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[RULE INDEX TO BE ADDED AFTER RULE ADOPTION]

PROPOSED AMENDED RULE 1171. SOLVENT CLEANING OPERATIONS

(a) Purpose and Applicability

The purpose of this rule is to reduce emissions of volatile organic compounds (VOCs), toxic air contaminants, and stratospheric ozone-depleting compounds, or and global-warming compounds from the use, storage and disposal of solvent cleaning materials Solvent Cleaning Materials in solvent cleaning operations and activities Solvent Cleaning Operations or Solvent Cleaning Activities. A solvent cleaning operation is solvent cleaning conducted as part of a business. This rule applies to: all persons who use these solvent materials in solvent cleaning operations during the production, repair, maintenance, or servicing of parts, products, tools, machinery, equipment, or general work areas; all persons who store and dispose of these materials used in solvent cleaning operations; and all solvent suppliers who supply, sell, or offer for sale solvent cleaning materials for use in solvent cleaning operations.

(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.

(b)(c) Definitions

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

(1) AEROSOL PRODUCT <u>ismeans</u> a hand-held, non-refillable container <u>whichthat</u> expels pressurized product by means of a propellant-induced force.

- (2) APPLICATION EQUIPMENT is a means any device used to apply adhesive, coating, ink, or polyester resin materials.
- (3) APPLICATION LINE <u>ismeans</u> that portion of a motor vehicle assembly production line <u>whichthat</u> applies surface and other coatings to motor vehicle bodies, hoods, fenders, cargo boxes, doors, and grill opening panels.
- (4) ARCHITECTURAL COATING is any coating applied to stationary structures and their appurtenances, to mobile homes, to pavements, or to curbs.
- (4) AUTOMOTIVE PART means any individual mechanical component that that are part of a vehicle that allow the vehicle to operate, including but not limited to, engine components, transmission components, suspension components, brake components, and intake system components.
- (5) BLANKET <u>ismeans</u> 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.
- (6) BLANKET WASH <u>ismeans</u> a <u>solventSolvent Cleaning Material</u> used to remove ink from the <u>blanket Blanket</u> of a <u>pressPress</u>.
- (7) CHLORINATION SYSTEM means a system composed of, but not limited to, a chlorine solution tank and feed pump connected to a water holding tank or reservoir, with the purpose of removing bacteria, viruses, and other microorganisms during the water treatment process at a Water Distribution Facility.
- (7) CLEAN AIR SOLVENT is as defined in Rule 102.
- (8) CLEAN AIR SOLVENT CERTIFICATE is a certificate issued by the District to a manufacturer, distributor, or person for a specific product or class of products that meets the criteria for a Clean Air Solvent.
- (98) CURED COATING, CURED INK, OR CURED ADHESIVE is means a coating, ink, or adhesive, which that is dry to the touch, and that has undergone a chemical or physical process to achieve its final state, where it is no longer tacky and does not release volatile components under normal use conditions.
- (109) ELECTRICAL APPARATUS COMPONENTS is 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. -<u>Electrical</u>

 <u>Apparatus Components also include Electrical electrical</u> components of graphic arts application equipment and <u>Hot-line Toolshot line tools are also included in this category</u>.
- 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.
- (11) 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 with a combined generation capacity of 50 Megawatts (MW) or more of electrical power for 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, Rule 1150.3 Emissions of Oxides of Nitrogen from Combustion Equipment at Landfills, or Rule 1179.1 Emission Reductions from Combustion Equipment at Publicly Owned Treatment Works Facilities.
- (11) ELECTRON BEAM INK is an ink that dries by chemical reaction caused by high energy electrons.
- (12) ELECTRONIC COMPONENT <u>ismeans</u> that portion 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.
- (13) EMISSION CONTROL SYSTEM means any combination of capture systems and control devices used to reduce VOC emissions.
- (14) ENERGY CURABLE INK means an ink that dries upon exposure to visible-light, ultra-violet light, or an electron beam.
- (1315) EXEMPT COMPOUND is as defined in Rule 102 Definition of Terms (Rule 102).

