Air Pollution Control Board

San Diego County Air Pollution Control District

AGENDA ITEM

DATE: February 24, 2010

TO: San Diego County Air Pollution Control Board

SUBJECT: NOTICED PUBLIC HEARING - ADOPTION OF RULE 66.1 – MISCELLANEOUS SURFACE COATING OPERATIONS AND OTHER PROCESSES EMITTING VOLATILE ORGANIC COMPOUNDS AND REPEAL OF EXISTING RULE 66 – ORGANIC SOLVENTS (District: All)

SUMMARY:

Overview

Volatile organic compounds emitted into the atmosphere contribute to formation of ozone, a major component of smog. San Diego County does not yet attain State and federal air quality standards for ozone.

Rule 66, initially adopted in 1972, was the first rule to control emissions of volatile organic compounds from stationary sources in San Diego County. It is presently used as a "catch-all" regulation for a variety of industrial operations that are not controlled by other air pollution control rules, including golf club manufacturing, plastic, glass and rubber coating operations, soil remediation, asbestos removal, and other operations using materials that contain volatile organic compounds. However, Rule 66 has become outdated. In addition, Rule 66 no longer satisfies the federal requirement for Reasonably Available Control Technology or the State requirement to implement all feasible measures to reduce volatile organic compound emissions. Therefore, the Air Pollution Control District requests to replace Rule 66 with proposed new Rule 66.1 in order to include a current definition of volatile organic compounds, provide emission limits for cleaning materials used for surface preparation and coating equipment cleaning, and specify record keeping requirements for users and manufacturers of such materials. After adoption, new Rule 66.1 will be submitted to the Environmental Protection Agency to replace Rule 66 in the San Diego County portion of the federally approved State Implementation Plan.

Staff conducted substantial outreach to affected facilities and industrial groups to ensure development of a balanced proposal. The proposed new rule includes exemptions in response to documented feasibility issues for specific operations. All known issues have been addressed.

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Recommendation(s)
AIR POLLUTION CONTROL OFFICER

1. Find that the adoption of Rule 66.1 and repeal of Rule 66 are categorically exempt from the provisions of the California Environmental Quality Act pursuant to California Code of Regulations, Title 14, Section 15308, as an action taken to assure the protection of the environment, where the regulatory process involves procedures for protection of the environment, and pursuant to California Code of Regulations Title 14, Section 15061(b)(3), since it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment.

2. Adopt the resolution entitled Resolution Repealing Existing Rule 66 and Adding New Rule 66.1 into Regulation IV of the Rules and Regulations of the San Diego County Air Pollution Control District.

Fiscal Impact
The proposed new Rule 66.1 will be implemented and enforced with existing staff and will not have a significant fiscal impact on the Air Pollution Control District.

Business Impact Statement
Adopting Rule 66.1 will not adversely impact the business community. Compliant cleaning solvents are widely available and many of them cost the same or less than conventional organic solvents. The majority of affected businesses are already using compliant cleaning materials. The socioeconomic impact assessment conducted by the San Diego County Air Pollution Control District shows that the proposed rule will not have a detrimental impact on affected industries.

Advisory Board Statement
At its meeting on November 12, 2009, with a quorum present, the Air Pollution Control District Advisory Committee expressed support of the Air Pollution Control District's recommendations.

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

Proposed new Rule 66.1 will control VOC emissions from sources not subject to other District rules. It will replace outdated Rule 66. Rule 66.1 also satisfies federal requirements to

implement Reasonably Available Control Technology and State requirements for implementing all feasible control measures to reduce VOC emissions.

Proposed Rule 66.1 establishes new emission standards that limit the VOC content of cleaning materials used in surface preparation, wipe cleaning, and coating application equipment cleaning. However, VOC emission limits for major operations subject to the rule will remain similar to current Rule 66. Specifically, any VOC emitting operation not covered by the District's other prohibitive rules must be controlled by air pollution control equipment unless the VOC emissions from such operations—excluding emissions from cleaning materials, which are subject to a separate VOC limit—are less than 5 tons per year. Alternatively, a facility can comply by using coatings with a specified, complying VOC content for both air-dried and baked coatings. Rule 66.1 includes the most recent definition of VOCs and establishes labeling and record keeping requirements for manufacturers and suppliers of VOC-containing materials that will facilitate compliance by affected facilities.

New Rule 66.1 requires the use of surface cleaning materials with a VOC content not exceeding 50 grams per liter or having a composite VOC vapor pressure (a measure of the VOC evaporation rate) not higher than 8 mm mercury (Hg) at 20^{o}C (68^{o}F). Cleaning of coating application equipment must be conducted according to the conditions outlined in the rule. All facilities must keep usage records and other specified parameters of VOC-containing materials to demonstrate compliance with the rule.

New Rule 66.1 exempts research and development operations, testing for quality control or quality assurance purposes, touch-up operations and the stripping of cured inks, coatings, and adhesives. In addition, some specialized processes are allowed exemptions from the VOC content limits for cleaning materials provided that the use of such non-compliant materials is limited to the small amounts specified in the rule.

New facilities will be subject to Rule 66.1 requirements immediately upon adoption. Existing facilities will have 12 months to comply with the new rule, allowing time for any adjustments of their processes and to deplete existing inventories of non-compliant materials. Upon completion of the 12-month grace period for existing facilities they will become subject to Rule 66.1 and Rule 66 will automatically be repealed.

New Rule 66.1 will apply to 172 companies in San Diego County. Upon full implementation, it will reduce VOC emissions from solvent cleaning operations by approximately 16%, or 9.1 tons per year.

During development of Rule 66.1, District staff conducted meetings with the operators of affected sources including industrial facilities, military installations, and small businesses. A public workshop was also held. Issues that were raised during and after the workshop were successfully resolved with affected parties.

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Compliance with Board Policy on Adopting New Rules
On February 2, 1993 (APCB #2), the Board directed that, with the exception of a regulation requested by business or a regulation for which a socioeconomic impact assessment is not required, no new or revised regulation shall be implemented unless specifically required by federal or State law. Proposed new Rule 66.1 is required pursuant to federal law, which requires Reasonably Available Control Technology, and State law, which calls for adoption of every feasible control measure to accelerate progress toward achieving the ambient air quality standards for ozone. Therefore, implementation of the proposed rule is consistent with the Board directive.

