluent, thinner, dissolver, viscosity reducer, or cleaning agent, or for other similar purposes.

(~~18~~19) **"Operation"** means any process that includes one or more pieces of equipment linked by the process flow and resulting in a product that cannot be made if any piece of equipment is removed or not functioning.

(~~19~~20) **"Precision Optics Components"** means the components used to create high resolution images in optical devices. ~~This does not include eye glasses.~~

(~~20~~21) **"Research and Development Operation"** means a small scale operation for the purpose of creating new or improved processes or products, that is conducted by technically trained personnel under the supervision of a research director, and is not used in the manufacture of products for sale or exchange for commercial profit, other than the first-article deliverable product.

(~~21~~22) **"Roll Coat"** means a coating application method accomplished by rolling a coating onto a flat surface using a roll applicator.

(~~22~~23) **"Solvent"** means any organic solvent.

(~~23~~24) **"Source"** means any article, machine, equipment, contrivance, operation or a group of such articles, machines, equipment, contrivances or operations that emits or may emit volatile organic compounds.

(~~24~~25) **"Solvent Cleaning"** means the removal of uncured adhesives, inks, coatings, and other contaminants such as dirt, soil, and grease from parts, products, tools, machinery, equipment or general work area.

(~~25~~26) **"Surface Preparation"** means the cleaning of surfaces by utilizing cleaning materials containing VOCs prior to coating, further treatment, sale or intended use.

(~~26~~27) **"Surface Coating" or "Surface Coating Operation"** means all steps involved in the application, drying and curing of coatings.

(~~27~~28) **"Touch-up Operation"** means the portion of a surface coating operation which is incidental to the main coating process but necessary to cover minor imperfections or minor mechanical damage incurred prior to intended use.

(~~28~~29) **"Volatile Organic Compound (VOC)"** means the same as defined in Rule 2.

(~~29~~30) **"VOC Content per Volume of Coatings, Less Water and Exempt Compounds"** means the weight of VOC per combined volume of VOC and coating solids and is calculated by the equation provided in Rule 2.

(~~30~~31) **"VOC Content per Volume of Cleaning Material or Low-Solids Coating"** means the weight of VOC per volume of cleaning material or low-solids coating and is calculated by the equation provided in Rule 2.

(~~31~~32) **"Wipe Cleaning"** means a method of surface preparation or solvent cleaning that is not conducted in a container but performed by physically rubbing the surface with a material such as a rag, paper, sponge or cotton swab moistened with a cleaning material.

(d) **STANDARDS**

(1) ~~VOC Emission Limits~~ Surface Coating and Other Operations

~~(i)~~A person shall not conduct any surface coating or other operation, excluding surface preparation and solvent cleaning operations, that may result in emissions of volatile organic compounds unless one of the following requirements is satisfied:

(~~A~~i) VOC emissions from such operation are less than 5 tons per calendar year, excluding emissions from cleaning operations; or

(~~B~~ii) VOC emissions are reduced by air pollution control equipment in compliance with all the applicable requirements of Section (e); or

(~~C~~iii) a surface coating operation is conducted by using air-dried coatings with a VOC content not higher than 420 grams/liter (3.5 lbs/gal) of coating, less water and exempt compounds, as applied, or by using baked coatings with a VOC content not higher than 360 grams/liter (3.0 lbs/gal) of coating, less water and exempt compounds, as applied.

(~~ii~~2) Surface Preparation and Solvent Cleaning Operations

A person shall not conduct a surface preparation or solvent cleaning operation, including wipe cleaning but excluding cleaning of coating application equipment, unless the VOC content of cleaning material is 50 grams/liter (0.42 lbs/gal), or less as used, or the total VOC vapor pressure of cleaning material is 8 mm Hg at 20$^{o}$C (68$^{o}$F) or less.

(~~2~~3) Application Equipment for Surface Coating Operations.

(i) Coating Application Methods.

No surface coatings shall be applied unless one of the following application methods is used:

(A) Hand application method, or

(B) Dip coat, or

(C) Roll coat, or

(D) Flow coat, or

(E) Electrostatic spray, or

(F) High-volume low-pressure (HVLP) spray. Facilities using HVLP spray shall have available on site pressure gauges in proper operating conditions to measure air pressure at the air cup, or have manufacturer's information regarding the correlation between the air cap pressure and the handle inlet pressure, or

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

(ii) Cleaning of Coating Application Equipment

A person shall not use VOC containing materials for the cleaning of coating application equipment used in operations subject to this rule unless:

(A) The cleaning material contains 50 grams or less of VOC per liter of material; or

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

(C) 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 its parts and provided that the cleaned equipment or its parts are drained to the container until dripping ceases; or

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

(e) **CONTROL EQUIPMENT**

(1) In lieu of complying with the provisions of Section (d) of this rule, an owner/operator may use an air pollution control system which:

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

(ii) Has a combined emissions capture and control device efficiency of at least 85% by weight.

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

(i) Identify all key system operating parameters. Key system operating parameters are those necessary to ensure compliance with Subsection (e)(1)(ii), such as temperature, pressure and/or flow rate; and

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

(3) Upon approval by the Air Pollution Control Officer, a person subject to the requirements of Section (e) shall implement the Operation and Maintenance plan and shall comply thereafter with the provisions of the approved plan.