- (1416) FACILITY means a business or businesses engaged in solvent cleaning operations. Solvent Cleaning Operations and Solvent Cleaning Activities which that are owned or operated by the same person or persons and are located on the same or contiguous parcels.
- (1517) FLEXOGRAPHIC PRINTING <u>ismeans</u> the <u>printing</u> 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.
- (1618) FULL SERVICE SOLVENT PROVIDER ismeans any person that provides both solvents Solvent Cleaning Materials and services to a solvent cleaning operation Facility. -Such services may include, but are not limited to, one or more of the following: filling or refilling solvent cleaning equipment with solvent, collection or pick up of customer's solvent-related waste stream, or cleaning equipment sales or rental.
- (1719) GENERAL WORK SURFACE ismeans 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.
- (1820) GRAMS OF VOC PER LITER OF MATERIAL (ACTUAL VOC). ismeans the weight of VOC per volume of material and can be calculated by the following equation:

Grams of VOC per liter of material =

$$\frac{W_{\text{s}v} - W_{\text{w}} - W_{\text{esex}}}{V_{\text{m}}}$$

Where: W_sW_v = Weight of volatile compounds in gram-s

(includes water, Exempt Compounds, and

VOCs)

W_w = Weight of water in grams

 $W_{es}W_{ex}$ = Weight of exempt compounds Exempt

Compounds in grams

 V_m = Volume of material in liters

(1921) GRAPHIC ARTS <u>aremeans</u> all gravure, letterpress, flexographic, and lithographic printing processes.

- (2022) GRAVURE PRINTING is means an intaglio process, which is a technique that involves etching or engraving wells into a roll or cylinder to create an image, in which the and then ink is carried in minutethe etched or engraved wells on a roll or cylinder and transferred to the printing substrate. -The excess ink is removed from the surface by a doctor blade.
- (2123) HIGH PRECISION OPTIC <u>ismeans</u> an optical element used in an electrooptical device and is designed to sense, detect, or transmit light energy, including specific wavelengths of light energy and changes in light energy levels.
- (2224) HOT-LINE TOOL ismeans 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.
- (2326) INKJET PRINTING ismeans a printing process in which images are formed by the precise placement of small (picoliter-sized) droplets of ink firedejected at high speedsvelocity from the nozzle(s) of computer-controlled printheads.
- (2427) JANITORIAL CLEANING ismeans 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 equipment, and excludes the cleaning of work areas where manufacturing or repair activity is performed.
- (2528) LETTERPRESS PRINTING <u>ismeans</u> the <u>printing</u> 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.
- (2629) LIQUID LEAK is the means a visible liquid solvent leak from the a container at a rate of more than three (3) drops per minute; or a visible liquid mist.
- (2730) LIQUID-TIGHT FOOD CONTAINER ismeans a paperboard container that can hold liquid food and food products without leaking even when it is held upside-down.
- (2831) LITHOGRAPHIC PRINTING ismeans a plane-o-graphic printmaking method in which the image and non-image areas are on the same plane.
- (2932) MAINTENANCE CLEANING ismeans a solvent cleaning operation or activity Solvent Cleaning Activity carried out to keep clean general work

- areas where manufacturing or repair activity is performed, <u>and</u> to clean tools, machinery, molds, forms, jigs, and equipment. -This definition does not include the cleaning of coatings, adhesives, or ink application equipment.
- (3033) MANUFACTURING PROCESS is means the process of making goods or articles by hand or by machinery.
- 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, Title17, California Code of Regulations.
- (3135) MEDICAL DEVICE <u>ismeans</u> 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) <u>it is intended Intended</u> for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease; or
 - (B) <u>it is intended Intended</u> to affect the structure or any function of the body; or
 - (C) <u>it is defined Defined</u> in the National Formulary or the United States Pharmacopeia, or any supplement to them.
- (3236) NON-ABSORBENT CONTAINER ismeans a container made of nonporous material, which does not allow the migration of the liquid solvent through it.
- (3337) NON-ATOMIZED SOLVENT FLOW ismeans the use of a solventSolvent Cleaning Material in the form of a liquid stream without atomization to remove uncured adhesives, uncured inks, uncured coatings, and contaminants from an article.
- (3438) NON-LEAKING CONTAINER <u>ismeans</u> a container <u>that can hold liquids</u> without leaking even when it is held upside-downwithout liquid leak.
- (3539) ON-PRESS COMPONENT ismeans a part, component, or accessory of a pressPress that is cleaned while still being physically attached to the pressPress.
- (3640) ON-PRESS SCREEN CLEANING ismeans a solvent cleaning activity Solvent Cleaning Activity carried out during pressPress runs in