Environmental Statement
The California Environmental Quality Act (CEQA) requires environmental review for certain actions. The District conducted a preliminary review of whether CEQA applies to the adoption of Rule 66.1. Upon full implementation, new Rule 66.1 will reduce VOC emissions from solvent cleaning operations by approximately 16%, or 9.1 tons per year. District staff determined that the adoption of Rule 66.1 and repeal of Rule 66 are categorically exempt from the provisions of the CEQA pursuant to California Code of Regulations, Title 14, Section 15308, as an action taken to assure the protection of the environment, where the regulatory process involves procedures for protection of the environment, and pursuant to Section 15061(b)(3), since it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment.

Linkage to the County of San Diego Strategic Plan
The County's five-year strategic plan includes an Environment Initiative to ensure environmental preservation and enhance quality of life. Proposed new Rule 66.1 will reduce emissions that contribute to smog formation without negatively impacting the local business community. The rule balances air quality preservation, public health protection, and economic development needs.

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Respectfully submitted,

CHANDRA L. WALLAR
Deputy Chief Administrative Officer

ROBERT KARD
Air Pollution Control Officer

ATTACHMENT(S)

Attachment A – Resolution Repealing Rule 66 & adopting new Rule 66.1 in Regulation IV of the Rules and Regulations of the San Diego County Air Pollution Control District.
Attachment B – Socioeconomic Impact Assessment
Attachment C – Comparative Analysis
Attachment D – Incremental Cost Effectiveness
Attachment E – Workshop Report
Attachment F – Existing Rule 66 to be Repealed

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AGENDA ITEM INFORMATION SHEET

CONCURRENCE(S)

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

Other Concurrence(s): N/A

ORIGINATING DEPARTMENT: Air Pollution Control District, County of San Diego

CONTACT PERSON(S):

ROBERT J. KARD	
Name	Name
(858) 586-2700	
Phone	Phone
(858) 586-2701	
Fax	Fax
O-176	
Mail Station	Mail Station
Robert.Kard@sdcounty.ca.gov	
E-mail	E-mail

AUTHORIZED REPRESENTATIVE: _____

ROBERT J. KARD
Air Pollution Control Officer

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AGENDA ITEM INFORMATION SHEET
(continued)

PREVIOUS RELEVANT BOARD ACTIONS:
N/A

BOARD POLICIES APPLICABLE:
N/A

BOARD POLICY STATEMENTS:
N/A

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

Resolution of the San Diego County
Air Pollution Control Board
Resolution No. **10-029**
Meeting Date: **02/24/2010(AP1)**

RESOLUTION ADOPTING NEW RULE 66.1 – MISCELLANEOUS SURFACE COATING OPERATIONS AND OTHER PROCESSES EMITTING VOLATILE ORGANIC COMPOUNDS AND REPEAL OF RULE 66 – ORGANIC SOLVENTS OF REGULATION IV OF THE RULES AND REGULATIONS OF THE SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT

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

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

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

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

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

(1) (Necessity) The adoption of proposed amended Rule 66.1 is necessary in order to implement all feasible measures to achieve the ambient air quality standards for ozone by further reducing emissions of Volatile Organic Compounds (VOCs) in the County of San Diego;

(2) (Authority) The adoption of proposed amended Rule 66.1 is authorized by Health and Safety Code section 40702;

(3) (Clarity) The proposed amended Rule 66.1 can be easily understood by persons directly affected by it;

(4) (Consistency) The adoption of proposed amended Rule 66.1 is in harmony with, and not in conflict with or contrary to, existing statutes, court decisions, and State and federal regulations;

(5) (Non-duplication) The adoption of proposed amended Rule 66.1 will not duplicate existing District or federal requirements;

(6) (Reference) The adoption of proposed amended Rule 66.1 is necessary to comply with the State law, California Health and Safety Code Section 40914(b)(2), that requires adoption of every feasible control measure to reduce ozone precursor emissions;

WHEREAS, the Air Pollution Control Board further finds pursuant to Health and Safety Code section 40001 that proposed amended Rule 66.1 will facilitate the attainment of ambient air quality standards; and

WHEREAS, the Air Pollution Control Board further finds that an assessment of socioeconomic impacts of the proposed amended Rule 66.1, as required by Section 40728.5 of the State Health and Safety Code, has been prepared and has been made available for public review and comment, and that the socioeconomic impacts of the proposed amended rule have been actively considered and the proposed amended rule will not have adverse socioeconomic impacts; and

WHEREAS, the Air Pollution Control Board further finds that an analysis comparing proposed amended Rule 66.1 with applicable requirements of federal and local regulations has been prepared pursuant to the State Health and Safety Code Section 40727.2; and

WHEREAS, the Air Pollution Control Board further finds that an incremental cost-effectiveness analysis pursuant to the State Health and Safety Code Section 40920.6(a) has been prepared for proposed amended Rule 66.1 and has been made available for public review and comment, and has been actively considered.

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

1. Proposed new Rule 66.1 is to read as follows:

RULE 66.1 MISCELLANEOUS SURFACE COATING OPERATIONS AND OTHER PROCESSES EMITTING VOLATILE ORGANIC COMPOUNDS (Adopted *(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 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;
68 through 69.4.1 – Rules Regulating Combustion Sources.

(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 coatings, surface preparation or solvent cleaning materials applied using 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 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 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.

(viii) Touch-up operations.

(ix) 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) 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, 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, 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.

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

(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.

(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.

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

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

(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.

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

(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.

(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.

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

(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.

(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*).

(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.

(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.

(20) **"Precision Optics Components"** means the components used to create high resolution images in optical devices.

(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.

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

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

(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.

(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.

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

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

(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.

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

(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.

(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.

(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) Surface Coating and Other Operations

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:

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

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

(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.

(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°C (68°F) or less.

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

IT IS FURTHER RESOLVED AND ORDERED that Rule 66.1 of Regulation IV shall take effect upon adoption for new operations or processes, and *(12 months after date of adoption)* for existing operations or processes.

