

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

**PROPOSED AMENDMENTS TO RULE 67.4 –
METAL CONTAINER, METAL CLOSURE AND METAL COIL
COATING OPERATIONS**

WORKSHOP REPORT

A workshop notice was mailed to the companies and government agencies in San Diego County that may be subject to proposed amended Rule 67.4 – Metal Container, Metal Closure and Metal Coil Coating Operations. 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 January 13, 2011, and was attended by two persons. Written comments were also received before and after the workshop. The workshop comments and District responses are as follows:

1. WORKSHOP COMMENT

Is it possible to use purchase records of cleaning materials instead of usage records to satisfy the rule record keeping requirements?

DISTRICT RESPONSE

The purchase records of VOC-containing cleaning materials may be very helpful in determining the total amount of VOC emissions from a facility. However, purchase records alone are not sufficient and could lead to an overestimate of emissions. Usage records are therefore required. For example, a facility may have a permit condition restricting the amount of daily emissions pursuant to New Source Review rules, such as 10 pounds of VOC emissions per day. In order to calculate daily emissions in this case, the actual usage of VOC-containing materials is required.

For facilities that do not have permit conditions limiting the daily amount of VOC emissions, monthly usage record keeping should be sufficient and is permitted under Rule 67.4. The monthly usage of coatings or cleaning solvents can be determined, for example, by using dispensing records, measuring the level of a material with a measuring stick, or weighing a container with such material in the beginning and the end of each month.

2. WORKSHOP COMMENT

Is it allowable to keep monthly records of VOC containing materials instead of daily records?

DISTRICT RESPONSE

Yes, monthly (or daily) record keeping is allowed pursuant to Subsection (f)(1)(ii) of the rule, unless the facility uses emission control equipment and is therefore subject to the daily record keeping requirements of Subsection (f)(2). Furthermore, as stated in the response to Comment 1, in some cases daily records may be required as a permit condition, such as for compliance with any applicable New Source Review rules.

3. EPA COMMENT

It is recommended that Rule 67.4 include the actual approval date of EPA test methods. If a test method cited in the rule is developed by other agencies, such as other California air districts, Section (g) should specify the date this test method was approved by EPA.

DISTRICT RESPONSE

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

4. EPA COMMENT

Subsection (g)(7) for the determination of capture efficiency of an emission collection system should be revised by adding the reference to 40 CFR 51, Appendix M, and Test Methods 204A through 204F.

DISTRICT RESPONSE

Subsection (g)(7) has been revised as suggested.

5. EPA COMMENT

Subsection (e)(1)(iii) specifies that overall control efficiency of add-on air pollution control system must be at least 85%. Some other air districts in California require the overall control efficiency to be at least 90%. Rule 67.4 requirements should be as stringent as similar rules in other districts.

DISTRICT RESPONSE

The District disagrees. It should be noted that there are only two companies in San Diego County subject to Rule 67.4, with a combined total VOC emissions of less than four tons per year. Therefore, an incremental emission reduction benefit of a control system with 90% overall control efficiency versus 85% efficiency will be negligible. In addition, to achieve a 90% overall

control efficiency of an air pollution control system, both the collection and emission reduction systems must be at least 95% efficient. Such requirements are very stringent and do not allow for any minor deviations from the perfect functioning of both systems, and this requirement seems to be excessive in this case.

6. EPA COMMENT

SCAQMD Rule 1125 requires coating application methods other than those specified in the rule to be at least as efficient as High Volume Low Pressure (HVLV) system. Subsection (d)(2)(vii) should be revised to stipulate this.

DISTRICT RESPONSE

The District disagrees. Subsection (d)(2)(vii) already stipulates that other coating application methods may be used provided that their transfer efficiency is at least equal to one of the approved methods, which includes HVLV.

7. EPA COMMENT

For clarity, all coating application methods listed in Subsection (d)(2) should be defined in Section (c).

DISTRICT RESPONSE

The definitions of various allowable coating application methods appear in a number of other District coating rules. These definitions are identical from rule to rule. In order to keep source-specific rules as concise as possible, the District plans to include these definitions in the next revision of Rule 2 (Definitions), which contains the definition of terms used throughout the District rules and regulations.

