# **RULE 240 SURFACE PREPARATION AND CLEANUP**

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### 100 GENERAL

**PURPOSE:** The purpose of this rule is to reduce emissions of volatile organic compounds (VOC) from solvents used for surface preparation, maintenance and cleanup operations, and from the storage and disposal of all VOC-containing materials used in these operations.

### 102 APPLICABILITY:

- 102.1 <u>Geographic:</u> The provisions of this rule apply to all of Placer County.
- 102.2 Operations: This rule applies to all persons who engage in the production, repair, maintenance, or servicing of parts, products, tools, machinery, or equipment, and storage and disposal of VOC-containing materials used in solvent cleaning operations.
- **SEVERABILITY:** If a court of competent jurisdiction issues an order that any provision of this rule is invalid, it is the intent of the Board of Directors of the District that other provisions of this rule remain in full force and effect, to the extent allowed by law.

### 104 EXEMPTIONS:

- 104.1 Low Volume: Usage of solvents for cleaning which does not exceed 38 liters (10 gallons) per calendar year, is exempt from the provisions of this rule except for recordkeeping requirements in Section 501.3.3.1.
- 104.2 The provisions of this rule do not apply to cleaning operations specifically subject to requirements under the following rules:
  - 104.2.1 Rule 216, Organic Solvent Cleaning and Degreasing Operations;
  - 104.2.2 Rule 223, Metal Can Coating;
  - 104.2.3 Rule 227, Petroleum Dry Cleaning Operations;
  - 104.2.4 Rule 234, Automotive Refinishing Operations;
  - 104.2.5 Rule 235, Adhesives;
  - 104.2.6 Rule 236, Wood Products Coating Operations;
  - 104.2.7 Rule 239, Graphic Arts Operations, and
  - 104.2.8 Rule 243, Polyester Resin Operations.
- 104.3 The provisions of this rule shall not apply to the following:
  - 104.3.1 Cleaning with solvents that contain 50 grams per liter or less VOCs as applied including water and exempt compounds;
  - 104.3.2 Cleaning of solar cells, laser hardware, scientific instruments, and high-precision optics;
  - 104.3.3 Cleaning of cotton swabs to remove cottonseed oil before cleaning of high-precision optics;
  - 104.3.4 Cleaning of paper-based gaskets and clutch assemblies where rubber is bonded to metal by means of an adhesive;

- 104.3.5 Cleaning of application equipment used to apply coatings on satellites and radiation effect coatings;
- 104.3.6 Cleaning of electrostatic coating application equipment; and
- 104.3.7 Janitorial cleaning, including graffiti removal.
- The provisions of this rule, except for the recordkeeping requirements in Sections 501.1, 501.3.1, and 502, shall not apply to the following:
  - 104.4.1 Cleaning of sterilization ink indicating equipment provided that the solvent usage is less than 1.5 gallons per day with solvents that contain more than 50 grams/liter VOC as applied including water and exempt compounds.
  - 104.4.2 Cleaning with aerosol, provided that 160 fluid ounces or less of aerosol product are used per day, per stationary source with solvents that contain more than 50 grams/liter VOC as applied including water and exempt compounds.
- 104.5 The provisions of Section 302 shall not apply to the cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems.