PASSED AND ADOPTED by the Air Pollution Control Board of the San Diego County Air Pollution Control District, State of California, this 24 day of Feb, 2010, by the following votes:

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

\- - -

STATE OF CALIFORNIA)
County of San Diego)SS

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

THOMAS J. PASTUSZKA
Clerk of the Air Pollution Control Board

By: Nancy Vizcarra
Nancy Vizcarra, Deputy

APPROVED AS TO FORM AND LEGALITY
COUNTY COUNSEL

BY: _____
SENIOR DEPUTY

No. 10-029
02-24-2010 (APCB 1)

ATTACHMENT B

SOCIOECONOMIC IMPACT ASSESSMENT

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

October 2009

Prepared by

San Diego County Air Pollution Control District
10124 Old Grove Road
San Diego, CA 92131

SOCIOECONOMIC IMPACT ASSESSMENT

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

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EXECUTIVE SUMMARY

This report represents the results of a socioeconomic impact assessment (SIA) of the San Diego County Air Pollution Control District's (District) proposed new Rule 66.1 – Miscellaneous Coating Operations and Other Processes Emitting Volatile Organic Compounds (VOCs). The new rule will replace existing Rule 66, which regulates VOC emissions from the usage of organic solvents in miscellaneous processes. Rule 66 has become seriously outdated since its initial adoption in 1972 and minor revision in 1995.

The main purpose of the fundamental revision and replacement of Rule 66 is for consistency with other District rules regulating VOC emissions, e.g., to include a current definition of VOC as it is now used to define photochemically reactive compounds. Proposed Rule 66.1 contains VOC emission limits for the major processes or operations conducted by the affected facilities, which are similar to the existing rule. However, the new rule will also control VOC emissions from surface cleaning and surface preparation operations by requiring the use of materials with a low VOC content or with a low VOC vapor pressure. (Existing Rule 66 has no limits on the VOC content or vapor pressure of cleaning materials.) Rule 66.1 includes recordkeeping requirements for manufacturers or suppliers of VOC containing materials and their users. The rule incorporates updated test methods and is reformatted according to similar District rules. The proposed new rule is required pursuant to State requirements for expeditiously adopting every feasible control measure and federal requirements for use of Reasonably Available Control Technology (RACT) on sources of VOC emissions.

New Rule 66.1 will apply to the same 172 existing facilities, which are currently regulated under Rule 66, i.e., miscellaneous processes not subject to other District rules. The new rule implementation will result in the VOC emission reduction from the use of compliant cleaning materials of approximately 9.1 tons per year, or by 16.4%.

New Rule 66.1 is not anticipated to have a detrimental socioeconomic impact on the affected industries. The SIA demonstrates that cleaning materials with a lower VOC content are currently available and many of them are already being used by the vast majority of businesses that are subject to the stricter VOC content standards. The cost of compliant materials is approximately the same or lower than conventional organic solvents. Only two out of 55 permitted facilities must find a compliant solvent to use in their operations. In addition, many compliant materials are now water-based, and therefore may provide additional health and environmental benefits by eliminating human exposure to organic solvents.

I. INTRODUCTION

California law requires air pollution control districts (excluding those with populations of less than 500,000 people) to perform a SIA when adopting, amending, or repealing rules and regulations that will significantly affect air quality and emission limitations.

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

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

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

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

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

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

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

This report presents the results of an SIA of San Diego Air Pollution Control District's (District) proposed new Rule 66.1 (Miscellaneous Coating Operations and Other Processes Emitting Volatile Organic Compounds). It should be noted that the only new emission limitations introduced in Rule 66.1 are VOC content limits for surface cleaning and equipment cleaning materials, including those used in wipe cleaning operations. Therefore, according to State law, only the socioeconomic impact of new VOC content limits for cleaning materials is considered in the following report.

II. NECESSITY OF REPLACING EXISTING RULE 66 WITH A NEW RULE

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

Existing Rule 66 regulates VOC emissions from the usage of organic solvents in miscellaneous processes. It was approved by the Environmental Protection Agency (EPA) and is included in the State Implementation Plan.

Initially adopted by the District in 1972, Rule 66 was the first rule to control emissions of photochemically reactive compounds (presently known as VOCs) from stationary sources in San

Diego County. It is presently used as a "catch-all" regulation that applies to operations that are not covered by other rules limiting VOC emissions for specific processes or sources, such as Rule 67.11 (Wood Products Coating Operations) or Rule 67.15 (Pharmaceutical and Cosmetic Manufacturing Operations). However, many provisions in the existing Rule 66 have become outdated and now the District proposes replacing it with new, fundamentally revised, Rule 66.1. The proposed new rule reflects the latest VOC definition, contains lower limits for the VOC content of cleaning materials already implemented in several California air districts, and updates recordkeeping requirements and test methods.

The new rule will also help to fulfill the District's commitment in the San Diego County Regional Air Quality Strategy to implement all feasible emission control measures as required by State law as well as the federal requirement for RACT on sources of VOC emissions. Existing Rule 66 will be repealed upon the effective date of proposed new Rule 66.1, i.e., 12 months after its adoption by the Air Pollution Control Board.

III. SUMMARY OF PROPOSED NEW RULE 66.1

New Rule 66.1 will:

- Require any operation emitting volatile organic compounds and not covered by other District rules be controlled by air pollution control equipment unless the VOC emissions from this operation are less than 5 tons per year, excluding emissions from cleaning operations.

- Alternatively, allow a surface coating operation to comply with emission control requirements by using air-dried coatings with a VOC content not exceeding 420 grams per liter or baked coatings with a VOC content not exceeding 360 grams per liter.

- Require the use of surface preparation or solvent cleaning materials with a VOC content not more than 50 grams per liter (0.42 pounds/gallon) of VOCs, or having a total VOC vapor pressure 8mm Hg at 20^{o}C (68^{o}F) or less.

- Specify coating application methods to be used and the requirements for cleaning of coating application equipment for surface coating operations subject to this rule.

- Provide operating parameters and requirements for air pollution control equipment if it is used by a facility.

- Exempt from all rule requirements the use of pesticides, research and development operations, or testing for quality control or quality assurance purposes, touch-up operations and stripping of cured inks, coatings and adhesives, digital printing, and cleaning of electronic or electrical components, medical devices, laser optics, or precision optics.

- Exempt the operations involved in the manufacture of biotechnology pharmaceutical or bio-agricultural products that do not a require permit to operate pursuant to Rule 11.

