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RULE 1171. SOLVENT CLEANING OPERATIONS

(a) Purpose

The purpose of this rule is to reduce emissions of Volatile Organic Compounds (VOCs), toxic air contaminants, and stratospheric ozone-depleting compounds, and global-warming compounds from the use, storage and disposal of Solvent Cleaning Materials in Solvent Cleaning Operations or Solvent Cleaning Activities.

(b) Applicability

This rule is applicable to any Person who uses Solvent Cleaning Materials in Solvent Cleaning Operations or Solvent Cleaning Activities during the production, repair, maintenance, or servicing of parts, products, tools, machinery, equipment, or general work areas as part of a business or public service within the South Coast AQMD. The rule shall also apply to all Persons who store and dispose of Solvent Cleaning Materials used in Solvent Cleaning Activities; and all Solvent Cleaner Suppliers who supply, sell, or offer for sale Solvent Cleaning Materials for use in Solvent Cleaning Operations or Solvent Cleaning Activities within the South Coast AQMD.

(c) Definitions

(1) AEROSOL PRODUCT means a hand-held, non-refillable container that expels pressurized product by means of a propellant-induced force. Aerosol Product does not include pump spray devices, which are packaging systems in which the product ingredients, or Solvent Cleaning Materials, are expelled only while a pumping action is applied to a button, trigger, or other actuator. Ingredients in a pump spray device are not under pressure.

(2) APPLICATION EQUIPMENT means any device used to apply adhesive, coating, ink, or polyester resin materials.

(3) APPLICATION LINE means that portion of a motor vehicle assembly production line that applies surface and other coatings to motor vehicle bodies, hoods, fenders, cargo boxes, doors, and grill opening panels.

(4) AUTOMOTIVE PART means any individual mechanical component that that is part of a vehicle that allows the vehicle to operate, including but not

- (c) (4) limited to, engine components, transmission components, suspension components, brake components, and intake system components.
- (5) BATTERY TERMINAL means the electrical contact or component of a battery that connects the battery to a charger, device, other battery, or external electrical circuit and transfers energy.
- (6) BLANKET means a synthetic rubber mat used in offset-lithography to transfer or “offset” an image from a planographic printing plate to the paper or other substrate.
- (7) BLANKET WASH means a Solvent Cleaning Material used to remove ink from the Blanket of a Press.
- (8) CHLORINATION SYSTEM means a chlorine feed system used for the oxidation of microbiological material, organic compounds or inorganic compounds during the water or wastewater treatment process. Chlorine can be in the form of gaseous chlorine, sodium hypochlorite, or calcium hypochlorite.
- (9) CURED COATING, CURED INK, OR CURED ADHESIVE means a coating, ink, or adhesive, that is dry to the touch, and that has undergone a chemical or physical process to achieve its final state and does not release volatile components under normal use conditions.
- (10) ELECTRICAL APPARATUS COMPONENT means 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 Apparatus Components also include electrical components of graphic arts application equipment and Hot-line Tools.
- (11) ELECTRICITY DISTRIBUTION UTILITY means one of several organizations that control energy transmission and distribution in California, including, but are not limited to, the Pacific Gas and Electric Company, the San Diego Gas and Electric Company, Southern California Edison, Los Angeles Department of Water and Power, the Imperial Irrigation District, and the Sacramento Municipal Utility District.

- (c) (12) **ELECTRICITY GENERATING FACILITY** means
- (A) A Facility that is owned or operated by an investor-owned electric utility or a public-owned electric utility and has one or more electric generating units; or
 - (B) A Facility that has electric generating units for onsite use and or distribution in the state or local electrical grid system.
- Electricity Generating Facility does not include Facilities subject to Rule 1109.1 – Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Operations.
- (13) **ELECTRONIC COMPONENT** means an individual part of an assembly, including circuit card assemblies, printed wire assemblies, printed circuit boards, soldered joints, ground wires, bus bars, and other electrical fixtures, except for the actual cabinet in which the components are housed, that collectively perform functions essential for the operation of an electronic device.
- (14) **EMISSION CONTROL SYSTEM** means any combination of capture systems and control devices used to reduce VOC emissions.
- (15) **ENERGY CURABLE INK** means an ink that dries upon exposure to visible-light, ultra-violet light, or an electron beam.
- (16) **EXEMPT COMPOUND** is as defined in Rule 102 – Definition of Terms (Rule 102).
- (17) **FACILITY** means a business, businesses, or public service engaged in Solvent Cleaning Operations and Solvent Cleaning Activities that are owned or operated by the same Person or Persons and are located on the same or contiguous parcels.
- (18) **FLEXOGRAPHIC PRINTING** means the printing method in which the image area is raised relative to the non-image area and utilizes flexible rubber or other elastomeric plates and rapid drying liquid inks.
- (19) **GENERAL WORK SURFACE** means an area of a medical device or pharmaceutical Facility where solvent cleaning is performed on work surfaces including, but not limited to, tables, countertops, and laboratory benches. General Work Surface shall not include items defined under Janitorial Cleaning.