### 200 DEFINITIONS

- **201 ADHESIVE:** Any material that is used to bond one surface to another surface by attachment.
- **AEROSOL CLEANER:** A material used as a surface preparation solvent, a cleanup solvent, or as a stripper and consisting of liquid and/or gaseous solvent and propellants packaged in a hand-held, pressurized, non-refillable container. The container expels pressurized aerosol materials when a valve on the container is depressed.
- **203 APPLICATION EQUIPMENT:** A device used to apply adhesive, coating, ink, or polyester resin materials.
- **APPURTENANCE:** Any accessory to a stationary structure, whether installed or detached at the proximate site of installation, including, but not limited to: hand railings, cabinets, bathroom and kitchen fixtures, elevators, doors, partitions, stairways, fixed ladders, catwalks, fire escapes, fences, rain-gutters and down spouts, window screens, lamp-posts, heating and air conditioning equipment, pipes and piping systems, other fixed mechanical equipment, large fixed stationary tools, and concrete forms.
- **ARCHITECTURAL COATING:** Any coating applied to stationary structures and their appurtenances, to portable buildings, to pavements or to curbs.
- ARCHITECTURAL COATINGS APPLICATION EQUIPMENT CLEANING: The cleaning of architectural coating application equipment such as paint spray guns, brushes, and hoses. For the purpose of this rule, the cleaning of architectural coating application equipment used for coating of prefabricated architectural components is not subject to the requirements of this rule.
- **207 CLOSED CONTAINER:** A container, which has a nonabsorbent cover where the cover meets with the main body of the container without any visible gaps between the cover and the main body of the container.

- **COATING:** A material applied onto or impregnated into a substrate for protective, decorative, or functional purposes. Such materials include, but are not limited to, paints, varnishes, sealers, and stains.
- **DEGREASER:** A tank, tray, drum, or other container in which the objects to be cleaned are exposed to a solvent or solvent vapor in order to remove contaminants.
- 210 ELECTRICAL APPARATUS COMPONENTS: An internal component such as wires, windings, stators, rotors, magnets, contacts, relays, energizers, and connections in an apparatus that generates or transmits electrical energy including, but not limited to: alternators, generators, transformers, electric motors, cables, and circuit breakers, except for the actual cabinet in which the components are housed. Electrical components of graphic arts application equipment and hot-line tools are also included in this category.
- **211 ELECTRONIC COMPONENTS:** The portion of an assembly, that includes circuit board assemblies, printed wire assemblies, printed circuit boards, soldered joints, ground wires, bus bars, and other electrical fixtures, except for the actual cabinets in which the components are housed.

### 212 ENCLOSED GUN CLEANER:

- 212.1 A device used for the cleaning of spray guns, pots and hoses, which has an enclosed solvent container, is not open to the ambient air when in use, and has a mechanism to force the cleanup material through the gun while the cleaner is in operation; or
- 212.2 A device used for the cleaning of spray guns, pots and hoses, which has an enclosed solvent container, uses non-atomized solvent flow to flush the spray equipment and collects and returns the discharged solvent to the enclosed container.
- **EXEMPT COMPOUNDS:** For the purposes of this rule, exempt compounds are determined in accordance with Section 503.2, and are listed in Rule 102, Definitions.
- 214 HIGH PRECISION OPTICS: An optical element used in an electro-optical device and which is designed to sense, detect, or transmit light energy, including specific wavelengths of light energy and changes in light energy levels.
- 215 HOT-LINE TOOL: A specialized tool used primarily on the transmission systems, subtransmission systems and distribution systems for replacing and repairing circuit components or for other types of work with electrically energized circuits.
- **216 INK:** Any fluid or viscous composition used in printing, impressing, or transferring an image onto a substrate.
- **JANITORIAL CLEANING:** The cleaning of building or facility components, such as the floor, ceiling, walls, windows, doors, stairs, bathrooms, etc.

### 218 KEY SYSTEM OPERATING PARAMETER:

- 218.1 A variable that is critical to the operation of an emission control system and that ensures:
  - 218.1.1 Operation of the system within the system manufacturer's specifications, and
  - 218.1.2 Compliance with the overall system efficiency standard required by Section 303.