- Exempt from all rule requirements any coating operation that uses not more than 20 gallons of coatings per consecutive 12 months or emits not more than 150 pounds of VOCs for the same period, provided that the specified records are kept.

- Exempt from the limitations on the VOC content of cleaning materials any cleaning operation that uses not more than 20 gallons of such materials per consecutive 12 months or emits not more than 150 pounds of VOCs per the same period, provided that not more than the 20 gallons of such non-compliant material or not more than 150 lbs of VOCs are emitted per consecutive 12 months from all non-compliant cleaning materials at the stationary source and the specified records are kept.

- Exempt materials used for cleaning and surface preparation of aerospace components, including wipe cleaning from the VOC content limit provided these operations are not associated with surface coating operations and are in compliance with the requirements of Subsection (d)(4) of Rule 67.9 (Aerospace Coating Operations).

- Exempt certain cleaning operations involved in the manufacture of gas turbine engines or in military ship repair operations.

- List recordkeeping requirements for persons conducting operations subject to this rule.

- Require manufacturers, sellers or suppliers to provide specified information related to any VOC containing material that is used in an operation that may be subject to this rule.

- Provide definitions for major terms used in the rule including the reference to the most recent definition of VOCs and exempt compounds as specified in Rule 2.

- Update the test methods for determining compliance.

- Provide a compliance schedule for new and existing operations that are or may be subject to this rule.

It should be noted that the definition of VOC in the new proposed rule is significantly different from the definition of photochemically reactive compound in the old rule. It relates to the current understanding of photochemical reactivity and the concept of exempt compounds. A "photochemically reactive compound" in the old rule was defined in terms of its chemical composition and structure such as a presence of double or triple bonds, aromatic bonds, etc. For example, saturated hydrocarbons were considered non-photochemically reactive because they have only single bonds. Therefore, existing Rule 66 has stricter emission limitations (40 pounds/day) for compounds that comply with this definition than for the rest of organic compounds. For example, the existing rule does not require an additional emission control unless the emissions of "organic compounds" exceed 3,000 lbs per day.

The current concept of photochemical reactivity as defined by EPA considers all VOCs to be photochemically reactive except those that are proven to have negligible or very low photochemical reactivity (exempt compounds). Therefore, while the VOC emission limitations in the proposed rule seem similar to the existing rule, they are fundamentally different. The proposed new rule limits such emissions to 5 tons/year for all organic compounds except for those designated as "exempt compounds."

IV. TYPE OF INDUSTRIES AFFECTED BY NEW RULE 66.1.

New Rule 66.1 is considered a "catch-all" general rule that is applicable to VOC emitting sources that are not subject to the District source-specific rules. Therefore, the new rule as well as existing Rule 66 will apply to a variety of industries and processes such as plastic products, glass and rubber coating operations, golf club manufacturing, soil remediation, asbestos removal, or other sources that emit VOCs as a part of production or cleaning operations. The following table presents the list of industries and their North American Industry Classification System (NAICS) codes that are subject to existing Rule 66 and also could be affected by the proposed new Rule 66.1.

Table 1. NAICS Classification of Industries

Type of Operations	NAICS Code	Industry
Golf Club Assembly	339920	Sporting and athletic goods manufacturing
Miscellaneous Coating Operations on plastic, glass, rubber, composites, etc.	332811	Coating, heat treating and allied activities
Electronic Products Manufacturing	334411	Semiconductor and other electronic components mfg.
Soil Remediation	562910	Remediation services, environmental
Asbestos Abatement	562910	Asbestos abatement services
Other Operations Using VOC Containing Materials	333611, 325411, 336611, 336411	Miscellaneous

V. SOURCES REGULATED BY CURRENT RULE 66 AND THEIR VOC EMISSIONS

1. Historical Data

The main purpose of revising current Rule 66 was to modernize it according to the current interpretation of photochemical reactivity and to include emission limits reflecting the availability of low VOC content cleaning materials. Simultaneously, the rule was reformatted to be consistent with other District rules regulating VOC emissions.

After Rule 66 was last revised in 1995, the District implemented or strengthened a number of rules that control VOC emissions from coating operations on a variety of substrates such as wood products, metal parts, aerospace components, automotive products, etc. The District also adopted or revised a few rules regulating manufacturing operations that take place in San Diego

County, such as paint and printing ink manufacturing and bio-polymer manufacturing. In addition, since 1995, some industries, e.g., a significant part of aerospace industry, left the San Diego area due to the diminished government financing or outsourcing.

Therefore, Rule 66 is presently applicable only to miscellaneous coating operations and processes, which were considered by the District not to be a significant source of VOC emissions and therefore do not warrant separate individual rules.

It should also be noted that as a result of the current recession and other factors, many companies have significantly reduced their production volumes and employee work force. Some of them have closed down or moved their major operations to another state or abroad. This may be the reason for the smaller number of sources now subject to the rule and their corresponding air emissions.

This trend is seen very clearly in golf club manufacturing companies subject to this rule. They underwent significant operational changes in the last couple of years which was reflected in their reduced air emissions. As shown in the District permit files, in 2007 there were eight golf club assembly companies, one of them a large company, with total VOC emissions of 72.7 tons/year. By September 2009, there were seven companies emitting only 35.5 tpy from coating and cleaning operations. One of the factors in such a drastic decrease in emissions was the cut in production of golf clubs at a large company and the subsequent transfer of its manufacturing operations abroad. The same trend was observed in miscellaneous coating operations. In the last year alone, at least three companies subject to the rule closed down or moved their operations from San Diego County.

To further illustrate this point, the following table shows a change in the number of plastic and composite coating operations and their VOC emissions from the cleaning operations subject to existing Rule 66 in the period between 1997 and 2008.

Table 2. Number of Companies and their VOC Emissions from Cleaning Operations 1997-2008

Substrate	Number of Facilities			Total VOC emissions from cleaning operations (tons/year)		
	1997	2003	2008	1997	2003	2008
Plastics	26	15	18	2.8	1.4	1.6
Composites (includes golf club manufacturing companies)	16	10	11	15.1	23.0*	17.1
Total	42	25	29	18.0	24.4	18.7

* Includes VOC emissions from new wipe cleaning operations at a large company, which were subsequently reduced.