- (c) (20) GRAMS OF VOC PER LITER OF MATERIAL (ACTUAL VOC) means the weight of VOC per volume of material and can be calculated by the following equation:

Grams of VOC per liter of material =

$$\frac{W_v - W_w - W_{ex}}{V_m}$$

Where: W_v = Weight of volatile compounds in grams
(includes water, Exempt Compounds, and VOCs)
 W_w = Weight of water in grams
 W_{ex} = Weight of Exempt Compounds in grams
 V_m = Volume of material in liters

- (21) GRAPHIC ARTS means all gravure, letterpress, flexographic, and lithographic printing processes.
- (22) GRAVURE PRINTING means an intaglio process, which is a technique that involves etching or engraving wells into a roll or cylinder to create an image, and then ink is carried in the wells and transferred to the printing substrate. The excess ink is removed from the surface by a doctor blade.
- (23) HIGH PRECISION OPTIC means an optical element used in an electro-optical device and is designed to sense, detect, or transmit light energy, including specific wavelengths of light energy and changes in light energy levels.
- (24) HOT-LINE TOOL means a specialized tool used primarily on the transmission systems, sub-transmission systems, and distribution systems for replacing and repairing circuit components or for other types of work with electrically energized circuits.
- (25) INK APPLICATION EQUIPMENT means any tool, machine, system, or component of any tool, machine, or system used to apply ink to a substrate.
- (26) INKJET PRINTING means a printing process in which images are formed by the precise placement of small (picoliter-sized) droplets of ink ejected at high velocity from the nozzle(s) of computer-controlled printheads.
- (27) JANITORIAL CLEANING means the cleaning of building or Facility components including, but not limited to, floors, ceilings, walls, windows, doors, stairs, bathrooms, furnishings, and exterior surfaces of office

- (c) (27) equipment, and excludes the cleaning of work areas where manufacturing or repair activity is performed.
- (28) LETTERPRESS PRINTING means the printing method in which the image area is raised relative to the non-image area and the ink is transferred to the paper directly from the image surface.
- (29) LIQUID LEAK means a visible liquid solvent leak from a container at a rate of more than three (3) drops per minute or a visible liquid mist.
- (30) LIQUID-TIGHT FOOD CONTAINER means a paperboard container that can hold liquid food and food products without leaking even when it is held upside-down.
- (31) LITHOGRAPHIC PRINTING means a planeographic printmaking method in which the image and non-image areas are on the same plane.
- (32) MAINTENANCE CLEANING means a Solvent Cleaning Activity carried out to keep clean general work areas where manufacturing or repair activity is performed, and to clean tools, machinery, molds, forms, jigs, and equipment. This definition does not include the cleaning of coatings, adhesives, or ink application equipment.
- (33) MANUFACTURING PROCESS means the process of making goods or articles by hand or by machinery.
- (34) MAXIMUM INCREMENTAL REACTIVITY (MIR) means the measure of the photochemical reactivity of a VOC, which estimates the weight of ozone produced from a weight of VOC expressed as gram of ozone per gram of VOC (g O₃/g VOC). MIR values for individual VOCs are specified in Sections 94700 and 94701, Title 17, California Code of Regulations.
- (35) MEDICAL DEVICE means 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:
- (A) Intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease; or
 - (B) Intended to affect the structure or any function of the body; or
 - (C) Defined in the National Formulary or the United States Pharmacopeia, or any supplement to them.
- (36) NON-ABSORBENT CONTAINER means a container made of nonporous material, which does not allow the migration of the liquid solvent through it.

- (c) (37) NON-ATOMIZED SOLVENT FLOW means the use of a Solvent Cleaning Material in the form of a liquid stream without atomization to remove uncured adhesives, uncured inks, uncured coatings, and contaminants from an article.
- (38) NON-LEAKING CONTAINER means a container that can hold liquids without leaking and is designed to prevent liquids, vapors, or any other contents from escaping through its seams, closures, or any other openings, ensuring secure storage or transport.
- (39) ON-PRESS COMPONENT means a part, component, or accessory of a Press that is cleaned while still being physically attached to the Press.
- (40) ON-PRESS SCREEN CLEANING means a Solvent Cleaning Activity carried out during Press runs in screen printing operation to remove excess inks and contaminants from a screen that is still attached to the Press.
- (41) OZONE GENERATOR means a mechanical system that produces ozone used for water or wastewater treatment. Ozone is produced by applying an electric potential or ultraviolet light to oxygen that can be either in the form of dry air or pure oxygen. Ozone Generator includes the associated oxygen supply equipment that is used to produce ozone.
- (42) PACKAGING PRINTING means any lithographic, flexographic, gravure, or letterpress printing that results in identifying or beautifying paper, paperboard, or cardboard products to be used as containers, enclosures, wrappings, or boxes.
- (43) PERSON is as defined in Rule 102.
- (44) PHARMACEUTICAL PRODUCT means a preparation or compound of medicinal drugs including, but not limited to, a prescription drug, analgesic, decongestant, antihistamine, cough suppressant, vitamin, mineral and herb, and is used by humans for consumption to enhance personal health.
- (45) PHOTOCURABLE RESIN means a chemical material that solidifies upon exposure to light.
- (46) PRESS means a mechanical device used to apply pressure to an inked surface resting on a substrate to transfer color, design, alphabetical text, or numerals to the substrate.
- (47) PRINTING means any operation that imparts color, design, alphabet, or numerals on a substrate in Graphic Arts.
- (48) PUBLIC WATER SYSTEM means a system that provides water for human consumption through pipes or other constructed conveyances that has