- 218.2 Variables described in Section 218.1 may include, but are not limited to:
  - 218.2.1 Hours of operation,
  - 218.2.2 Temperature,
  - 218.2.3 Flow rate, and
  - 218.2.4 Pressure.
- 219 LEAK: A leak is:
  - 219.1 The dripping of liquid volatile organic compounds in excess of three drops per minute; or
  - 219.2 The appearance of a visible mist.
- **MAINTENANCE CLEANING:** A solvent cleaning operation or activity performed to keep parts product, tools, machinery, equipment (excluding application equipment, or general work areas), in clean and good operating condition.
- **MANUFACTURING PROCESS:** The process of making goods or articles by hand or by machinery.
- **MEDICAL DEVICE:** An instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent or other similar article, including any component or accessory, that meets one of the following conditions:
  - 222.1 it is intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease; or
  - 222.2 it is intended to affect the structure or any function of the body; or
  - 222.3 it is defined in the National Formulary or the United States Pharmacopoeia, or any supplement to them.
- **NON-ABSORBENT CONTAINERS:** Containers made of nonporous material, which do not allow the migration of the liquid solvent through them.
- **NON-ATOMIZED SOLVENT FLOW:** The use of a solvent in the form of a liquid stream without atomization to remove uncured inks, uncured adhesives, uncured coatings and contaminants from an article.
- 225 NON-COMPLIANT SOLVENT: A solvent that:
  - 225.1 exceeds the VOC content limits specified in Section 301.1 and 301.2 and
  - 225.2 is not exempt pursuant to Section 104, and
  - 225.3 is used at a facility that does not use emission control equipment pursuant to Section 303.
- **NON-LEAKING CONTAINER:** A container without a leak.
- **PERSON:** Any firm, business establishment, association, partnership, corporation or individual, whether acting as principal, agent, employee, or any other capacity including any governmental entity or charitable organization.

- **POLYESTER RESIN:** Unsaturated polyester resin such as isophthalic, orthophthalic, halogenated, bisphenol-A, vinyl-ester, or furan resin; cross-linking agent; catalyst, gel coat, inhibitor, accelerator, promoter, and any other VOC-containing material comprising a resin made from polyester. Inert filler and cleaning material are excluded from this definition.
- **PREFABRICATED ARCHITECTURAL COMPONENTS:** Prefabricated metal parts and products, which are to be used as architectural appurtenances or structures and which are coated in a shop environment, not including window frames and door frames.
- 230 PRINTING: Any operation that imparts color, design, alphabet, or numerals on a substrate.
- **PRODUCT CLEANING:** The cleaning of parts or components in a process of making goods or articles by hand or by machinery from those parts or components.
- 232 RADIATION-EFFECT COATING: A material that prevents radar detection.
- **REPAIR CLEANING:** A solvent-cleaning operation or activity performed during a repair process.
- **REPAIR PROCESS:** The process of returning a damaged object or an object not operating properly to good condition.
- **SCIENTIFIC INSTRUMENT:** An instrument (including the components, assemblies, and subassemblies used in their manufacture and associated accessories and reagents that is used for the detection, measurement, analysis, separation, synthesis, or sequencing of various compounds.
- **SOLVENT:** A VOC-containing liquid used to perform solvent cleaning operations.
- **SOLVENT CLEANING:** The removal of loosely held uncured inks, uncured coatings, and contaminants which include, but are not limited to: dirt, soil, and grease from parts, products, tools, machinery, and equipment. Each distinct method of cleaning in a cleaning process, which consists of a series of cleaning methods shall constitute a separate solvent cleaning operation.
- 238 SOLVENT CONTAINER: That part of a cleaning device that holds the solvent.
- **SOLVENT FLUSHING:** The use of a solvent to remove uncured inks, uncured coatings, or contaminants from the internal surfaces and passages of the equipment by flushing solvent through the equipment.
- **STATIONARY SOURCE:** Any building, structure, facility, or emissions unit, which emits or may emit any affected pollutant directly or as a fugitive emission. This includes all pollutant-emitting activities which:
  - 240.1 Belong to the same industrial grouping, and
  - 240.2 Are located on one property or on two or more contiguous properties, and
  - 240.3 Are under the same or common ownership, operation, or control or which are owned or operated by entities, which are under common control.