NY:RR:jlm
02/02/11

RULE 67.4. METAL CONTAINER, METAL CLOSURE AND METAL COIL COATING OPERATIONS (Effective 5/9/79: Rev. Adopted & Effective 5/15/96); ~~(Amended and Effective (6 months after date of adoption))~~

(a) **APPLICABILITY**

(1) This rule applies to all metal container, metal closure and metal coil coating operations in which volatile organic compounds (VOCs) are employed.

(2) Operations subject to this rule shall not be subject to Rule 66.1 or 67.3.

(b) **RESERVED**

(c) **DEFINITIONS** ~~(Rev. Effective 5/15/96)~~

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

(1) **"Cleaning Material"** means a VOC containing material used for cleaning hands, tools, application equipment and work area.

(2) **"Closure"** means any metal component which is used to close or seal a container.

(3) **"Coating Line"** means an operation or process for applying, drying or oven baking and/or curing surface coatings, together with associated equipment including a coating applicator, flash-off area and oven.

(4) **"Coil"** means any flat metal sheets or strips that have been formed into rolls or ~~coils~~ in concentric rings for further industrial or commercial use.

(5) **"Container"** means any can, pail or drum.

(6) **"Drum"** means any manufactured or reconditioned cylindrical metal container that ~~has is a capacity~~ is a capacity larger than 12 gallons but smaller than 110 gallons ~~capacity~~.

(7) **"End"** means a part of a container which is used for its closure after the container is filled with a product.

(8) **"End Sealing Compound"** means a compound which is coated onto a container closure and which functions as a gasket when the closure is assembled onto the container.

(9) **"Exempt Compound"** means the same as defined in Rule 2.
~~(Rev. Effective 5/15/96)~~

(10) **"Exterior Base Coating"** means a coating applied to the exterior of a container, body, closure or flat sheet to provide a protection to the metal or to provide background for any lithographic operation.

(11) **"Exterior Body Spray"** means a coating sprayed on the exterior of the container body to provide a decorative or protective finish.

(12) **"Food/Beverage Container"** means a metal container in which food or beverages intended for human consumption are packaged.

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

~~(14)~~ **"Interior Base Coating"** means a coating applied to the interior of a container body or end or flat sheet to provide a protective lining between the product and the container.

~~(15)~~ **"Interior Body Spray"** means a coating sprayed on the interior of the container to provide a protective film between the product and the container.

~~(16)~~ **"Letterpress Coating"** means an acrylate-based topcoat which is used for coating letterpress printing plates during the manufacture of such plates.

~~(17)~~ **"Lid"** means a reusable closure.

~~(18)~~ **"Metal Container, Metal Closure, and Metal Coil Coating"** means any coating containing VOCs applied by spray, roller or other means to the inside and/or outside of metal containers, drums, pails, lids, closures or to the surface of flat sheets, rolls, or coil for further industrial or commercial use.

~~(19)~~ **"Overvarnish"** means a coating applied directly over a design coating to reduce the coefficient of friction, to provide gloss and to protect the finish against abrasion and corrosion.

~~(20)~~ **"Pail"** means any manufactured or reconditioned cylindrical metal container with a capacity between one and 12 gallons, capacity and ~~that is from one gallon to 12 gallons, capacity and~~ constructed of 29 gauge ~~or heavier material~~ or heavier.

~~(21)~~ **"Pet Food Container"** means a metal container in which food for animal (non-human) consumption is packaged.

~~(2122)~~ **"Stationary Source"** means the same as defined in Rule 20.1.

~~(2223)~~ **"Three-Piece Container Side-Seam Spray"** means a coating sprayed on the exterior and/or interior of a welded, cemented or soldered seam to protect the exposed metal.

~~(2324)~~ **"Two-Piece Container Exterior End Spray"** means a coating sprayed on the exterior bottom end of a container to provide protection to the metal.