- screen printing operation to remove excess inks and contaminants from a screen that is still attached to the pressPress.
- (41) OZONE GENERATOR means a device that produces ozone gas that is used to disinfect water during the water treatment process at a Water Distribution Facility.
- (3742) PACKAGING PRINTING ismeans 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.
- (3843) PERSON ismeans any firm, business establishment, association, partnership, corporation or individual, whether acting as principal, agent, employee, or other capacity including any governmental entity or charitable organization.
- (3944) PHARMACEUTICAL PRODUCT <u>ismeans</u> 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.
- (4045) PHOTOCURABLE RESIN <u>ismeans</u> 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.
- (4147) PRINTING, in the graphic arts, is means any operation that imparts color, design, alphabet, or numerals on a substrate in Graphic Arts.
- (48) PUBLIC WATER DISTRIBUTION SYSTEM means a system for the provision of water for human consumption through pipes or other constructed conveyances that has 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,

 $PW-MIR = (Wtd-MIR)_1 + (Wtd-MIR)_2 + ... + (WtdMIR)_n$

where,

MIR = ingredient MIR; and

1,2,3,...,n = each ingredient in the product up to the total n ingredients in the product.

- (4250) RADIATION-EFFECT COATING ismeans a material that prevents radar detection.
- (4351) REMOTE RESERVOIR CLEANER ismeans 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.
- (4452) REMOVABLE PRESS COMPONENT is means a part, component, or accessory of a pressPress that is physically attached to the pressPress but is disassembled and removed from the pressPress prior to being cleaned.

 Removable Press Components do not include Rollers plates, blankets, metering rollers, dampening rollers, ink trays, printing plates, fountains, impression cylinders and plates shall not be considered as removable press components.
- (45<u>53</u>) REPAIR CLEANING <u>ismeans</u> a <u>solvent cleaning operation or</u> <u>activitySolvent Cleaning Activity</u> carried out during a repair process.
- (4654) REPAIR PROCESS <u>ismeans</u> the process of returning a damaged object or an object not operating properly to good condition.
- (47<u>55</u>) ROLLER WASH <u>ismeans</u> a <u>solventSolvent Cleaner</u> used to remove ink from the rollers of a <u>pressPress</u>.
- (4856) SCIENTIFIC INSTRUMENT <u>ismeans</u> 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.
- (4957) SCREEN PRINTING ismeans 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.
- (5058) SCREEN RECLAMATION <u>ismeans</u> a <u>solvent cleaning activitySolvent</u>

 <u>Cleaning Activity</u> carried out in screen printing operation where the screen is completely cleaned for recycling or reuse of the screen for other production runs.
- (5159) SOLVENT <u>CLEANER OR SOLVENT CLEANING MATERIAL</u> is means a <u>VOC containing</u> liquid <u>substance</u> used to perform solvent cleaning <u>Solvent Cleaning</u>.
- (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.
- (5261) SOLVENT CLEANING ismeans the use of a Solvent Cleaner or Solvent Cleaning Material for the removal of loosely held uncured adhesives, uncured inks, uncured coatings, and contaminants whichthat 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 eleaning in a cleaning process, which consists of a series of cleaning methods, shall constitute a separate solvent cleaningSolvent Cleaning operationActivity.
- (62) SOLVENT CLEANING ACTIVITY means a distinct method of cleaning, or a series of distinct cleaning methods, 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.
- (5364) SOLVENT FLUSHING ismeans 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.

- (54) SOLVENT SUPPLIER is any person who sells and delivers or arranges to deliver solvent cleaning materials to a solvent cleaning operation subject to this regulationrule.
- (5565) STEREOLITHOGRAPHY is means a type of printing process that employs a system using a light to solidify photocurable resins in a desired configuration in order to produce a 3three-dimensional object.
- (66) 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).
- (5667) SPECIALTY FLEXOGRAPHIC PRINTING ismeans flexographic printing Flexographic Printing on polyethylene or polypropylene food packaging, fertilizer bags, or liquid-tight food containers.
- (5768) STERILIZATION INDICATING INK is means an ink that changes color to indicate that sterilization has occurred, which. Such ink is used to monitor the sterilization of medical instruments, autoclave efficiency, and the thermal processing of foods for prevention of spoilage.
- (5869) STRIPPING ismeans the removal of cured coatings, cured inks, or cured adhesives.
- (5970) SURFACE PREPARATION <u>ismeans</u> 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.
- (60) ULTRAVIOLET INK is an ink that dries by polymerization reaction induced by ultraviolet energy.
- (72) ULTRAVIOLET STERILIZATION is means the process of disinfecting water by exposing it to ultraviolet light as part of the water treatment process at a public water distribution utility facility Water Distribution Facility.
- (6173) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102.
- (74) WATER DISTRIBUTION FACILITY means one of several public entities that control water distribution in California and that is responsible for water delivery operations, wastewater treatment and management, sewage treatment and management, or water reclamation.