- (c) (48) fifteen or more connections or regularly serves at least twenty-five individuals daily at least sixty days out of the year.
- (49) PRODUCT-WEIGHTED MIR (PW-MIR) means the sum of all weighted-MIR for all ingredients in a Regulated Product. The PW-MIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging) and calculated according to the following equations:
- Weighted MIR (Wtd-MIR) ingredient = MIR x Weight fraction ingredient, and,
- $PW-MIR = (Wtd-MIR)_1 + (Wtd-MIR)_2 + \dots + (WtdMIR)_n$
- where,
- MIR = ingredient MIR; and
- 1,2,3,...,n = each ingredient in the product up to the total n ingredients in the product.
- (50) RADIATION-EFFECT COATING means a material that prevents radar detection.
- (51) REMOTE RESERVOIR CLEANER means a cleaning device in which liquid solvent is pumped from a solvent container to a sink-like work area and the solvent from the sink-like area drains into an enclosed solvent container while parts are being cleaned.
- (52) REMOVABLE PRESS COMPONENT means a part, component, or accessory of a Press that is physically attached to the Press but is disassembled and removed from the Press prior to being cleaned. Removable Press Components do not include rollers, Blankets, metering rollers, dampening rollers, ink trays, printing plates, fountains, impression cylinders and plates.
- (53) REPAIR CLEANING means a Solvent Cleaning Activity carried out during a repair process.
- (54) REPAIR PROCESS means the process of returning a damaged object or an object not operating properly to good condition.
- (55) ROLLER WASH means a Solvent Cleaner used to remove ink from the rollers of a Press.
- (56) SCIENTIFIC INSTRUMENT means an instrument (including the components, assemblies, and subassemblies used in their manufacture) and

- (c) (56) associated accessories and reagents that is used for the detection, measurement, analysis, separation, synthesis, or sequencing of various compounds.
- (57) SCREEN PRINTING means a process in which the printing ink passes through a web or a fabric to which a refined form of stencil has been applied. The stencil openings determine the form and dimensions of the imprint.
- (58) SCREEN RECLAMATION means a Solvent Cleaning Activity carried out in Screen Printing operation where the screen is completely cleaned for recycling or reuse of the screen for other production runs.
- (59) SOLVENT CLEANER OR SOLVENT CLEANING MATERIAL means a VOC-containing liquid substance used to perform Solvent Cleaning.
- (60) SOLVENT CLEANER SUPPLIER means any Person who sells, and delivers or arranges to deliver Solvent Cleaning Materials to a Facility subject to this rule.
- (61) SOLVENT CLEANING means the use of a Solvent Cleaner or Solvent Cleaning Material for the removal of loosely held uncured adhesives, uncured inks, uncured coatings, and contaminants that include, but are not limited to, dirt, soil, and grease from parts, products, tools, machinery, equipment, and general work areas. Each distinct method of Solvent Cleaning shall constitute a Solvent Cleaning Activity.
- (62) SOLVENT CLEANING ACTIVITY means a distinct method of cleaning in a Solvent Cleaning process or single event.
- (63) SOLVENT CLEANING OPERATION means a Solvent Cleaning Activity or Solvent Cleaning Activities conducted as part of a business or a public service.
- (64) SOLVENT FLUSHING is the use of a solvent to remove uncured adhesives, uncured inks, uncured coatings, or contaminants from the internal surfaces and passages of the equipment by flushing solvent through the equipment.
- (65) SOUTH COAST AQMD TEST METHOD means a test method included in the manual of “Laboratory Methods of Analysis for Enforcement Samples,” which can be found on the South Coast AQMD website and are referenced in subdivision (h).
- (66) SPECIALTY FLEXOGRAPHIC PRINTING means Flexographic Printing on polyethylene or polypropylene food packaging, fertilizer bags, or liquid-tight food containers.