~~(2425)~~ **"Volatile Organic Compound (VOC)"** means the same as defined in Rule 2. ~~any volatile compound containing at least one atom of carbon, which may be emitted to the atmosphere during operations or activities subject to this rule, except methane, carbon monoxide, carbon dioxide, carbonic acid, ammonium carbonate, metallic carbides and carbonates, and exempt compounds.~~

~~(2526)~~ **"VOC Content per Volume of Coatings, Less Water and Exempt Compounds"** means the same as defined in Rule 2. ~~weight of VOC per combined volume of VOC and coating solids and is calculated by the following equation~~

$$\frac{C_{voc}}{V_m} = \frac{(W_s - W_w - W_{es})}{(V_m - V_w - V_{es})}$$

where:

~~C_{voc}~~ = VOC content of coating, less water and exempt compounds

~~W_s~~ = weight of volatile compounds including water and exempt compounds

~~W_w~~ = weight of water

~~W_{es}~~ = weight of exempt compounds

~~V_m~~ = volume of material including water and exempt compounds

~~V_w~~ = volume of water

~~V_{es}~~ = volume of exempt compounds

(2627) "VOC Content per Volume of Cleaning Material" means the same as defined in Rule 2 weight of "VOC Content per Volume of Material". and is calculated by the following equation.

$$C_{m\text{voc}} = (W_s - W_w - W_{es}) / V_m$$

where:

- $C_{m\text{voc}}$ = VOC content of material
- W_s = weight of volatile compounds including water and exempt compounds
- W_w = weight of water
- W_{es} = weight of exempt compounds
- V_m = volume of material including water and exempt compounds

(d) **STANDARDS**

(1) VOC Limits

Except as provided for in Section (e), a person shall not use or apply coatings on any coating line of the type designated below which contains VOCs in excess of the following limits at the point of application:

| (i) | Grams of VOC per liter of coating (less water and exempt compounds) |
|--|---|
| <u>Metal Container or Closure Coating Lines</u> | |
| Sheet base coat (exterior and interior) and overvarnish | 180 |
| Two-piece container exterior base coat and overvarnish, <u>and end spray</u> | 250 |
| Container exterior body spray and exterior closure spray | 250 |
| Three-piece container side seam spray | 660 |
| End sealing compound: | |
| Food/Beverage Container: | 20 |
| Pet Food Container | 20 |
| Non-Food Container | 20 |
| Container interior body spray: | |
| Two-piece container | 420 |
| Three-piece container | 310 |
| Reconditioned drums, pails and lids: | |
| Exterior spray | 420 |

| | |
|----------------------------|---|
| Interior spray | 510 |
| New drums, pails and lids: | |
| Exterior spray | 340 |
| Interior spray | 420 |
| (ii) | Grams of VOC per liter of coating (less water and exempt compounds) |
| <u>Coil Coating Line</u> | |
| (A) Letterpress coatings | 200 |
| (B) Other coil coatings | 200 |

(2) Coating Application Equipment

A person shall conduct coating operations subject to this rule by using only the following coating application methods:

(i) Electrostatic spray application; or

(ii) Flow coat application; or

(iii) Dip coat application; or

(iv) Roll coat; or

(v) Hand application methods; or

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

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

(23) 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:

- (i) The VOC content of cleaning material ~~is contains~~ 25 ~~200~~ grams or less of VOC-per liter of material; or
- (ii) ~~The cleaning material has an initial boiling point of 190°C (374°F) or greater; or~~
- (iii) ~~The solvent has a total VOC vapor pressure of 20 mm Hg or less, at 20°C (68°F); or~~
- (~~iv~~ii) The cleaning material is flushed or rinsed through the application equipment in a contained manner that will minimize evaporation into the atmosphere; or
- (~~iii~~iv) The application equipment or equipment parts are cleaned in a container which is open only when being accessed for adding, cleaning, or removing application equipment or when cleaning solvent is being added, provided the cleaned equipment or equipment parts are drained to the container until dripping ceases; or
- (~~vi~~iv) A system is used that totally encloses the component parts being cleaned during the washing, rinsing, and draining processes; ~~or~~
- (vii) ~~The combined usage of cleaning materials not complying with any of the standards described in Subsection (2)(i) through Subsection (2)(vi) above is less than 10 gallons each calendar month at a stationary source.~~

(e) **ADD-ON CONTROL DEVICE EQUIPMENT**

(1) In lieu of complying with the provisions of Subsection (d)(1); and (d)(3) a person may use an air pollution control system which:

- (i) has been installed in accordance with an Authority to Construct; and
- (ii) includes an emission collection system which captures and transports organic gaseous emissions to an air pollution control device; and
- (iii) has a combined VOC emissions capture and control device efficiency of at least 85 percent by weight.