(62) WIPE CLEANING is the method of cleaning a surface by physically rubbing it with a material such as a rag, paper, sponge or a cotton swab moistened with a solvent.

(e)(d) Requirements

(1) Solvent Requirements 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:

A person shall not use a solvent to perform solvent cleaning operations unless the solvent complies with the applicable requirements set forth below:

SOLVENT CLEANING ACTIVITY	CURRENT LIMITS* VOC g/1 (lb/gal)	EFFECTIVE 1/1/2010 VOC g/1 (lb/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)	
(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)	
(iii) Medical Devices & Pharmaceuticals		
(A) Tools, Equipment, & Machinery	800 (6.7)	
(B) General Work Surfaces	600 (5.0)	
SOLVENT CLEANING ACTIVITY (cont.)	CURRENT LIMITS* VOC g/4 (lb/gal)	EFFECTIVE 1/1/2010 VOC g/1 (lb/gal)
(C) Cleaning of Coatings or Adhesives Application Equipment	25 (0.21)	

(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 Letter Press 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) Ultraviolet Ink/ Electron Beam Ink Application Equipment (except screen printing)	100 (0.83)	
(vii) Specialty Flexographic Printing	100 (0.83)	
(E) Cleaning of Polyester Resin Application Equipment	25 (0.21)	

^{*} The specified limits remain in effect unless revised limits are listed in subsequent columns.

Table 1 – Table of Standards VOC Content Limits

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

- (2) Cleaning Devices and Methods Requirements
 - A person shall not perform solvent cleaningSolvent 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 hand—held spray bottles from which solvents Solvent Cleaners are applied without a propellant-induced force;
 - (C) Cleaning equipment whichthat has a solventSolvent Cleaner container that can be closed, and is closed during cleaning operationsSolvent 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) Cleaning device which is listed in the Office of Operations' manual "Alternative Devices for Rule 1171 Compliance" dated. The Executive Officer shall periodically update the manual to identify any additional cleaning devices determined by the Executive Officer to result in equivalent or lower emissions; the manual to identify any additional cleaning devices determined by the Executive Officer to result in equivalent or lower emissions;
 - (E)(D) Remote reservoir Reservoir cleaner used pursuant to the provisions of paragraph (e)(d)(3);
 - (F)(E) Non-atomized solvent Solvent flow Flow method where the cleaning solvent Solvent Cleaner is collected in a container or a collection system which that is closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container; or
 - (G)(F) Solvent flushing, which is a Solvent Cleaning Activity method where the cleaning solventa Solvent Cleaner is used to remove uncured adhesives, uncured inks, uncured coatings, or contaminants from the internal surfaces and passages of equipment by flushing solvent through the equipment, and is discharged into a container which that is closed except for solvent Solvent Cleaner collection

openings and, if necessary, openings to avoid excessive pressure build-up inside the container. —The discharged solventSolvent Cleaning Material from the equipment must be collected into containers without atomizing into the open air. -The solventSolvent Cleaning Material may be flushed through the system by air or hydraulic pressure, or by pumping.

(3) Remote Reservoir Cleaners

Any person owning or operating a remote reservoir cleaner Remote Reservoir Cleaner shall comply with all of the following requirements in addition to the applicable VOC limits specified in paragraph $\frac{(e)(d)}{(1)}$:

- (A) Prevent solvent Solvent Cleaner vapors from escaping from the solvent 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 Solvent Cleaner flow in a manner that will prevent liquid solvent Solvent Cleaning Material from splashing outside of the remote reservoir cleaner Remote Reservoir Cleaner;
- (C) Do not Not clean porous or absorbent materials, such as cloth, leather, wood, or rope; and
- (D) Use only—solvent 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 solventSolvent Cleaning Materials and shut down until it is replaced or repaired.

(4) Storage and Disposal

All VOC-containing solvents Solvent Cleaning Materials used in solvent cleaning operations Solvent Cleaning Activities listed in paragraph (d)(1) shall be stored in non-absorbent Non-Absorbent, non-leaking Non-Leaking containers, which shall be kept closed at all times except when filling or emptying. It is recommended that cloth Cloth and paper moistened with VOC-containing solvents Solvent Cleaning Materials must be stored in closed, non-absorbent Non-Absorbent, non-leaking Non-Leaking containers.

(5) Labeling

Any person who sells or offers for sale Solvent Cleaning Materials for use in the South Coast AQMD shall comply with the provisions of Rule 443.1 – Labeling of Materials Containing Organic Solvents.