Pollutant-emitting activities shall be considered as part of the same industrial grouping if they:

240.4 Belong to the same two-digit standard industrial classification code, or

- 240.5 Are part of a common production process. (Common production process includes industrial processes, manufacturing processes and any connected processes involving a common material.)
- **STERILIZATION INDICATING INK:** Ink that changes color to indicate that sterilization has occurred. Such ink is used to monitor the sterilization of medical instruments, autoclave efficiency, and the thermal processing of foods for the prevention of spoilage.
- **STRIPPING:** The removal of cured coatings, cured inks, and cured adhesives.
- **SUBSTRATE:** The material upon which another material is coated or fabricated.
- **SURFACE PREPARATION:** The removal of contaminants such as dust, soil, oil, or grease, before coating or ink applications.
- **UNCURED COATINGS AND UNCURED INKS:** Coatings and inks that are not dry to the touch.
- **VOLATILE ORGANIC COMPOUND (VOC):** Any chemical compound containing at least one atom of carbon, except for the Exempt Compounds listed in Rule 102, Definitions.
- 247 VOC COMPOSITE PARTIAL PRESSURE: The sum of the partial vapor pressures of the compounds defined as VOCs, as determined in accordance with Sections 403 and 503.3
- **VOLATILE ORGANIC COMPOUND (VOC) AS APPLIED:** A VOC as applied means the VOC content of the cleaning solvent as applied, including any diluters, and calculated pursuant to Section 503.1.
- **VOLATILE ORGANIC COMPOUND (VOC) AS SUPPLIED:** A VOC as supplied means the VOC content of the original material as supplied by the manufacturer and calculated pursuant to Section 503.1.
- **WIPE CLEANING:** The method of cleaning a surface by physically rubbing it with a material such as a rag, paper, or a cotton swab moistened with a solvent.

### 300 STANDARDS

## 301 SOLVENT REQUIREMENTS:

- **301.1** Until December 11, 2004, a person shall not use a solvent to perform cleaning operations, including the use of cleaning devices or methods, unless it complies with the following applicable requirements:
  - 301.1.1 Manufacturing Processes and Coating, Adhesive, or Ink Applications: The solvent used to clean substrates during the manufacturing process, or used for surface preparation of substrates before coating, adhesive, or ink applications shall have a VOC content equal to or less than 70 grams of VOC per liter of material, as calculated in accordance with Sections 401 and 503.1.
  - 301.1.2 Repair and Maintenance: Solvents used for repair or maintenance cleaning shall have a VOC content of 900 grams or less of VOC per liter of material, as calculated in accordance with Sections 401 and 503.1 and a VOC composite partial pressure of 20 mm Hg or less at 20 °C (68 °F), as calculated in accordance with Sections 401 and 503.3.

- 301.1.3 <u>Coatings Application Equipment:</u> Solvents used for cleaning coatings application equipment shall have a VOC content of 950 grams or less of VOC per liter of material, as calculated in accordance Sections 401 and 503.1 and 503.2 and a VOC composite partial pressure of 35 mm Hg or less at 20 °C (68 °F), as calculated in accordance with Sections 401 and 503.3.
- 301.1.4 Electronic Assemblies: Solvents used for manufacturing or maintenance cleaning of electronic assemblies shall have a VOC content of 900 grams or less of VOC per liter of material, as calculated in accordance with Sections 401 and 503.1 **and** a VOC composite partial pressure of 33 mm Hg or less at 20 °C (68 °F), as calculated in accordance with Sections 401 and 503.3.
- 301.1.5 <u>Polyester Resin Application:</u> Solvents used for cleaning polyester resin application equipment shall comply with any one of the limits specified below:
  - 301.1.5.1 The solvent shall have a VOC content of 200 grams or less VOC per liter of material, as calculated in accordance with Sections 401 and 503.1; or
  - 301.1.5.2 The solvent shall have a VOC content of 1100 grams or less of VOC per liter of material, as calculated in accordance with Sections 401 and 503.1, **and** a VOC composite partial pressure of 1.0 mm Hg or less at 20 °C (68 °F), as calculated in accordance Sections 401 and 503.3 or
  - 301.1.5.3 In lieu of complying with either of the VOC limitations in Sections 301.1.5.1 and 301.1.5.2, above, a person may comply by using a solvent residue reclamation system. Reclamation may be done either on-site or off-site through a reclamation facility. The on-site reclamation system shall operate at least at 80 percent efficiency, by weight, and the solvent residues shall contain not more than 20 percent VOC, by weight.
- 301.2 Effective December 11, 2004 a person shall not perform solvent cleaning unless the solvent has a VOC content, as applied (as determined per Sections 401 and 503.1) equal to or less than the applicable VOC limit in the table below. The VOC content shall be calculated based on grams per liter of solvent or pounds per gallon of solvent including water and exempt compounds.