- (c) (67) STEREOGRAPHY means a type of printing process that employs a system using a light to solidify photocurable resins in a desired configuration to produce a three-dimensional object.
 - (68) STERILIZATION INDICATING INK means an ink that changes color to indicate that sterilization has occurred, which is used to monitor the sterilization of medical instruments, autoclave efficiency, and the thermal processing of foods for prevention of spoilage.
 - (69) STRIPPING means the removal of Cured Coatings, Cured Inks, or Cured Adhesives.
 - (70) SURFACE PREPARATION means the removal of contaminants such as dust, soil, oil, grease, etc., prior to coating, adhesive, or ink applications.
 - (71) THROTTLE BODY means a component of a vehicle air intake system, and is located between the air intake filter and intake manifold of the vehicle air intake system, and controls the amount of air that flows into the vehicle engine.
 - (72) ULTRAVIOLET LIGHT TREATMENT means the process of using ultraviolet light to inactivate microorganisms (i.e., disinfection) or using ultraviolet light either with or without the addition of peroxide to oxidize contaminants (i.e., oxidation). Ultraviolet light treatment is used for both potable water and wastewater, including indirect and direct potable water reuse projects.
 - (73) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.
 - (74) WATER TREATMENT FACILITY means a public entity that is responsible for water delivery operations, sewage pumping plants, sewage treatment, or water reclamation.
- (d) Requirements
- (1) A Person shall not use a Solvent Cleaner to perform Solvent Cleaning Activities as part of a Solvent Cleaning Operation unless the Solvent Cleaner complies with the applicable requirements set forth below:

**Table 1 – Table of Standards
VOC Content Limits**

SOLVENT CLEANING ACTIVITY	VOC Limits	
	g/L	lbs/gal
(A) Product Cleaning During Manufacturing Process, or Surface Preparation for Coating, Adhesive, or Ink Application		
(i) General	25	0.21
(ii) Electrical Apparatus Components & Electronic Components	100	0.83
(A) Printed Circuit Boards	800	6.7
(iii) Medical Devices & Pharmaceuticals	800	6.7
(B) Repair and Maintenance Cleaning		
(i) General	25	0.21
(ii) Electrical Apparatus Components & Electronic Components	100	0.83
(A) Electronic or Electrical Cables	400	3.4
(iii) Medical Devices & Pharmaceuticals		
(A) Tools, Equipment, & Machinery	800	6.7
(B) General Work Surfaces	600	5.0
(C) Cleaning of Coatings or Adhesives Application Equipment		
(i) General	25	0.21
(ii) Thin or Sheet Metal Laminating Equipment	950	8.0
(D) Cleaning of Ink Application Equipment		
(i) General	25	0.21
(ii) Flexographic Printing	25	0.21
(iii) Gravure Printing		
(A) Publication	100	0.83
(B) Packaging	25	0.21
(iv) Lithographic (Offset) or Letterpress Printing		
(A) Roller Wash, Blanket Wash, & On-Press Components	100	0.83
(B) Removable Press Components	25	0.21
(v) Screen Printing	100	0.83
(vi) Energy Curable Printing		
(A) Ink Application Equipment (except Screen Printing)	100	0.83
(B) Lamps and Reflectors	800	6.7
(vii) Specialty Flexographic Printing	100	0.83
(E) Cleaning of Polyester Resin Application Equipment	25	0.21

(d) (2) Cleaning Devices and Methods Requirements

A Person shall not perform Solvent Cleaning Activities listed in paragraph (d)(1) unless one of the following cleaning devices or methods is used:

- (A) Wipe cleaning, which is a Solvent Cleaning Activity conducted by physically rubbing it with a material such as a rag, paper, sponge or a cotton swab moistened with a solvent;
- (B) Closed containers or handheld spray bottles from which Solvent Cleaners are applied without a propellant-induced force;
- (C) Cleaning equipment that has a Solvent Cleaner container that can be closed, and is closed during Solvent Cleaning Activities, 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;
- (D) Remote Reservoir Cleaner used pursuant to the provisions of paragraph (d)(3);
- (E) Non-atomized Solvent Flow method where the Solvent Cleaner is collected in a container or a collection system that is closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container;
- (F) Solvent Flushing where the Solvent Cleaner is discharged into a container that is closed except for Solvent Cleaner collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container. The discharged Solvent Cleaning Material from the equipment must be collected into containers without atomizing into the open air. The Solvent Cleaning Material may be flushed through the system by air or hydraulic pressure, or by pumping; or
- (G) Hand-held spray devices, where solvent cleaning material is applied using a hand-held device with a pressurized container used to disperse Solvent Cleaning Material through a nozzle, when performing Solvent Cleaning Activities at Electricity Distribution Utilities, Electricity Generating Facilities, Water Treatment Facilities, or Public Water Systems, provided that Solvent Cleaning Activities are performed pursuant to the alternative compliance options in paragraph (e)(2).