(f) **RECORDKEEPING REQUIREMENTS**

(1) Any person conducting operations subject to this rule shall maintain a current list of each coating, solvent, or other VOC containing material in use, which provides the VOC content and all other data necessary to evaluate compliance, including but not limited to:

(i) Manufacturer name and identification for each material containing VOCs; and

(ii) For coatings, other than low-solid coatings, the VOC content expressed in grams per liter (lbs/gal), less water and exempt compounds, as applied and mix ratio of components, if applicable; and

(iii) Actual oven drying temperature, if applicable; and

(iv) For surface preparation and cleaning materials or for low-solid coatings, the VOC content expressed in grams per liter (lbs/gal) of cleaning material or low-solids coating as used, and density and mix ratio of components, if applicable; and

(v) For other materials containing VOCs, other than surface coatings, surface preparation or cleaning materials, the VOC concentration per weight or volume of material.

(2) In addition, any person conducting operations subject to this rule shall:

(i) Maintain monthly records of the amount of each coating used; and

(ii) Maintain monthly inventory, purchasing or dispensing records for each surface preparation and cleaning material or other VOC containing materials used.

(3) In addition, any person using control equipment pursuant to Section (e) of this rule shall maintain daily records of key system operating parameters as approved in the Operation and Maintenance plan pursuant to Subsection (e)(2). Such records shall be sufficient to document continuous compliance with Subsection (e)(1)(ii) during periods of emission producing activities.

(4) All records shall be retained onsite for at least three years and ~~shall be~~ made available to the District upon request.

(g) **MANUFACTURER AND SUPPLIER INFORMATION**

Any person, who manufactures, sells, offers for sale, or supplies to users in San Diego County any coating, coating component, solvent cleaning material, or any other VOC containing material that is used in an operation that may be subject to this rule shall provide the following information to customers:

(1) The manufacturer's name and identification of each coating or coating component, surface preparation material, equipment cleaning material or any other material containing VOCs; and

(2) The VOC content of coatings, as supplied, expressed in grams per liter or pounds per gallon, less water and exempt compounds; and

(3) The VOC content of low-solid coatings, as supplied, surface preparation or solvent cleaning materials or any other materials containing VOCs in grams per liter or pounds per gallon; and

(4) Any other necessary information enabling a user to comply with the requirements of Section (d) of this rule.

(h) **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) The VOC content of coatings containing more than 50 grams of VOC per liter of material shall be determined by the Environmental Protection Agency (EPA) Reference Method 24 (Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings, 40 CFR Part 60, Appendix A) or by the South Coast Air Quality Management District Method 304 (Determination of Volatile Organic Compounds in Various Materials) as they exist on (*date of adoption*).

(2) The VOC content of solvents or coatings containing 50 grams of VOC per liter of material or less shall be determined by the South Coast Air Quality Management District (SCAQMD) Method 313 (Determination of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry), SCAQMD Method 308 (Quantification of Compounds by Gas Chromatography) as they exist on (*date of adoption*), or any other alternative test methods approved by EPA, California Air Resources Board, and the Air Pollution Control Officer.

(3) 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.

(4) Calculation of total VOC vapor pressure for materials subject to Subsection (d)~~(1)(ii)~~ (2) of this rule shall be conducted in accordance with the District's "Procedures for Estimating the Vapor Pressure of VOC Mixtures." If the vapor pressure of the liquid mixture, as calculated by this procedure, exceeds the limits specified in Subsection (d) ~~(1)(ii)~~(2), the vapor pressure shall be determined in accordance with ASTM Standard Test Method D2879-97(2007)~~,~~ (Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope), or its most current version.

(5) Measurements of transfer efficiency pursuant to Subsection (d)(~~2~~3)(i)(G) of this rule shall be conducted in accordance with the SCAQMD "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)(i)(G) 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 of air pollution control equipment operated pursuant to Subsection (e)(1)(ii) 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 Test Methods 25A and/or 18 (40 CFR Part 60, Appendix A) and in accordance with a protocol approved by the Air Pollution Control Officer.

(7) Capture efficiency shall be determined according to EPA Test Method 204 and technical document, "Guidelines for Determining Capture Efficiency," dated January 9, 1995. Subsequent to the initial compliance demonstration period, appropriate key system operating parameters as approved by the Air Pollution Control Officer may be used as indicators of the performance of the emission control system.

(i) **COMPLIANCE SCHEDULE**

(1) All new operations or processes subject to this rule shall comply with all applicable requirements upon initial startup.

(2) All existing operations or processes subject to this rule shall comply with all applicable requirements no later than (*12 months after date of adoption*).

(3) The owner or operator of an existing operation that chooses to comply with the rule by installing air pollution control equipment pursuant to Section (e) of this rule shall:

(i) By (*6 months after date of adoption*), submit to the Air Pollution Control Officer an application for an Authority to Construct and a Permit to Operate an air pollution control system as specified in Section (e).

(ii) By (*12 months after date of adoption*), comply with all applicable rule requirements.