

(Adopted: 05/07/76; CARB Ex. Order G-73: 2/1/77;
Amended: 9/02/77; Amended: 03/03/78; Amended: 07/06/79;
Amended: 03/05/82; Replaced SCAQMD Reso: 82-35
10/15/82; Readopted by Statute: 07/01/97; Readopted by
Statute: 01/01/02; Amended: 11/15/05)

Rule 442

Usage of Solvents

(A) General

- (1) Purpose
 - (a) To reduce volatile organic compound (VOC) emission from VOC containing materials or equipment which is not subject to VOC limits of any rule found in District Regulation XI – *Source Specific Standards*.
 - (b) To provide emissions limits for the use of non-VOC organic solvents.
- (2) Applicability
 - (a) This rule applies to any person using VOC containing materials or Emissions Unit which is not subject to the VOC limits of any other rule found in District Regulation IV – *Prohibitions* or in any rule found in the District Regulation XI – *Source Specific Standards*.
 - (i) VOC containing materials include, but are not limited to; coatings, resins, adhesives, inks, solvents, thinners, diluents, mold seal and release compounds, lubricants, cutting oils and quenching oils.
 - (b) This rule applies to any person using an organic solvent which is not a VOC and which is not subject to the limits of any other rule found in District Regulation IV – *Prohibitions* or in any rule found in District Regulation XI – *Source Specific Standards*.

(B) Definitions

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

- (1) Aerosol Product – A hand held, non-refillable container that expels pressurized materials by means of a propellant-induced force.
- (2) California Air Resources Board (CARB) - The California State Air Resources Board the powers and duties of which are described in Part 2 of Division 26 of the California Health & Safety Code (commencing with section 39500).
- (3) District - The Antelope Valley Air Quality Management District the geographical area of which is described in District Rule 103.
- (4) Emissions Unit – Any article, machine, equipment contrivance or combination thereof which emits or has the potential to emit any Regulated Air Pollutant.

- (5) Facility – Any structure, building, Emissions Unit, combination of Emissions Units or installation which emits or may emit a Regulated Air Pollutant and which are:
- (a) Located on one or more contiguous or adjacent properties within the District;
 - (b) Under the control of the same person (or by persons under common control);
 - (c) Belong to the same industrial grouping, as determined by being within the same two digit Standard Industrial Classification Code (SICC).
 - (d) For the purpose of this Rule, such above-described grouping, remotely located but connected only by land carrying a pipeline, shall not be considered one Facility.
- (6) Regulated Air Pollutant – Any of the following:
- (a) Any air pollutant and its precursors for which an Ambient Air Quality Standard has been promulgated.
 - (b) Any air pollutant that is subject to a standard under 42 U.S.C. §7411, Standards of Performance for New Stationary Sources (Federal Clean Air Act §111) or the regulations promulgated thereunder.
 - (c) Any substance which has been designated a Class I or Class II substance under 42 U.S.C. §7671a (Federal Clean Air Act §602) or the regulations promulgated thereunder.
 - (d) Any air pollutant subject to a standard or other requirement established pursuant to 42 U.S.C. §7412, Hazardous Air Pollutants (Federal Clean Air Act §1112) or the regulations promulgated thereunder.
- (7) South Coast Air Quality Management District (SCAQMD) – The local air district created pursuant to Division 26, Part 3, Chapter 5.5 of the Health & Safety Code (commencing with §40400).
- (8) United States Environmental Protection Agency (USEPA) - The United States Environmental Protection Agency, the Administrator of the USEPA and his or her authorized representative.
- (9) Volatile Organic Compound (VOC) – Any volatile compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate and those compounds listed in 40 CFR 51.1100(s)(1).

(C) Requirements

(1) Emission Limitations

- (a) A person shall not discharge VOCs into the atmosphere from all VOC containing materials, Emissions Units, equipment or processes subject to this rule, in excess of 540 kilograms (1,190 pounds) per month per Facility.
 - (i) Compliance with the provisions of subsection (C)(1)(a) above may be obtained through use of any of the following or any combination thereof:
 - a. Product reformulation or substitution;
 - b. Process changes;
 - c. Improvement of operational efficiency;
 - d. Development of innovative technology;
 - e. Installation of a control device operated in accordance with section (C)(2) below.

(2) Control Equipment

- (a) A person may comply with the provisions of (C)(1) above by using a VOC emission collection and control system that reduces overall emissions by eighty-five percent (85%) as follows:
 - (i) The system shall capture at least ninety percent (90%), by weight, of the emissions generated by the Emissions Unit, material or operation and
 - a. Have a destruction efficiency of at least ninety-five percent (95%), by weight; or
 - b. Have an output of less than fifty parts per million(50 PPM) calculated as carbon with no dilution.