2. Existing facilities subject to the proposed rule.

There are presently 172 existing facilities that are regulated by Rule 66 and will be subject to Rule 66.1 after the new rule takes effect. The number of these facilities and their VOC emissions are grouped by type of operation in Table 3 below.

Table 3. Number of Facilities Subject to Rule 66.1 and Estimated VOC Emissions

Type of Operation	Number of Facilities	Total VOC emissions from affected operations including cleaning operations (tons/year)	VOC emissions from cleaning operations only (tons/year)	% of VOC emissions from cleaning operations, per type of operation
Misc. Coating Operations	30	59.2	7.2	12.2
Misc. Processes using VOC Containing Materials	29	58.1	21.2	36.5
Golf Club Assembly Operations	7	35.5	22.9	64.5
Electronic Mfg.	21	38.1	4.2	11.0
Asbestos Abatement	23	2.7	0	0
Soil Remediation	62	33.5	0	0
TOTAL	172	227.1	55.5	N/A

Overall, the emissions from solvent cleaning operations are approximately 24.4 % of the total VOC emissions from all sources that will be regulated by the proposed rule.

Information provided in Table 2 also shows that solvent cleaning operations are only conducted in four out of six categories of affected operations that will be subject to Rule 66.1, i.e., miscellaneous coating operations, miscellaneous other processes using VOCs, golf club manufacturing, and electronic manufacturing.

Facilities conducting coating operations are painting various substrates such as plastics, glass, ceramics, leather, or rubber. Miscellaneous processes in Table 2 include a variety of operations such as chemical distillation, solvent recovery, resin manufacturing, rubber glove manufacturing, etc. Many of them have add-on emission control equipment or do not use any VOC containing cleaning materials. One large facility in this category that conducts wipe cleaning operations is using organic solvents for precision cleaning of laser optics components, precision welding, and thermal spray operations that have a limited exemption in the proposed rule for a volume of non-compliant materials used. The largest source of emissions in this category is a military facility that cleans aerospace components. The cleaning materials used in this facility also have a limited exemption from Rule 66.1 VOC limits with the condition that these materials comply with the VOC content or boiling point limits of District Rule 67.9 (Aerospace Coating Operations).

The last category of processes that utilize cleaning materials is electronic manufacturing. Many of these operations not specifically exempt from the proposed rule have add-on air pollution control equipment that reduces emissions from cleaning materials in compliance with the rule.

VI. EMISSION REDUCTION POTENTIAL OF THE PROPOSED NEW RULE

As mentioned above, the main purpose of revising Rule 66 was to bring it to the current state-of-the-art in air pollution control regulations, specifically, to update the definition of photochemically reactive compounds and to include the necessary recordkeeping and manufacturers' requirements that will improve rule enforceability. Additionally, the proposed new rule is required pursuant to State requirements for expeditiously adopting every feasible control measure and federal requirements for use of RACT to control VOC emissions.

The VOC emission limit for many operations and processes (excluding solvent cleaning operations) in the proposed new Rule 66.1 is 5 tons per year. Facilities with uncontrolled emissions higher than 5 tons/year will be required to reduce emissions either by using low VOC content products or by installing an add-on emission control system. This limit is similar to the requirements in existing Rule 66. Therefore, there will be no additional emission reductions from this part of the rule because the regulated sources are already in compliance with this requirement. In addition, as shown in Table 2, the majority of operations such as asbestos abatement, soil remediation, and many miscellaneous coating operations are small sources with average emissions of less than 2 tons per year. Some coating operations are also using only compliant coatings (VOC content $\leq$ 420 grams/liter). Other sources such as electronic manufacturing facilities have add-on emission control in place that comply with the rule requirements for the capture and control efficiency of such systems.

The expected emission reductions will be a result of new limits for the VOC content of cleaning materials that must not exceed 50 grams/liter, or a total VOC vapor pressure of 8mm Hg at 20^{o}C. Current Rule 66 has no limits on the VOC content or vapor pressure of cleaning materials.

As shown in Table 3, there are 30 facilities involved in miscellaneous coating operations on various substrates, such as plastics, glass, ceramics, or rubber. A recent District survey showed that at least 23 of them are already using compliant cleaning materials including exempt compounds (acetone, methyl acetate, or combination of exempt compounds), solvents with low vapor pressure or water-based cleaners. Others are using pure water for surface preparation and cleaning. Six facilities are exempt from the VOC content limits because they use less than 20 gallons/year of cleaning materials or conduct coating operations on electronic or medical equipment that are also exempt from the rule. Consequently, there will be only one facility in this miscellaneous coating operations category that may be affected by the proposed rule. Another facility affected by the rule is involved in golf club assembly operations that presently use high VOC content solvents for wipe cleaning of golf clubs.

The estimated VOC emissions reductions from these operations affected by the new VOC content limits for cleaning materials are provided in Table 4 below.

Table 4. Expected VOC Emission Reductions from the Implementation of New Rule 66.1

Type of Operation	VOC emissions from cleaning operations (tons/year)	VOC Emission reductions (tons/year)	VOC emission reductions per type of operation (%)
Misc. Coating Operations	7.2	0.9	12.5
Misc. Processes using VOC Containing Materials	21.2	None	None
Golf Club Assembly Operations	22.9	8.2	35.8
Electronic Manufacturing	4.2	None	None
TOTAL	55.5	9.1	N/A

Overall, the VOC emissions from solvent cleaning operations as a result of the proposed rule will be reduced by an estimated 9.1 tons/year or 16.4%. Although not quantified here, substantial additional emission reductions have already been realized by facilities voluntarily using compliant products prior to rule adoption, given that compliant products are already commercially available. (See Section VIII below for additional information.) Adoption of the proposed rule will ensure the San Diego Air Basin continues to benefit from these low-VOC materials and associated emission reductions.