- (d) (3) Remote Reservoir Cleaners
- Any Person owning or operating a Remote Reservoir Cleaner shall comply with all of the following requirements in addition to the applicable VOC limits specified in paragraph (d)(1):
- (A) Prevent Solvent Cleaner vapors from escaping from the Solvent Cleaner container by using such devices as a cover or a valve when the remote reservoir is not being used, cleaned, or repaired;
 - (B) Direct Solvent Cleaner flow in a manner that will prevent liquid Solvent Cleaning Material from splashing outside of the Remote Reservoir Cleaner;
 - (C) Not clean porous or absorbent materials, such as cloth, leather, wood, or rope; and
 - (D) Use only containers free of all liquid leaks. Auxiliary equipment, such as pumps, pipelines, or flanges, shall not have any liquid leaks, visible tears, or cracks. Any liquid leak, visible tear, or crack detected shall be repaired within one (1) calendar day, or the leaking section of the remote reservoir cold cleaner shall be drained of all Solvent Cleaning Materials and shut down until it is replaced or repaired.
- (4) Storage and Disposal
- All VOC-containing Solvent Cleaning Materials used in Solvent Cleaning Activities listed in paragraph (d)(1) shall be stored in Non-Absorbent, Non-Leaking containers, which shall be kept closed at all times except when filling or emptying. Cloth and paper moistened with VOC-containing Solvent Cleaning Materials must be stored in closed, Non-Absorbent, Non-Leaking containers.
- (5) Labeling
- Any Person who sells or offers for sale Solvent Cleaning Materials for use in the South Coast AQMD shall:
- (A) For Solvent Cleaning Materials complying with paragraph (d)(1), comply with the labeling provisions of Rule 443.1 – Labeling of Materials Containing Organic Solvents; and
 - (B) For Solvent Cleaning Materials complying with the alternative PW-MIR VOC limits pursuant to paragraphs (e)(2), (e)(4), or (e)(5), include the PW-MIR VOC content on the container.

- (e) Alternative Compliance Options
- (1) In lieu of complying with the requirements in paragraphs (d)(1) and (d)(2), a Person may comply by using a VOC Emission Control System in association with the Solvent Cleaning Activities provided the Emission Control System:
- (A) Collects at least 90 percent, by weight, of the emissions generated by the Solvent Cleaning Activities; and
- (i) Has a destruction efficiency of at least 95 percent by weight, or
- (ii) Has an output of less than 50 parts per million calculated as carbon with no dilution; or
- (B) Meets the requirements of the applicable source specific rule of South Coast AQMD Regulation XI; or
- (C) For cleaning in Graphic Arts and Screen Printing and cleaning of application equipment used for Graphic Arts materials and Screen Printing materials:
- (i) Collects at least 70 percent, by weight, of the emissions generated; and
- (ii) Has a destruction efficiency of at least 95 percent, by weight.
- (D) For internal cleaning of enclosed mobile containers, including but not limited to rail tank cars and tanker truck containers, used to transport materials:
- (i) Shall be air-tight and leak free during the Solvent Cleaning Activities; and
- (ii) For all fugitive components, vapor leaks shall not exceed 50 parts per million measured on a South Coast AQMD organic vapor analyzer calculated as carbon, with no dilution.
- (2) Alternative Limits for Electricity and Water Equipment
- Facilities conducting Solvent Cleaning Activities for the following equipment listed in Table 2 that are operated at Electricity Generating Facilities, Electricity Distributing Utilities, Water Treatment Facilities or Public Water Systems may use Solvent Cleaning Materials that exceed the VOC limits in paragraph (d)(1) provided:
- (A) The Facility uses no more than the annual volumes listed in Table 2;
- (B) The Solvent Cleaning Materials have a PW-MIR no more than those listed in Table 2;

- (e) (2) (C) The Facility maintains monthly purchase and usage records pursuant to paragraph (g)(2) for a minimum of five years; and
- (D) The Solvent Cleaning Materials comply with the labeling provisions in subparagraph (d)(5)(B).

Table 2 – Alternative Usage and MIR Limits

Solvent Cleaning Activity	Usage Limits (gallons per year)	PW-MIR
(A) Electricity Generating or Distribution Equipment	70	1.7
(B) Water Distribution Equipment and Water Treatment Equipment		
(i) Chlorination Systems	5	1.7
(ii) Ozone Generators	40	1.7
(iii) Ultraviolet Light Treatment Systems	30	1.7

- (3) Alternative Limits for Aerosol Cleaning
Facilities conducting Solvent Cleaning Activities listed in Table 3 may use Aerosol Solvent Cleaners that exceed the VOC limits in paragraph (d)(1) provided:
 - (A) The Facility complies with the applicable usage limit(s) listed in Table 3;
 - (B) On and after September 6, 2025, the Facility maintains monthly purchase and usage records pursuant to paragraph (g)(2) for a minimum of five years; and
 - (C) Such products are compliant with California Air Resources Board (CARB) Consumer Product Regulations, including, but not limited to, meeting the VOC content limit requirements of Article 2 or as allowed by Article 4.