Solvent Cleaning Activity	VOC Content g/l (lb/gal) (Effective December 11, 2004)
General (wipe cleaning, maintenance cleaning)	50 (0.42)
Product Cleaning During Manufacturing Process or Surface Preparation for Coating, Adhesive, Sealants, or Ink Application	
General Electrical Apparatus Components and Electronic Components Medical Devices and Pharmaceuticals	50 (0.42) 500 (4.2) 800 (6.7)

Solvent Cleaning Activity	VOC Content g/I (Ib/gal) (Effective December 11, 2004)		
Repair and Maintenance Cleaning			
General Electrical Apparatus Components and Electronic Components  Medical Devices and Pharmaceuticals  General Work Surfaces Tools, Equipment, and Machinery Platelets	50 (0.42) 900 (7.5) 600 (5.0) 800 (6.7) 800 (6.7)		
Architectural Coating Application Equipment			
Water based Coatings Solvent based Coatings – Jobsite and No Enclosed Gun Cleaner	50 (0.42) 300 (2.5)		

- **302 CLEANING DEVICES AND METHODS:** A person shall not perform solvent cleaning unless one of the following cleaning devices or methods is used:
  - 302.1 Wipe cleaning.
  - 302.2 Cleaning within closed containers or by using hand held spray bottles from which solvents are applied without a propellant-induced force.
  - 302.3 Using cleaning equipment which has a solvent container that is closed during cleaning operations, except when depositing and removing objects to be cleaned, and is closed during non-operation with the exception of maintenance and repair to the cleaning equipment itself.
  - 302.4 Using remote reservoir degreaser, non-vapor degreaser, or vapor degreaser used pursuant to the provisions of Rule 216, Organic Solvent Cleaning and Degreasing Operations.
  - 302.5 Using solvent flushing methods where the cleaning solvent is discharged into a container, which is, closed except for the solvent collection openings and, if necessary, openings to avoid excessive pressure buildup inside the container. The discharged solvent from the equipment must be collected into containers without atomizing into the open air. The solvent may be flushed through the system by air or hydraulic pressure, or by pumping.
  - 302.6 Using an enclosed gun cleaner for the cleaning of application equipment, except as listed in Section 302.7 or by using a solvent that contains 50 grams per liter or less VOCs for cleaning of spray guns if no enclosed gun cleaner is used.
  - 302.7 Using solvents that comply with the VOC limits in Section 301 and cleaning methods in Section 302.5 for cleaning of application equipment used to apply architectural coatings at the jobsite.
  - 302.8 Cleaning of spray gun nozzles by soaking in solvent provided the container (not to exceed five (5) gallons in size) is kept tightly covered at all times except when accessing the container.