VII. RANGE OF PROBABLE COSTS TO INDUSTRY INCLUDING SMALL BUSINESS

As mentioned above, the majority of businesses affected by the lower VOC content limits for cleaning materials are already using either exempt or water-based solvents. Considering that such materials are widely available and their prices are similar or lower than those for organic solvents, proposed Rule 66.1 will not impose any additional costs for the majority of the industrial sources, including small businesses. Also, all air districts in Southern California (outside of San Diego County) and the majority of districts in non-attainment areas in the northern part of the State already have rules requiring the use of low VOC content solvents. However, one large company in San Diego County will have some extra expenses to modify their wipe cleaning operations that according to the recent data result in approximately 8.2 tons/year of VOC emissions. The company is actively searching for a compliant material that will also satisfy their quality control requirements. According to company information, the use of one of the alternative compliant materials would require additional drying steps and a consequent increase in labor costs. The District estimated that the cost of a compliant material and additional labor will result in the yearly cost increase of approximately $51,000, which corresponds to a cost effectiveness of $3.3 per pound of VOC reduced. This cost-effectiveness is significantly below the District guidelines of $6 per pound of VOC reduced for rules regulating VOC emissions.

VIII. IMPACT OF THE PROPOSED NEW RULE ON EMPLOYMENT AND THE REGIONAL ECONOMY

Proposed new Rule 66.1 will have no significant impact on employment and economy of the region because all compliant materials are widely available in the County at prices comparable or lower than conventional organic solvents. As it was discussed above, many companies are already using low or non-VOC containing cleaning materials.

This phenomenon can be partly explained as a result of market penetration of cleaning products mandated for use in the South Coast Air Quality Management District (SCAQMD) adjacent to San Diego County. Since early 2000, SCAQMD Rule1171 had a low VOC content limit (25 grams/liter) for the majority of industrial cleaning solvents. That District also has published on its website a list of "Clean Air Solvents," including the names and addresses of the solvents manufacturers that comply with Rule 1171 requirements. In addition, many of these materials have the same or even better cleaning properties combined with a decreasing health risks and improved fire safety in the workplace. As a result, many companies have voluntarily switched to more environmentally friendly materials or eliminated solvent cleaning steps altogether.

IX. AVAILABILITY AND COST-EFFECTIVENESS OF ALTERNATIVES

There are no reasonably available alternatives for the proposed rule. Not adopting it at this time would be a disservice to the District's regulated community because the current rule is seriously outdated. In addition, the District has an obligation under State law to expeditiously adopt all feasible control measures and under federal law to require RACT on sources of ozone precursor emissions.

To adopt a more stringent rule for the VOC content limit of cleaning materials (25 grams/liter) does not seem reasonable because it would result in minimal additional emission reductions (approximately 600 lbs VOC per year) and exclude many cleaning products with a low VOC content or a low VOC vapor pressure that are presently successfully used by some facilities.

COMPARATIVE ANALYSIS

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

STATUTORY REQUIREMENTS

Prior to adopting, amending, or repealing a rule or regulation, California Health and Safety Code Section 40727 requires findings of necessity, authority, clarity, consistency, non-duplication, and reference. As part of the consistency finding to ensure proposed rule requirements do not conflict with or contradict other Air Pollution Control District (District) or federal regulations, Health and Safety Code Section 40727.2(a) requires the District to perform a written analysis identifying and comparing the air pollution control standards and other provisions of proposed new Rule 66.1 with existing or proposed District rules and guidelines and existing federal rules, requirements, and guidelines applying to the same source category.

ANALYSIS

Proposed Rule 66.1 applies to a variety of processes emitting volatile organic compounds (VOCs) including cleaning operations, miscellaneous coating operations, electronic products manufacturing, asbestos mastic removal, and other processes that are not regulated by other District source specific rules. There is no single federal regulation specifically applicable to all of these processes. However, in the last few years, the Environmental Protection Agency (EPA) issued several Control Technique Guidelines (CTGs) that represent the Reasonably Available Control Technology (RACT) applicable to some of the operations subject to the proposed new rule. Therefore, the following table provides a comparison of the RACT requirements for Miscellaneous Metal and Plastic Parts Coatings and Industrial Cleaning Solvents that are also subject to the proposed new Rule 66.1 (Table 1). Table 2 contains a comparison of the new rule with the District's Best Available Control Technology (BACT) requirements of the New Source Review rules applicable to sources that will be regulated by Rule 66.1. New Rule 66.1 satisfies all feasible control measures as required by State law as well as the federal requirement to implement RACT. The District intends to submit proposed new Rule 66.1 for inclusion in the federal State Implementation Plan.

CONCLUSION

As shown in the attached tables, there are no conflicts or contradictions between proposed new Rule 66.1 and federal control technique guidelines. There are also no contradictions between the proposed rule and the District's BACT requirements.

TABLE 1 – COMPARATIVE ANALYSIS

Items for Comparison	SDAPCD New Rule 66.1- Miscellaneous Surface Coating Operations and Other Processes Emitting Volatile Organic Compounds	CTG- Industrial Cleaning Solvents	CTG- Miscellaneous Metal & Plastic Parts Coatings
Applicability	All surface coating, solvent cleaning, or other operations or processes that may result in emissions of VOC and are not subject to or exempt from other prohibitory rules. No applicability threshold.	All industries that use organic solvents for cleaning processes such as wiping, flushing, or spraying. VOC emissions applicability threshold from the use of solvents is 15 lbs/day (2.7 tpy).	Plastic parts coating operations with VOC emissions not exceeding 15 lb/day VOC. Also applies to associated cleaning activities.
Exemptions	Exempt from the rule: 1. Use of non-refillable, hand-held aerosol spray containers. 2. Surface coating operations using 20 gallons/year of coatings or less. 3. Surface coating or other VOC emitting operation with VOC emissions of 150 lbs or less. 4. The following operations: R&D, QA/QC testing, educational laboratory, biotech, digital printing, and touch-up. 5. Solvent cleaning or surface prep of electrical or electronic components, medical devices, laser optics, or precision optics components. Exempt from the solvent cleaning standards: 1. Aerospace components not associated with a surface coating operation (must comply with solvent cleaning standards in Rule 67.9). 2. Solvent cleaning related to welding of aluminum structures for Navy ships. 3. Limited solvent usage exemption for cleaning associated with precision	No exemptions.	No exemptions.