Table 3 – Aerosol Solvent Cleaner Usage Limits

Solvent Cleaning Activity	Usage Limits
(A) Cleaning of Automotive Parts	
(i) Throttle Body and Intake Systems	4,800 ounces per month
(ii) All Other Automotive Part Cleaning	32 ounces per month
(B) Battery Terminal Cleaning at Battery Manufacturing Facilities	2,400 ounces per month
(C) All Others Solvent Cleaning Activities	1,750 ounces per month

- (e) (4) Alternative MIR Limit
- In lieu of complying with the VOC limits in paragraph (d)(1), a Person may elect to supply for use within South Coast AQMD or use Solvent Cleaning Materials that comply with a PW-MIR limit of 0.38 g O₃/g VOC for any Solvent Cleaning Activity provided the Solvent Cleaning Materials comply with the labeling provision in subparagraph (d)(5)(B).
- (5) Alternative MIR Limit for Ink Application Equipment
- In lieu of complying with the VOC limits for the following Table 1 Solvent Cleaning Activities for Cleaning of Ink Application Equipment, a Person may elect to supply for use within South Coast AQMD or use Solvent Cleaning Materials that comply with a PW-MIR limit of 0.70 g O₃/g VOC provided the Solvent Cleaning Materials comply with the labeling provision in subparagraph (d)(5)(B):
- (A) Table 1 (D)(vi) Energy Curable Printing;
- (B) Table 1 (D)(iv)(A) Lithographic (Offset) or Letterpress Printing for Roller Wash, Blanket Wash, & On-Press Components; and
- (C) Table 1 (D)(v) Screen Printing.
- (f) General Prohibitions
- (1) A Person shall not atomize any Solvent Cleaner unless it is vented to an Emission Control System, that meets the requirements of paragraph (e)(1).
- (2) A Person shall not specify or require any Person to use a Solvent Cleaner or equipment subject to the provisions of this rule that does not meet the requirements of this rule.

- (f) (3) Carcinogenic Materials and Exempt Compounds
A Person shall not perform Solvent Cleaning Activities subject to the provisions of this rule with any Solvent Cleaning Material that contains any of the following chemicals in concentrations greater than the limits indicated:
- (A) 0.01 percent by weight of Group II Exempt Compound except cyclic, branched, or linear, completely methylated siloxanes (VMS);
or
- (B) 0.01 percent by weight of para-Chlorobenzotrifluoride (pCBtF), CAS 98-56-6 and *tert*-Butyl Acetate (t-BAc), CAS 540-88-5 for Solvent Cleaning Materials manufactured after January 1, 2026.
- (4) Sell Through Provision for pCBtF and t-BAc
Any Solvent Cleaning Material that is manufactured prior to January 1, 2026, that contains more than 0.01 percent of pCBtF and t-BAc may be sold, supplied, or offered for sale until July 1, 2027, and used until July 1, 2028.
- (5) Any Person subject to the Airborne Toxic Control Measure for Emissions of Chlorinated Toxic Air Contaminants from Automotive Maintenance and Repair Activities - Title 17, California Code of Regulations, section 93111, shall comply with its provisions.
- (6) No Solvent Cleaner Supplier shall aid, abet or assist a Facility or any Person to use a supplied Solvent Cleaner in a manner that does not meet the requirements of this rule.
- (7) No Solvent Cleaner shall be used when documentation cannot be provided pursuant to paragraph (g)(2) for that Solvent Cleaner.
- (8) Prohibition of Possession
Solvent Cleaning Materials that do not meet the requirements of this rule and are used, intended for use, or labeled for use, for Solvent Cleaning Activities within South Coast AQMD shall not be kept on-site, unless the Facility is complying with any of the alternative compliance options pursuant to subdivision (e).
- (g) Recordkeeping Requirements
- (1) Any Person who performs Solvent Cleaning Activities shall maintain records pursuant to Rule 109 – Recordkeeping for Volatile Organic Compound Emissions for all applications subject to this rule, including