- 302.9 Regardless of cleaning method, any spray discharge of solvent into the open air is prohibited at all times.
- **303 EMISSION CONTROL SYSTEM:** As an alternative to complying with Sections 301 and 302, a person may use air pollution control equipment provided it satisfies the following conditions:
  - 303.1 The air pollution control equipment is approved by the Air Pollution Control Officer pursuant to Rule 501, General Permit Requirements, and
  - 303.2 The air pollution control equipment is designed and operated with:
    - 303.2.1 A control device efficiency of at least 95 percent on a mass basis, as determined pursuant to Sections 402 and 503.5, and
    - 303.2.2 An emission collection efficiency of at least 90 percent on a mass basis of the emissions generated by the solvent cleaning operations, as determined pursuant to Section 503.6, or
    - 303.2.3 An output of less than 50 parts per million calculated as carbon with no dilution.

### 304 STORAGE AND DISPOSAL:

- 304.1 All VOC-containing materials used in solvent cleaning operations, such as solvents, and cloth and paper moistened with solvents, shall be stored in non-absorbent containers with no liquid leaks. Such containers shall be kept closed at all times except when filling or emptying.
- 304.2 All spent solvents shall be disposed of properly. Spent cleanup solvents may be classified as hazardous waste. The owner or operator shall obtain approval from applicable local, state, or federal water pollution control agency prior to disposing of spent solvents into the sewer or storm drain systems.

### **400 ADMINISTRATIVE**

CALCULATION FOR DETERMINING VOC CONTENT OF CLEANING SOLVENTS INCLUDING WATER AND EXEMPT COMPOUNDS: For the VOC content as applied, the volume of solvent is defined as the volume of the original solvent, plus any material added to the original solvent (e.g., thinners or reducers). For the VOC content as supplied, the volume of solvent is defined as the volume of the original solvent. The weight of VOC per total volume of solvent shall be calculated by the following equation:

$$G_2 = \frac{W_v - W_w - W_{ec}}{V_w}$$

Where:  $G_2$  = Weight of VOC per total volume of solvent, in grams per liter

W<sub>v</sub> = Weight of all volatile compounds, in grams

 $W_w$  = Weight of water, in grams

W<sub>ec</sub> = Weight of exempt compounds, in grams

V<sub>m</sub> = Volume of solvent, in liters

402 CALCULATION FOR DETERMINING PERCENT CONTROL EFFICIENCY AND VOC MASS EMISSION RATE: The VOC mass emission rate shall be calculated both upstream and downstream of the emissions control device based on the VOC mass concentration, collection efficiency, and volumetric flowrate, pursuant to Section 503.5, and 503.6 and the following equations:

### 402.1 VOC mass emission rate:

Q

$$M = (Q) * (C) * (60 \frac{m}{hr})$$
 (calculated upstream and downstream)

Where: M VOC mass emission rate (upstream/downstream), in lb/hr.

> the volumetric flowrate at the inlet (upstream) or exhaust stack outlet (downstream), in standard cubic feet per minute as determined by Section 503.9.

С the VOC mass concentration at the inlet (upstream) or = outlet (downstream), in pounds per standard cubic feet, as determined pursuant to Section 503.9.

## 402.2 The percent control efficiency is calculated as follows:

$$\% CE = \left(\frac{M_u - M_d}{M_u}\right) * 100$$

Where: CE control efficiency.

 $M_u =$ the upstream VOC mass emission rate, in lb/hr. the downstream VOC mass emission rate, in lb/hr.

#### CALCULATION FOR DETERMINING VOC COMPOSITE PARTIAL PRESSURE: VOC 403 composite partial pressure shall be calculated by the following equation:

$$PP_{c} = \frac{\sum_{i=1}^{n} \frac{(W_{i})(VP_{i})}{MW_{i}}}{\frac{W_{w}}{MW_{w}} + \sum_{e=1}^{n} \frac{W_{e}}{MW_{e}} + \sum_{i=1}^{n} \frac{W_{i}}{MW_{i}}}$$

Where:  $PP_C =$ VOC composite partial pressure at 20 °C, in mm Hg.