	welding and thermal spray operations. 4. Small usage of cleaning solvents (20 gal/yr or emissions of 150 lbs VOC/year).		
Emission Standards for Regulated Processes (excluding cleaning operations)	Use of add-on control equipment (85% control efficiency) unless VOC emissions do not exceed 5 tpy, or use coatings with VOC content not exceeding 420 g/l (air-dried), or 360 g/l (baked).	Use of add-on control equipment (85% control efficiency) unless the VOC content of cleaning material $\leq$50 g/l or VOC vapor pressure is not more than 8mm Hg at 20C.	Low-VOC content limits for a number of plastic coating categories and specified application methods or the use of add-on control equipment (90% control efficiency).
Emission Standards for cleaning operations	VOC content of cleaning solvents $\leq$50 g/l or VOC vapor pressure is $\leq$8mm Hg at 20C.	VOC content of cleaning solvents 50 g/l or VOC vapor pressure is 8mm Hg at 20C.	None.
Work Practice	Coating application equipment cleaning procedures (including 50 g/l VOC limit) and District Rule 67.17 - Closed Containers	1) Covering open containers and used applicators; 2) Minimizing air circulation around cleaning operations; 3) Properly disposing of used solvent and shop towels, and 4) Implementing equipment practices that minimize emissions.	1) Covering open containers and used applicators; 2) Minimizing air circulation around cleaning operations; 3) Properly disposing of used solvent and shop towels, and 4) Implementing equipment practices that minimize emissions.
Recordkeeping Requirements	Current list of each coating or solvent used with the VOC content and monthly usage records. Records must be kept for at least 3 years.	N/A	N/A
Manufacturer and Supplier Information	Manufacturers and suppliers of any coating, coating component, or solvent cleaning material shall provide customers with the VOC content of the material, as well as any other information necessary for the user to comply with the standards of the rule.	N/A	N/A
Test Methods	SCAQMD Methods 313 or 308, EPA Method 24. Various test methods for determining the total VOC vapor pressure, transfer efficiency, overall control efficiency of control equipment and capture efficiency.	None Specified	None Specified

TABLE 2 – COMPARATIVE ANALYSIS

Items for Comparison	Rule 66.1	New Source Review – Best Available Control Technology
Applicability	All surface coating, solvent cleaning, or other operations or processes that may result in emissions of VOC and are not subject to or exempt from other prohibitory rules.	New or modified sources with potential to emit > 10 lbs/day of VOCs.
Exemptions	Same as in Table 1 above	N/A
Emission Standards	Use of add-on emission control equipment (85% control efficiency) unless VOC emissions do not exceed 5 tpy, or coatings used have VOC content of 420 g/l (air-dried), or 360 g/l (baked).	New or modified sources with VOC emissions <10 lbs/day comply with this limit; Sources with emissions $\geq$ 10 lbs/day and having no add-on emission control – a case-by-case determination applicable add-on control requirements based on District's cost-effectiveness analysis.
Add-on Emission Control Requirements	Combined capture and control efficiency of at least 85% by weight.	The same.
Recordkeeping	Current list of each coating or solvent used with the VOC content and monthly usage records. Records must be kept for at least 3 years. Daily records of key system operations parameters of add-on emission control system.	Daily VOC emission records to comply with the limit on daily emissions. Same as Rule 66.1 if add-on emission control system is used.

COUNTY OF SAN DIEGO
AIR POLLUTION CONTROL DISTRICT

INCREMENTAL COST-EFFECTIVENESS ANALYSIS

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

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

The main goal in proposing new Rule 66.1 is to fundamentally revise the existing and outdated Rule 66 - Organic Solvents. This goal is achieved by including a current definition of volatile organic compounds (VOCs), test methods, and VOC emission limits for cleaning solvents that were absent from the existing Rule 66. The most efficient and the cheapest strategy to comply with new emission standards required by the rule is the use of low VOC content cleaning materials. Such materials are now available in the marketplace and are already used by many affected businesses. This strategy will result in VOC emission reductions from solvent cleaning operations by approximately 16%.

There are no potential control options other than the use of significantly more expensive add-on emission control systems that will achieve the comparable VOC emission reductions. Both cost-effectiveness and incremental cost-effectiveness of such control options will be extremely high and therefore not feasible.

ATTACHMENT E

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 Air Pollution Control District (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 (VOCs) 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 VOCs 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 five 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. The last paragraph of Subsection (b) (Exemptions) in the proposed rule provides the requirements for maintaining monthly records for cleaning solvents such as MEK.

9. WORKSHOP COMMENT

Does the rule consider acetone to be an exempt compound?

DISTRICT RESPONSE

Yes, acetone is a low-reactive VOC 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 8mm 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 Air Quality Management District 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 8mm 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

ATTACHMENT F

RULE 66 – ORGANIC SOLVENTS
is to be deleted in its entirety.

RULE 66. ORGANIC SOLVENTS (Adopted 7/1/72; Rev. Effective 7/25/95)

(a) A person shall not discharge into the atmosphere more than 15 pounds (6.8 kg) of organic materials in any one day from any article, machine, equipment or other contrivance, in which any organic solvent vapor comes into contact with a flame or in which any organic solvent is evaporated at temperatures exceeding 200° F (93.3° C), unless emissions of organic materials have been reduced by at least 85 percent by weight. Emissions of organic materials resulting from any series of articles, machines, equipment, processes, operations or other contrivances designed for processing any item shall be collectively subject to compliance with this section.

(b) A person shall not discharge into the atmosphere more than 40 pounds (18.14 kg) in any one day of organic materials from any article, machine, equipment or other contrivance used under conditions other than described in Section (a), which exceeds the compositional limitations for photochemically reactive compounds set forth in Section (l), unless emissions of organic materials have been reduced by at least 85 percent by weight.

Emissions of organic materials resulting from any series of articles, machines, equipment, processes, operations or other contrivances designed for processing any item shall be collectively subject to compliance with this section.

(c) A person shall not discharge into the atmosphere more than 3,000 pounds (1361 kg) in any one day of organic materials from any article, machine, equipment or other contrivance used under conditions other than described in Section (a), unless emissions of organic materials have been reduced by at least 85 percent by weight. Emissions of organic materials resulting from any series of articles, machines, equipment, processes, operations or other contrivance designed for processing any item shall be collectively subject to compliance with this section.

(d) **(Reserved)**

(e) Emissions of organic materials to the atmosphere from the cleanup of any article, machine, equipment, process, operation, or other contrivance shall be included with the discharge of organic materials into the atmosphere from that article, machine, equipment, process, operation, or other contrivance for determining compliance with Sections (a), (b), and (c) of this rule.