(2) A person subject to the requirements of this section shall submit to the Air Pollution Control Officer for approval an Operation and Maintenance (O&M) plan for the proposed emission control device and emission collection system. Such plan shall:

- (i) identify all key system operating parameters. Key system operating parameters are those necessary to ensure compliance with Subsection (e)(1)(iii) such as 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) The Operation and Maintenance plan must be submitted to the Air Pollution Control Officer and receive approval prior to operation of the air pollution control equipment. A person subject to the requirements of this section shall implement the plan on approval of the Air Pollution Control Officer.

(f) **RECORD KEEPING**

~~(4) Any person subject to the requirements of Sections (d) or (e) of this rule shall maintain records in accordance with the following:~~

- ~~(i) Maintain a current list coatings in use volatile organic compounds (VOCs) which provides all of the coating and VOC data necessary to evaluate compliance.~~
- ~~(ii) Maintain records on a monthly basis showing the types and amounts solvents used for clean up.~~

(1) Coating and Cleaning Materials

Any person subject to the requirements of Subsections (d)(1) and/or (d)(3) shall:

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

(A) Material name, manufacturer and manufacturer identification;

(B) Type and applicable coating category of each coating used as specified in Subsection (d)(1)(i) and (d)(1)(ii);

(C) VOC content, less water and exempt compounds, of coatings, as applied and VOC content of cleaning materials, as used.

(ii) Maintain monthly or daily records showing the amount of each coating, the applicable coating category and cleaning material used.

~~(2) Any person complying with the requirements of Subsection (d)(1)(i) shall maintain daily or monthly records showing the type and amount used of each coating, solvent used as thinner or diluent, and VOC containing material.~~

~~(32) Any person complying with the requirements of Subsection (d)(1) by using control equipment pursuant to Section (e) of this rule shall:~~

~~(i) For all materials not in compliance with Subsection (d)(1) of this rule, maintain daily records of the amount used of each material used coating, solvent used as thinner or diluent, and VOC containing material; and~~

~~(ii) Maintain daily records sufficient to document continuous compliance with Subsection (e)(1)(iii), including records of key system operating parameters as approved in the Operation and Maintenance plan.~~

~~Such~~ All records shall be retained on site for at least three years, and shall be made available to the District upon request.

(g) ~~VOC 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 and subject to Subsections (d)(1)(i) and (d)(1)(ii)(B) 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) dated 9/11/1995 or by the South Coast Air Quality Management District (SCAQMD) Method 304 (Determination of Volatile Organic Compounds in Various Materials) approved by EPA on February 1, 1996 as they exist on (date of adoption).

(2) Measurements of VOC content of coatings subject to Subsection (d)(1)(ii)(A) of this rule shall be conducted in accordance with San Diego Air Pollution Control District's Method 24D for Determination of Density, Total Volatile Matter Content, and Weight Solids of Surface Coatings Containing Photosensitive Reactive Diluents approved by EPA in July 1993 as it exists on (date of adoption).

(3) The VOC content of coatings containing 50 grams of VOC per liter or less, or cleaning materials shall be determined by the SCAQMD Method 313-91 (Determination of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry) approved by EPA in July 1991 or the SCAQMD Method 308-91 (Quantitation of Compounds by Gas Chromatography) approved by EPA in February 1993 as they exist on (date of adoption).

(4) 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.

(5) Measurements of exempt compound content, other than determined in accordance with Subsection (g)(4), shall be conducted in accordance with the SCAQMD Test Method 303-91 (Determination of Exempt Compounds) approved by EPA in August 1996.