Weight of the "i"th VOC compound, in grams as determined by

ASTM E 260-96.

W<sub>w</sub> Weight of water, in grams as determined by ASTM D 3792-99.

Weight of the "e"th exempt compound, in grams, as determined

by ASTM E 260-96.

 $MW_i$ Molecular weight of the "i"th VOC compound, in grams per gmole, as given in chemical reference literature.

 $MW_w$ Molecular weight of water, 18 grams per g-mole.

 $MW_{\triangle}$ Molecular weight of the "e"th exempt compound, in grams per g-

mole, as given in chemical reference literature.

Vapor pressure of the "i"th VOC compound at 20°C, in mm Hg,  $VP_i$ as determined by Section 503.4 of this rule.

## 404 OPERATION AND MAINTENANCE PLAN: Any person using an approved emission control equipment pursuant to Section 303 must submit an Operation and Maintenance Plan for the emissions control equipment to the Air Pollution Control Officer for approval. This Plan shall specify operation and maintenance procedures that demonstrate continuous operation and compliance of the emissions control equipment during periods of emissions-producing operations. This Plan shall specify key system operating parameters, such as temperatures, pressures, and/or flow rates, necessary to determine compliance with this rule and shall describe in detail procedures to maintain the approved control device. The plan shall specify which records must be kept to document these operations and maintenance procedures. The records shall comply with the

- requirements of Section 501. This Plan shall be implemented upon approval by the Air Pollution Control Officer.
- **PRODUCT INFORMATION REQUIREMENTS FOR SELLERS:** Any person who sells any solvent subject to this rule shall make available to the purchaser at the time of sale the following information:
  - 405.1 The solvent type by name/code/manufacturer;
  - 405.2 The maximum VOC content of the cleanup solvent as applied. The VOC content shall be displayed as grams of VOC per liter of solvent (or pounds of VOC per gallon), including water and exempt compounds as determined pursuant to Section 503.1.
  - 405.3 Recommendations regarding thinning, reducing, or mixing with any solvent, if applicable.
- **VIOLATIONS:** Failure to comply with any provision of this rule shall constitute a violation of the rule.

### 500 MONITORING AND RECORDS

- **RECORDKEEPING:** Any person subject to this rule, shall comply with all of the following applicable requirements:
  - 501.1 <u>List of Solvents</u>: A list shall be maintained of all solvents currently used and/or stored at the site. The list shall include the following information:
    - 501.1.1 Cleaning solvent type by name/code/manufacturer.
    - 501.1.2 The actual VOC content of cleaning solvents listed in Section 301, as applied including water and exempt compounds.
    - 501.1.3 The actual mixing ratio for the cleaning solvent as applied.
  - 501.2 <u>Product Information</u>: The information listed under Section 405 shall be maintained on-site and made available to the Air Pollution Control Officer upon request.
  - 501.3 <u>Usage Records</u>: Any person within the District using cleaning solvents regulated by this rule shall update and maintain the records as required by this rule as follows:
    - 501.3.1 <u>Daily</u>: Any person claiming an exemption from this rule pursuant to Section 104.4 shall maintain the following records.
      - 501.3.1.1 Records of total applied volume in gallons per day of solvents used for cleaning of sterilization ink indicating equipment.
      - 501.3.1.2 Records of total volume of aerosol products in ounces used.

### 501.3.2 Monthly:

- 501.3.2.1 Record of total applied volume in gallons for each cleaning solvent used, and
- 501.3.2.2 Record of solvent cleaning activity associated with each solvent used.

