

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

RULE 109 - RECORDKEEPING FOR VOLATILE ORGANIC COMPOUND EMISSIONS

*(Adopted May 5, 1989)(Amended March 6, 1992)(Amended August 18, 2000)
(Amended May 2, 2003)*

(a) Applicability

(1) The provisions of this rule shall apply to an owner or operator of a stationary source within the District conducting operations, which include the use of adhesives, coatings, solvents, and/or graphic arts materials, when records are required to determine a District rule's applicability or source's exemption from a rule, rule compliance, or specifically as a Permit to Operate or Permit to Construct condition.

(2) District rules requiring recordkeeping as outlined by Rule 109 include, but are not limited to, the following:

- 219 - Equipment not Requiring a Written Permit Pursuant to Regulation II,
- 1102 - Petroleum Solvent Dry Cleaners,
- 1104 - Wood Flat Stock Coating Operations,
- 1106 - Marine Coating Operations,
- 1106.1 - Pleasure Craft Coating Operations,
- 1107 - Coating of Metal Parts and Products,
- 1115 - Motor Vehicle Assembly Line Coating Operations,
- 1122 - Solvent Degreasers,
- 1124 - Aerospace Assembly and Component Manufacturing Operations,
- 1125 - Metal Container, Closure, and Coil Coating Operations,
- 1126 - Magnet Wire Coating Operations,
- 1128 - Paper, Fabric, and Film Coating Operations,
- 1130 - Graphic Arts
- 1130.1 - Screen Printing Operations,
- 1136 - Wood Products Coatings,
- 1145 - Plastic, Rubber, and Glass Coatings,
- 1151 - Motor Vehicle and Mobile Equipment Non-Assembly Line Coating Operations,
- 1164 - Semiconductor Manufacturing,

- 1168 - Adhesive Applications,
- 1171 - Solvent Cleaning Operations.

(b) Definitions

- (1) EXEMPT COMPOUND is as defined in Rule 102.
- (2) GRAPHIC ARTS MATERIAL is any ink, coating, adhesive, fountain solution, thinner, retarder, or cleaning solution used in printing or related coating or laminating processes.
- (3) MATERIAL CATEGORY is a type of VOC-containing material including but not limited to coatings, resins, adhesives, sealants, inks, fountain solutions, solvents, strippers, thinners, diluents, catalysts, activators, retarders, accelerators, mold releases, mold seals, dyes and lubricants.
- (4) PERMIT UNIT is any article, machine, equipment, or other contrivance, or combination thereof, which may cause the issuance or control the issuance of air contaminants, and which:
 - (A) requires a written permit pursuant to the provisions of Rules 201 and/or 203, or
 - (B) is in operation pursuant to the provisions of Rule 219.
- (5) STATIONARY SOURCE is any permit unit or grouping of permit units or other air contaminant-emitting activities which are located on one or more contiguous properties within the District, in actual physical contact or separated solely by a public roadway or other public right-of-way, and are owned or operated by the same person (or by persons under common control). Such above-described groupings, if non-contiguous, but connected only by land carrying a pipeline, shall not be considered one stationary source.
- (6) SUPER COMPLIANT MATERIAL is any material containing 50 grams or less of VOC per liter of material.
- (7) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.

(c) Daily Recordkeeping Requirements

- (1) An owner or operator of a stationary source using adhesives, coatings, solvents, and/or graphic arts materials and subject to this rule shall maintain daily records of operations for the most recent two (2) year period. The records shall be retained on the premises of the affected operation for a period of not less than two (2) years unless a longer time

period is specified in an applicable rule or permit. Said records shall be made available to the District upon request. The records shall include, but not be limited to, the following:

- (A) each applicable District rule number pertinent to the operation for which records are being maintained;
- (B) a list of the permit units involved in the operation(s) using adhesives, coatings, solvents, and/or graphic arts materials;
- (C) the method of application and substrate type;
- (D) the amount and type of adhesive, coating (including catalyst and reducer), solvent, and/or graphic arts material used in each permit unit or dispensing station (when permitted equipment is not involved), including exempt compounds (use of amounts of one pint per week or less may be recorded in an alternative manner);
- (E) the VOC content in each adhesive, coating (including catalyst and reducer), solvent, and/or graphic arts material;
- (F) the amount of diluent, surface preparation, clean-up, or wash-up solvent (including exempt compounds) used and the VOC content of each (use of amounts of one pint per week or less may be recorded in an alternative manner);
- (G) where applicable, the vapor pressure of solvents used as surface cleaners; and
- (H) oven temperature (for coating operations).