(6) Measurements of transfer efficiency pursuant to Subsection (d)(2)(vii) of this rule shall be conducted in accordance with the SCAQMD "Spray Equipment Transfer Efficiency Test Procedure for Equipment Users," approved by EPA on May 24, 1989~~as it exists on (date of adoption)~~. The equivalency of coating application equipment pursuant to Subsection (d)(2)(vii) shall be determined by the SCAQMD "Guidelines for Demonstrating Equivalency with District Approved Transfer Efficient Spray Guns" dated September 26, 2002~~as they exist on (date of adoption)~~.

(7) The overall control efficiency of air pollution control equipment operated pursuant to Subsection (e)(1)(iii) shall be determined by multiplying the capture efficiency of the emission collection system by the control efficiency of the air pollution control device. The control efficiency of the air pollution control device shall be determined using EPA 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. Capture efficiency of an emission collection system pursuant to Subsection (e)(1)(ii) shall be determined according to EPA Test Methods 204 and 204A through 204 F (51 CFR Appendix M), as applicable, 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.

(8) Other test methods which are determined to be equivalent to the test methods specified in this rule and approved, in writing, by the Air Pollution Control Officer,

California Air Resources Board, and EPA may be used in place of the test methods specified in this rule.

~~(1) — Measurements of VOC content of coatings and cleaning materials subject to Subsections (d)(1)(i), (d)(1)(ii)(B), and (d)(2)(i) of this rule shall be conducted and reported in accordance with EPA Test Method 24 (40 CFR 60, Appendix A) as it exists on July 25, 1995.~~

~~(2) — Measurements of VOC content of coatings subject to Subsection (d)(1)(ii)(A) of this rule shall be conducted and reported in accordance with San Diego Air Pollution Control District's Method 24D for Determination of Density, Total Volatile Matter Content, and Weight Solids of Surface Coatings Containing Photosensitive Reactive Diluents as it exists on July 25, 1995.~~

~~(3) — Measurement of the control device efficiency subject to Subsection (e)(1)(iii) of this rule shall be conducted in accordance with EPA Methods 18 and/or 25A (40 CFR 60) as they exist on July 25, 1995 and in accordance with a protocol approved by the Air Pollution Control Officer.~~

~~(4) — Measurement of the emission collection system capture efficiency subject to Subsection (e)(1)(ii) of this rule shall be determined according to EPA's technical document, "Guidelines for Determining Capture Efficiency," dated January 9, 1995, using a protocol approved by the Air Pollution Control Officer. Subsequent to the initial compliance demonstration period, applicable key system operating parameters, as approved by the Air Pollution Control Officer, may be used as verification that capture efficiency has not diminished.~~

~~(5) — Perfluorocarbon (PFC) compounds and other exempt compounds shall be assumed to be absent from a coating, or cleaning material subject to this rule unless a manufacturer of the material or a facility operator identifies the specific individual compound(s) present in the material and provides an EPA and ARB approved test method which can be used to quantify the specific compounds.~~

~~(6) — Measurement of the initial boiling point of cleaning materials subject to Subsection (d)(2)(ii) shall be conducted in accordance with ASTM Standard Test Method D1078-86 for distillation range of volatile organic liquids.~~

~~(7) — Calculation of total VOC vapor pressure for materials subject to Subsection (d)(2)(iii) of this rule shall be conducted in accordance with the District's "Procedures for Estimating the Vapor Pressure of VOC Mixtures" as it exists on July 25, 1995. If the vapor pressure of the liquid mixture, as calculated by this procedure, exceeds the limits specified in Subsection (d)(2)(iii), the vapor pressure shall be determined in accordance with ASTM Standard Test Method D2879-86. The solvent composition shall be determined using one of the following ASTM standard recommended practices: E168-92, E169-93 or E260-91. The fraction of water and exempt compounds in the liquid phase shall be determined by using ASTM Standard Test Methods D3792-91 and D4457-85 and shall be used to~~

~~calculate the partial pressure of water and exempt compounds. The results of vapor pressure measurements obtained using ASTM Test Method D2879-86 shall be corrected for partial pressure of water and exempt compounds.~~