(f) **(Reserved)**

(g) Discharge of organic materials into the atmosphere required to be controlled by Sections (a), (b), and (c) of this rule shall be reduced by:

(1) Incineration, provided that the combined collection and reduction efficiency of a control device is at least 85 percent by weight, or

(2) Adsorption, provided that the combined collection and reduction efficiency of a control device is at least 85 percent by weight.

(3) Processing in a manner not less effective than (1) or (2) above.

(h) A person incinerating, adsorbing, or otherwise processing organic materials pursuant to this rule shall provide, properly install and maintain in calibration, in good working order and in operation, devices as specified by the Air Pollution Control Officer (APCO) for indicating temperatures, pressures, rates of flow, or other operating conditions necessary to determine the degree and effectiveness of the air pollution control equipment.

(i) Any person using, or any person selling for use in San Diego County, any organic solvents or any materials containing organic solvents shall supply the APCO, upon request and in the manner and form prescribed by the APCO, written evidence of the chemical composition, and physical properties for each organic solvent.

(j) For the purposes of this rule, determination of the organic solvent content and composition of a solvent or material shall be made as of the time that said solvent or material is in its final form for application or employment, including any prior blending, reducing, thinning, or other preparations for application or employment.

(k) For the purposes of this rule, organic solvents are defined as organic materials which are liquids at standard conditions, except materials which exhibit an initial boiling point of 450° F (232°C) or higher at 760 mm Hg unless such materials are exposed to temperatures exceeding 200° F (93.3°C).

(l) The compositional limitations of any organic solvent referred to in this rule are the volume percentages of the following photochemically reactive compounds, compared to the total solvent volume:

(1) A combination of hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones having an olefinic or cyclo-olefinic type of unsaturation: 5 percent.

(2) A combination of aromatic compounds with eight or more carbon atoms to the molecule, except ethylbenzene: 8 percent.

(3) A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: 20 percent.

(4) Any aggregate of (1), (2), or (3) above, provided their individual volume percentages are not exceeded: 20 percent.

Whenever any organic solvent or constituent of an organic solvent may be classified from its chemical structure into more than one of the above groups of photochemically reactive compounds, it shall be considered as a member of the most reactive group, that is, that group having the lowest individual percentage limitation.

(m) For the purposes of this rule, organic materials are defined as chemical compounds of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, metallic carbonates, and ammonium carbonate.

(n) The provisions of this rule shall not apply to:

(1) Operations for which other requirements are specified by Rules 61.0 through 61.8, 67.2, 67.6, or 67.15 or operations which are subject to rules that specifically exempt said operations from this rule.

(2) The spraying or other employment of insecticides, pesticides, or herbicides.

(3) The use of any surface coating material in any article, machine, equipment or other contrivance described in Sections (a), (b), or (c) of this rule, if:

(i) The organic solvent content of such surface coating material does not exceed 30 percent by volume, excluding water, and

(ii) The organic solvent or any organic material in such surface coating material does not come into contact with flame.

(4) The use of any air-dried coating material which, when applied, contains less than 420 grams of volatile organic compounds per liter of coating applied (excluding water and exempt compounds) or the use of any baked coating material which, when applied, contains less than 360 grams of volatile organic compounds per liter of coating applied (excluding water and exempt compounds). For purposes of this exemption, "air-dried coating," "baked coating," "exempt compounds" and "volatile organic compounds" shall have the same meaning as defined in Rule 67.3.

(5) Equipment exclusively using aqueous solutions not containing organic solvents in excess of 10 percent by weight for surface preparation, cleaning, stripping or etching.

Any person claiming exemptions (n)(3), (n)(4), and/or (n)(5) shall maintain current manufacturers' specifications or analyses which substantiate this claim. These specifications and analyses shall be maintained on site and made available to the District upon request.

(6) Any equipment, process or operation that has been subjected to New Source Review pursuant to these rules, provided that the Best Available Control Technology (BACT) or Lowest Achievable Emission Rate (LAER) requirement for such equipment, process or operation was established during the New Source Review process, was implemented, and is in use. For the purpose of this exemption, BACT and LAER shall have the same meaning as defined in Rule 20.1.

(o) An owner or operator of a stationary source using organic materials subject to this rule shall maintain records of operations subject to this rule. These records shall be maintained on site for not less than three years and made available to the District upon request. These records shall include, but not be limited to, the following:

(1) The substrate type.

(2) A current list of adhesives, coatings, thinners, cleaning materials, surface preparation materials or other substances used that contain organic materials, and the manufacturer's name, identification number and the organic material content.

(3) Daily or monthly records of the amount of adhesives, coatings, thinners, cleaning materials, surface preparation materials or other substances used that contain organic materials;

(4) Oven temperature, where applicable;

(5) Daily records of the emission control equipment operating parameters necessary to ensure compliance with this rule such as temperatures, pressures, and/or flow rates; and

(6) Inspection and ongoing maintenance schedules for the control equipment.

(p) For the purpose of determining compliance with this rule, the following test methods shall be used:

(1) Measurements of organic material emissions subject to this rule shall be conducted in accordance with Methods 18 and 25 or 25A (40 CFR 60, Appendix A) as they exist on July 25, 1995, and with EPA technical document "Guidelines for Determining Capture Efficiency" dated January 9, 1995. Measurement of the emission collection system capture efficiency shall be conducted using a protocol approved by the Air Pollution Control Officer. Subsequent to the initial compliance demonstration period, applicable key operating system parameters, as approved by the Air Pollution Control Officer, shall be used as indirect verification that capture efficiency performance has not been diminished.

(2) Measurement of the initial boiling point of organic solvents shall be determined using the ASTM Standard Test Method for Distillation Range of Volatile Organic Liquids, D 1078-86.

(3) The photochemical reactive compound content shall be determined using the ASTM Standard Recommended Practices for General Gas Chromatography Procedures, E 260-91, General Techniques of Infrared Quantitative Analysis, E 168-92, or General Techniques of Ultraviolet Quantitative Analysis, E 169-93.

(4) The organic material content of adhesives, coatings, or other substances containing organic materials shall be determined using EPA Test Method 24 (40 CFR 60, Appendix A) as it exists on July 25, 1995.