(d) Monthly Recordkeeping Option

- (1) In lieu of complying with the requirements of subdivision (c), an owner or operator of a stationary source may choose to comply with the monthly recordkeeping requirements of this subdivision provided that the stationary source:
 - (A) is not subject to a daily emission or usage limit in any applicable District rule(s) or permit(s); and
 - (B) uses only materials that comply with the VOC content requirements of the applicable District rule(s).
- (2) An owner or operator of a stationary source choosing to keep monthly records shall develop and maintain a VOC Listing of all the VOC-containing materials purchased for use at the facility. The list shall be

kept in a format specified by the District or in an equivalent format and shall contain the following data:

- (A) the name and AQMD facility identification number of the stationary source;
- (B) for each VOC-containing material:
 - (i) the manufacturer, a manufacturer product number, ID, or code that uniquely identifies the material, and a material category;
 - (ii) the VOC content of each material, as applied, less water and exempt compounds;
 - (iii) the material VOC content of each material, as applied, including water and exempt compounds;
 - (iv) the specific mixing ratio for the material, hardeners, catalysts, solvents, diluents, and thinners, if applicable; and
 - (v) the type of activity or substrate to which the materials are applied.

The VOC Listing shall be updated within seven (7) calendar days from the date of receipt of a new material at the facility.

- (3) An owner or operator of a stationary source shall record the following information on a Usage Log in a format specified by the District or in an equivalent format:
 - (A) the name and AQMD identification number of the facility;
 - (B) the manufacturer product number, ID, or code from the VOC Listing;
 - (C) the AQMD permit number(s) of the permit unit(s) in which the material was used;
 - (D) the amount of each material used on an on-going basis which:
 - (i) may be aggregated for all permit unit(s) that are subject to a single facility-wide material usage or VOC emission limits and do not have unit specific limits; and
 - (ii) may be aggregated for multiple days up to a maximum of three (3) days without any calendar monthly overlap;
 - (E) the initials of the person entering the data; and
 - (F) the date the data was entered.

- (4) On a calendar monthly basis, an owner or operator of a stationary source shall record the following information, on a Monthly Summary form, in a format specified by the District or in an equivalent format:
 - (A) the name, address, and AQMD identification number of the facility;
 - (B) the AQMD permit number(s) of the permit unit(s) in which the materials were used;
 - (C) the name and telephone number of the contact person;
 - (D) for each material used, the manufacturer product number, ID, or code from the VOC Listing;
 - (E) the amount of each material used from the records in the Usage Log;
 - (F) from the VOC listing, the material VOC content as applied for each material from the VOC listing, and, for lithographic printing inks, the emission factor for each ink based on the appropriate retention factor;
 - (G) the VOC emissions from each material; and
 - (H) the month and year for which the data were entered.
- (5) An owner or operator of a facility with equipment not requiring a written permit pursuant to Rule 219 or a permit unit using only Super Compliant Materials may choose to keep monthly records provided the equipment meets the requirements of paragraph (d)(1). In such cases, the owner or operator of the equipment shall record:
 - (A) the applicable data for the VOC Listing in paragraph (d)(2); and
 - (B) the applicable data for the Monthly Summary in paragraph (d)(4)

(e) Supporting Documentation

An owner or operator of a stationary source choosing to keep monthly records pursuant to subdivision (d) shall maintain and make available to a District representative upon request all of the information necessary to verify the amount of material used at the facility including, but not limited to:

- (1) purchase records identifying the supplier's name, date, and amount of material purchased; and
- (2) waste manifests identifying the waste material, source's name and address, name and address of company removing waste, and the amount of waste materials disposed.

(f) Alternative Recordkeeping System

- (1) In lieu of complying with subdivision (d), an owner or operator of a stationary source subject to this rule may comply by means of an Alternative Recordkeeping System, provided a plan for such a system is prepared by the operator, submitted to the District for approval, and approved in writing by the District, the California Air Resources Board (CARB), and the United States Environmental Protection Agency (EPA). The plan shall include, at a minimum:
 - (A) A list of applicable District rules, permit unit(s), and permit conditions to be included in the Alternative Recordkeeping System;
 - (B) A description of the quantification and recordkeeping procedures for material VOC and solid content as applied if required in the applicable rules or permits, material usage, emission factors (if applicable), and VOC emissions as applied; and
 - (C) An identification of all supporting documents to verify the information provided in subparagraph (f)(1)(B);
- (2) An Alternative Recordkeeping System may be approved by the District, if:
 - (A) the system provides a deterrent to non-compliance, and is enforceable; and
 - (B) compliance can be verified within a reasonable time period as determined by the District.