### 501.3.3 Annually:

- 501.3.3.1 Low Volume Usage: Any person claiming partial exemption from this rule for low volume of solvent usage, pursuant to Section 104.1, shall maintain records of the type and volume of solvent used, as required by Section 502, on an annual basis.
- 501.4 <u>Emission Control Equipment</u>: Any person using an emission control equipment pursuant to this rule shall maintain records, on a daily basis, of key system operating parameters for emission control equipment, including, but not limited to:
  - 501.4.1 Hours of operation;
  - 501.4.2 Routine and non-routine maintenance; and
  - 501.4.3 The records required by Section 404 as part of the Operation and Maintenance Plan.
  - 501.4.4 Records of test reports conducted pursuant to Section 503.
- **RETENTION OF RECORDS:** All records required by this rule shall be retained on-site for at least two years, except for sources subject to Rule 507, <u>Federal Operating Permit Program</u>, which shall be retained for at least five years. Such records shall be made available to the Air Pollution Control Officer upon request.

### 503 TEST METHODS

December 11, 2003

- 503.1 <u>Determination of VOC Content:</u> VOC content of solvents shall be determined in accordance with United States Environmental Protection Agency (U.S. EPA) Method 24 and Sections 401 and 503.2 of this rule.
- 503.2 <u>Determination Of Compounds Exempt From VOC Definition:</u> Compounds exempt from the VOC definition, as listed in Rule 102, <u>Definitions</u>, shall be determined in accordance with ASTM D4457-91 or ARB Method 432. If any of the perfluorocarbons or volatile cyclic and linear methyl siloxanes are being claimed as exempt compounds, the person making the claim must state in advance which compounds are present, and the EPA-approved test method used to make the determination of these compounds.
- 503.3 <u>Determination Of VOC Composite Partial Pressure:</u> VOC composite partial pressure shall be determined in accordance with ASTM E260-96 for organic compounds, and ASTM D3792-91 for water content as applicable, and Sections 403 and 503.4 of this rule.
- 503.4 <u>Determination of Vapor Pressure:</u> Vapor pressure of a VOC shall be determined in accordance with ASTM Method D2879-96, or may be obtained from a published source such as:
  - 503.4.1 "The Vapor Pressure of Pure Substances", Boublik, Fried, and Hala; Elsevier Scientific Publishing Company, New York, 1973.
  - 503.4.2 "Perry's Chemical Engineer's Handbook", McGraw-Hill Book Company, 1984
  - 503.4.3 "CRC Handbook of Chemistry and Physics, Chemical Rubber Publishing Company, 1986-87.

- 503.4.4 "Lange's Handbook of Chemistry", John Dean, ed., McGraw-Hill Book Company, 1985. DETERMINATION OF SOLVENT COMPONENTS: The identity of components in solvents shall be determined by U.S. EPA Method 18.
- 503.5 <u>Determination of Control Device Efficiency:</u> Control efficiency of the emissions control equipment shall be determined in accordance with United States Environmental Protection Agency Method 18, 25, or 25A (whichever is applicable).
- 503.6 <u>Determination of Collection Efficiency:</u> Collection efficiency shall be determined in accordance with U.S. EPA "Guidelines for Determining Capture Efficiency, January 9, 1995". Individual capture efficiency test runs subject to United States Environmental Protection Agency technical guidelines shall be determined by:
  - 503.6.1 Applicable U.S. EPA methods 204, 204A, 204B, 204C, 204E, and/or 204F; or
  - 503.6.2 Any other method approved by the U.S. EPA, the California Air Resources Board, and the Air Pollution Control Officer.
- 503.7 <u>Multiple Test Methods:</u> When more than one test method or set of test methods is specified for any testing, a violation of any requirement of this rule established by any one of the specified test methods shall constitute a violation of this rule.
- 503.8 <u>Test Method Updates:</u> Future U.S. EPA-approved revisions of any test methods referenced in Section 503 shall then become the applicable versions with respect to this rule.
- 502.9 <u>Determination of Volumetric Flowrate:</u> Volumetric flowrate shall be determined in accordance with United States Environmental Protection Agency Methods 2, 2A, 2C, or 2D (whichever is applicable).

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