- (g) (1) those exempted under paragraphs (j)(3) through (j)(6), except Facilities required to keep records of Solvent Cleaning Materials used and Solvent Flushing pursuant to an applicable Regulation XI source specific rule.
- (2) Any Person who performs Solvent Cleaning Activities shall maintain records for five years for all Solvent Cleaning Materials used, and make available to the Executive Officer upon request, that includes the following for each solvent cleaning activity performed:
- (A) Product name of each Solvent Cleaner used;
 - (B) Dates and quantities in which each Solvent Cleaner was used during the time period specified by the Executive Officer;
 - (C) VOC content of each Solvent Cleaner as used; and
 - (D) PW-MIR VOC content if the manufacturer elects to comply with the alternative PW-MIR VOC limits in paragraph (e)(2), (e)(4), and (e)(5).
- (3) Any Solvent Cleaner Supplier supplying Solvent Cleaning Materials for use in the South Coast AQMD shall maintain the following records for five years and make the data available upon request by the Executive Officer:
- (A) Product name of each supplied Solvent Cleaner;
 - (B) Name and address of the Facility that the Solvent Cleaner was supplied to;
 - (C) Dates and quantities in which the Solvent Cleaner was supplied during the time period specified by the Executive Officer; and
 - (D) VOC content of the Solvent Cleaner as supplied.
- (4) Dilution Instructions
- If a Solvent Cleaner is required to be diluted prior to being used in a Solvent Cleaning Activity to meet the applicable VOC limits:
- (A) Any Person who uses Solvent Cleaning Materials requiring such dilution shall maintain at all times, and make available to the Executive Officer upon request, the correct written dilution instructions for each of these Solvent Cleaner; and
 - (B) The Solvent Cleaner Supplier providing Solvent Cleaning Material for use in the South Coast AQMD shall supply to the operator, upon the operator's request, the correct written dilution instructions for each supplied Solvent Cleaner.

- (g) (5) Remote Reservoir Cleaners
Records of any repair of leaks, visible tears, or cracks of remote reservoir cleaner auxiliary equipment shall be maintained and made readily available for a period of five years following the date of repair.
- (h) Test Methods
- (1) Determination of VOC Content
The VOC content of materials subject to the provisions of this rule shall be determined by the following methods:
- (A) United States Environmental Protection Agency (U.S. EPA) Reference Test Method 24 – Determination of Volatile Matter Content, Water Content, Volume Solids and Weight Solids of Surface Coatings, Code of Federal Regulations, Title 40, Part 60, Appendix A with the Exempt Compounds' content determined by South Coast AQMD Test Method 303 – Determination of Exempt Compounds; or,
 - (B) South Coast AQMD Test Method 304 – Determination of Volatile Organic Compounds (VOC) in Various Materials; or
 - (C) South Coast AQMD Test Method 313 – Determination of Volatile Organic Compounds (VOC) by Gas Chromatography/Mass Spectrometry/Flame Ionization Detection (GC/MS/FID); or
 - (D) ASTM Standard Test Method E 1868 – Standard Test Method for Loss-On-Drying by Thermogravimetry with quality assurance and quality control procedures using South Coast AQMD Additional Requirements to ASTM Standard Test Method E 1868-10 for Metalworking Fluids and Direct-Contact Lubricants.
- (2) Exempt Perfluorocarbon Compounds
The following classes of compounds shall be analyzed as Exempt Compounds for compliance with subdivision (d), only at such time as manufacturers specify which individual compounds are used in the solvent formulation and identify the test methods, which have been approved by the U.S. EPA, CARB and the South Coast AQMD prior to such analysis, that can be used to quantify the amounts of each exempt compound:
- (A) Cyclic, branched, or linear, completely fluorinated alkanes;
 - (B) Cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;

- (h) (2) (C) Cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and
- (D) Sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.
- (3) Determination of Efficiency of Emission Control Systems

A Person that elects to comply with the provisions of paragraph (d)(1) using an Emission Control System specified in subparagraph (e)(1)(A) shall:

 - (A) Determine the capture efficiency of the collection device in the Emission Control System by using:
 - (i) South Coast AQMD’s “Protocol for Determination of Volatile Organic Compounds (VOC) Capture Efficiency,”;
 - or
 - (ii) Any other method approved by the U.S. EPA, CARB, and the South Coast AQMD Executive Officer.
 - (B) Determine the efficiency and the VOC content in the Emission Control System exhaust gases, measured and calculated as carbon by:
 - (i) U. S. EPA Test Method 25 - Determination of Total Gaseous Nonmethane Organic Emissions as Carbon;
 - (ii) U. S. EPA Test Method 25A - Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer;
 - (iii) South Coast AQMD Test Method 25.1 - Determination of Total Gaseous Non-Methane Organic Emissions as Carbon;
 - or
 - (iv) South Coast AQMD Test Method 25.3 - Determination of Low Concentration Non-Methane Non-Ethane Organic Compound Emissions from Clean Fueled Combustion Sources.
 - (C) Determine emissions of Exempt Compounds by:
 - (i) U.S. EPA Test Method 18 – Volatile Organic Compounds by Gas Chromatography; or
 - (ii) CARB Method 422 – Determination of Volatile Organic Compounds in Emissions from Stationary Sources.