(g) Test Methods

- (1) VOC content shall either be calculated using a percent solids basis (less water and exempt solvents) for adhesives, coatings, and inks; or testing shall be done using EPA Reference Method 24 (Determination of Volatile Matter Content, Water Content, Density Volume Solids, and Weight Solids of Surface Coatings, Code of Federal Regulations Title 40, Part 60, Appendix A, 7/1/85 edition). Analysis done according to EPA Method 24 shall utilize Procedure B of ASTM Method D-2369, referenced within EPA Method 24. The exempt solvent content shall be determined using SCAQMD Test Methods 302, 303, and 304 (SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual). Alternatively, the VOC content may be determined using SCAQMD Test Methods 302,

and 303. The test method shall be documented. The VOC content may be supplied by a Material Safety Data Sheet (MSDS) or data sheet provided the test methods described above are used and specified on the MSDS or data sheet.

- (2) VOC content and density of rotogravure publication inks shall be determined by EPA Reference Method 24A (Determination of Volatile Matter Content and Density of Printing Inks and Related Coatings, Code of Federal Regulations Title 40, Part 60, Appendix A, 7/1/85 edition). The exempt solvent content shall be determined using SCAQMD Test Methods 302 and 303 (SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual). Alternatively, the VOC content may be determined using SCAQMD Test Methods 302, 303, and 304.
- (3) VOC content for low solid adhesive, adhesive primer, or stain shall be calculated by the method used to calculate the "Grams of VOC per Liter of Material" as specified in Rules 1136 and 1168.
- (4) VOC content for non-thin film ultraviolet/electron beam or other radiation-cured materials shall be determined using ASTM Method D-5403, Test Method for Volatile Content of Radiation Curable Materials using a film thickness not less than 0.3 mil and not greater than 1.0 mil. This method is not applicable to thin-film radiation cured materials. The VOC content of thin-film radiation cured materials shall be determined using the test methods specified in paragraph (g)(1) or by any other method approved by the District, CARB, and EPA.
- (5) The VOC content for multi-package coatings shall be determined using the test methods specified in paragraph (g)(1).
- (6) The VOC content determination for super compliant water-based coatings shall be determined using the non-volatile determination portion of SCAQMD Method 304-91 (Distillation of Solvents from Paints, Coatings, and Inks) followed by analysis of the distillate according to the SCAQMD Clean Air Solvent Certification Protocol.
- (7) Alternative test methods may be used if they are determined to produce results adequate to determine compliance and are approved in writing by the District, CARB, and EPA.
- (8) When more than one test method or set of methods are specified for any testing, noncompliance with any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute

a violation of this rule. This does not apply to rotogravure publication inks, powder coatings, and non thin-film ultraviolet/electron beam or other radiation-cured materials where the specific test methods for these materials as listed in subdivision (g) shall be used exclusively.

Exempt compounds that are not specifically listed in the “Applicability” section of SCAQMD Test Methods 302 and 303 will be analyzed as exempt compounds only at such time as manufacturers specify which individual compounds are used in the formulation. In addition, the manufacturers must identify the EPA, CARB, and the District approved test methods used to quantify the amount of each exempt compound.

(h) Exemptions

- (1) The provisions of this rule shall not apply to any cleaning solvents subject to Rule 1171 or Rule 1122 provided that the material contains 50 grams of VOC per liter of material or less.
- (2) The provisions of this rule shall not apply to any Super Compliant Material(s) used at a facility which can demonstrate that the total permitted and non-permitted facility VOC emissions, including emissions from the super compliant material, do not exceed 4 tons in any calendar year as shown by annual VOC records.
- (3) If the District determines that an owner or operator has violated any provision of this rule, monthly records shall be kept pursuant to subdivision (d) for all materials exempt under paragraphs (h)(1) and (h)(2) for three (3) consecutive years following discovery of the violation.