(3) Storage and Disposal

- (a) All VOC containing materials subject to this rule, whether in its form for intended use or as a waste or used product, shall be stored in non-absorbent, non-leaking containers which shall be kept closed at all times, except when filling or emptying, and disposed of in a manner to prevent evaporation of VOCs into the atmosphere at the Facility.

(D) Exemptions

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

- (a) The manufacture, transport or storage of organic solvents, or the transport or storage of materials containing organic solvents.

- (b) The emissions of VOCs from VOC-containing materials or equipment which are subject to other Regulation IV rules (excluding Rule 481 – Spray Coating Operations) or which are exempt from air pollution control requirements by such rules.
- (c) The use of pesticides including insecticides, rodenticides or herbicides.
- (d) The use of 1,1,1 trichloroethane, methylene chloride and trichlorotrifluoroethane.
- (e) Aerosol products

(E) Monitoring, Recordkeeping and Reporting

- (1) Usage records for all VOC-containing materials subject to this Rule shall be maintained pursuant to Rule 109.
- (2) Such records shall be retained for two years and shall be made available upon request.

(F) Test Methods

- (1) For the purpose of this rule, the following test methods shall be used:
 - (a) Determination of VOC Content in Solvent-containing materials
 - (i) The VOC content of VOC-containing materials subject to the provisions of this rule shall be determined by USEPA Reference Method 24 (Code of Federal Regulations, Title 40, Part60, Appendix A).
 - (ii) The exempt compounds' content shall be determined by SCAQMD Method 303 - *Determination of Exempt Compounds* or Method 304 - *Determination of Volatile Organic Compounds (VOC) in Various Materials* contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.
 - (iii) The following classes of Exempt Perfluorocarbon compounds: cyclic, branched, or linear, completely fluorinated alkanes; cyclic, branched, or linear, completely fluorinated ethers with no unsaturations; cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine, will be analyzed as exempt compounds for compliance with Section (C)(1), only when manufacturers specify which individual compounds are used in the solvent formulation and identify the USEPA, CARB, and the District approved test methods used to quantify the amount of each exempt compound.

- (b) Determination of Presence of VOC in Clean-up Materials
 - (i) The presence of VOC in the headspace over the cleaning material shall be determined by SCAQMD Method 313 - Determination of Volatile Organic Compounds (VOC) by Gas Chromatography/Mass Spectrometry (GC/MS) as contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.
- (c) Determination of Efficiency of Emission Control Systems
 - (i) The capture efficiency of the capture system for purposes of determining overall efficiency shall be determined by verifying the use of a permanent total enclosure and 100% capture efficiency as defined by USEPA Method 204 - *Criteria for and Verification of a Permanent or Temporary Total Enclosure.*"
 - (ii) Alternatively, if a USEPA Method 204 defined permanent total enclosure is not employed, capture efficiency shall be determined using a minimum of three sampling runs subject to data quality criteria presented in the USEPA *Guidelines for Determining Capture Efficiency*, January 9, 1995."
 - (iii) Individual capture efficiency test runs subject to the US EPA technical guidelines shall be determined by the Temporary Total Enclosure approach of USEPA Methods 204 through 204F.
 - (iv) The control device efficiency of an emission control system on a mass emissions basis and the VOC concentrations in the exhaust gases, measured and calculated as carbon, shall be determined by US EPA Test Methods 25, 25A, SCAQMD Method 25.1 - *Determination of Total Gaseous Non-Methane Organic Emissions as Carbon*, or SCAQMD Method 25.3 – *Determination of Low Concentration Non-Methane Non-Ethane Organic Compound Emissions from Clean Fueled Combustion Sources*, as applicable.
 - (v) USEPA Test Method 18, or CARB Method 422 shall be used to determine emissions of exempt compounds.
 - (vi) The overall efficiency of an emission collection and control system shall be determined using the following equation (all efficiencies expressed in percent):

$$\text{Overall Efficiency} = (\text{Capture Efficiency}) \times (\text{Control Device Efficiency}) / 100$$

- (d) Any other applicable test methods approved by CARB, the USEPA, and the District.
- (2) Multiple Test Methods
- (a) When more than one test method or set of test methods are specified for any testing, the application of these methods to a specific set of test conditions is subject to approval by the Air Pollution Control Officer.

- (3) All test methods referenced in this section shall be the most recent version as approved by USEPA.
- (4) 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.

[SIP: See AV Full SIP Table at <https://avaqmd.ca.gov/rules-plans>]