- (h) (4) Equivalent Test Methods
Other test methods determined to be equivalent by the Executive Officer, CARB, and the U.S. EPA, and approved in writing by the Executive Officer may also be used.
- (5) Multiple Test Methods
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 or set of test methods shall constitute a violation of this rule.
- (6) All test methods referenced in this section shall be the most recently approved version.
- (i) Rule 442 Applicability
Any Solvent Cleaner, Solvent Cleaning Material, Solvent Cleaning Activity, Solvent Cleaning Operation, or Person, that is exempt from all or a portion of this rule except paragraph (g)(1), shall be subject to the applicable requirements of the applicable Regulation XI source specific rule or Rule 442 - Usage of Solvent.
- (j) Exemptions
 - (1) The recordkeeping provisions in subdivision (g), shall not apply to Solvent Cleaning Activities using Solvent Cleaning Materials containing no more than 25 grams of VOC per liter of material, provided that, if the Executive Officer determines that a Person has violated any of the VOC limits in paragraph (d)(1) for any Solvent Cleaning Activities occurring, then for a period of five years following the date of such violation, the recordkeeping requirements in subdivision (g) shall apply to the Facility at which the violation occurred.
 - (2) The following Solvent Cleaning Activities are not subject to any provision of this rule:
 - (A) Cleaning operations subject to Rule 1122 – Solvent Degreasers, or Rule 1425 – Film Cleaning and Printing Operations;
 - (B) Cleaning operations subject to Rule 1102 – Petroleum Solvent Dry Cleaners, or Rule 1421 – Control of Perchloroethylene Emissions from Dry Cleaning Operations;
 - (C) Cleaning operations subject to Rule 1164 – Semiconductor Manufacturing;
 - (D) Cleaning operations subject to Rule 1124 – Aerospace Assembly and Component Manufacturing Operations, except coating

- (j) (2) (D) application equipment cleaning and storage and disposal of VOC-containing materials used in Solvent Cleaning Activities;
 - (E) Cleaning operations subject to Rule 1141.1 – Coatings and Ink Manufacturing;
 - (F) Janitorial cleaning, including graffiti removal;
 - (G) Stripping of cured coatings, cured ink, or cured adhesives;
 - (H) Cleaning operations in Printing pre-press or Graphic Arts pre-press areas, including the cleaning of film processors, color scanners, plate processors, film cleaning, and plate cleaning; and
 - (I) Cleaning operations using individually wrapped, saturated towelettes, during cable splicing activity for high voltage electrical cable where the VOC content shall not exceed 790 g/L.
- (3) The VOC limits in paragraph (d)(1) shall not apply to the following applications:
- (A) Cleaning of solar cells, laser hardware, scientific instruments, and high-precision optics;
 - (B) Cleaning conducted with performance laboratory tests on coatings, adhesives, or inks; research and development programs; and laboratory tests in quality assurance laboratories;
 - (C) Cleaning of motor vehicles on application lines subject to Rule 1115 - Motor Vehicle Assembly Line Coating Operations;
 - (D) Cleaning of paper-based gaskets, and clutch assemblies where rubber is bonded to metal by means of an adhesive;
 - (E) Cleaning of cotton swabs to remove cottonseed oil before cleaning of high-precision optics;
 - (F) Medical device and pharmaceutical Facilities using up to 1.5 gallons per day of solvents;
 - (G) The cleaning of photocurable resins from stereolithography equipment and models;
- (4) The provisions of paragraph (f)(1) shall not apply to:
- (A) Cleaning with aerosol products that do not contain VOC in excess of applicable Table 1 VOC limits in paragraph (d)(1);
 - (B) Solvent Cleaning Activities performed pursuant to subparagraph (d)(2)(G), paragraph (e)(2), and paragraph (e)(3).

- (j) (5) The VOC limit in subparagraph (d)(1)(C) shall not apply to the following applications:
 - (A) Cleaning of coating and adhesive application processes utilized to manufacture transdermal drug delivery product using less than three gallons per day of ethyl acetate averaged over a 30-calendar day period;
 - (B) Cleaning of Application Equipment used to apply coatings on satellites and Radiation Effect Coatings; and
 - (C) Cleaning of solvent-based fluoropolymer coating Application Equipment, provided less than one gallon per day of Solvent Cleaning Materials is used.
- (6) The VOC limit in subparagraph (d)(1)(D) shall not apply to Persons or Facilities using less than 1.5 gallons per day of Solvent Cleaning Materials to clean sterilization indicating ink Application Equipment.
- (7) The provisions of paragraph (f)(1) shall not apply to the following:
 - (A) Cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems.
 - (B) Cleaning with spray bottles or containers described in subparagraph (d)(2)(B).
 - (C) Printing operations where the Roller Wash or Blanket Wash is applied automatically.