- (e) (5) Alternative Compliance Options Control Equipment
 - (1) In lieu of complying with the requirements in paragraphs (e)(d)(1) or (e)(d)(2), a person may comply by using a VOC emission collection and control system Emission Control System in association with the solvent cleaning operation Solvent Cleaning Activities provided the Emission Control System:
 - (A) the emission control system shall collect Collects at least 90 percent, by weight, of the emissions generated by the solvent cleaning operation Solvent Cleaning Activities; and
 - (i) <u>have Has</u> a destruction efficiency of at least 95 percent, by weight, or
 - (ii) have <u>Has</u> an output of less than 50 parts per million (PPM) calculated as carbon with no dilution; or
 - (B) the emission control system meets Meets the requirements of the applicable source specific rule of the District's South Coast AQMD Regulation XI-; or
 - (C) The collection system for For cleaning in graphic arts Graphic Arts and screen printing Screen Printing and cleaning of application equipment used for graphic arts Graphic Arts materials and screen printing Screen Printing materials:
 - (i) , shall eCollect at least 70 percent, by weight, of the emissions generated;; and
 - <u>(ii)</u> This control system shall reduce Reduce emissions from the emission collection system by at least 95 percent by weight.
 - (2) Alternative Limits for Electricity and Water Utilities

 Facilities conducting Solvent Cleaning Activities for the following equipment listed in Table 2 that are operated at Electricity Generating Facilities, Electricity Distributing Utilities, or Water Distribution Facilities 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 less than those listed in Table 2; and
- (C) The Facility maintains monthly purchase and usage records on-site for a minimum of five years.

Table 2 – Alternative Usage and MIR Limits

Solvent Cleaning Activity	Usage Limits (gallons per year)	PW-MIR	
(A) Electricity Generating or Distribution Equipment			
(i) Circuit Breakers and Circuit Breaker <u>Components</u>	<u>70</u>	0.6	
(B) Water Distribution Equipment			
(i) Chlorination Systems	<u>5</u>	<u>1.5</u>	
(ii) Ozone Generators	<u>30</u>	<u>0.6</u>	

(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 volumetric usage limit(s) listed in Table 3;
- (B) The Facility maintains monthly purchase and usage records on-site for a minimum of five years; and
- (C) The use of such products complies with California Air Resources
 Board (CARB) regulations.

<u>Table 3 – Aerosol Solvent Cleaner Usage Limits</u>

Solvent Cleaning Activity	<u>Usage Limits</u>	
(A) Cleaning of Automotive Parts		
(i) Throttle Body and Intake Systems	4,800 fluid ounces per month	
(ii) All Other Automotive Part Cleaning	32 fluid ounces per month	
(B) All Others Solvent Cleaning Activities	160 fluid ounce per year	

(6) Recordkeeping Requirements

Records shall be maintained pursuant to Rule 109 for all applications subject to this rule, including those exempted under paragraphs (g)(3)_through (g)(11), except facilities required to keep records of VOC used pursuant to any other Regulation XI rules.

- (7) Any solvent supplier supplying solvent cleaning material for use by a solvent cleaning operation in the District, shall upon request by the Executive Officer, provide in a District approved electronic format, the following information: product name of the supplied solvent cleaning material; the name and address of the solvent cleaning operation that the product was supplied to; dates and quantities in which the product was supplied during the time period specified by the Executive Officer; and the VOC content of the product as supplied. The solvent supplier shall maintain records necessary to provide this required information for three (3) years.
- (8) The operator shall maintain at all times, and make available to the Executive officer upon request, the correct written dilution instructions for each solvent cleaning material if dilution is necessary to meet the applicable VOC limits in this rule. A solvent supplier providing solvent cleaning material for use by a solvent cleaning operation in the District shall supply to the operator, upon the operator's request, the correct written dilution instructions for each supplied solvent cleaning material.
- (9) Any person who sells or offers for sale solvent cleaning materials for use in the District shall comply with the provisions of Rule 443.1 Labeling of Materials Containing Organic Solvents.

(d)(f) General Prohibitions

- (1) A person shall not atomize any solvent Solvent Cleaner unless it is vented to an air pollution control equipment Emission Control Equipment, which that meets the requirements of paragraph (e)(5)(e)(1).
- (2) A person shall not specify or require any person to use <u>a solventSolvent</u> <u>Cleaner</u> or equipment subject to the provisions of this rule that does not meet the requirements of this rule.
- (3) <u>Carcinogenic Materials and Exempt Compounds</u>
 A person shall not perform solvent cleaning activities <u>Solvent Cleaning</u>
 Activities or operations subject to the provisions of this rule with any

material which that contains any of the following chemicals in concentrations greater than the limits indicated:

- (A) 0.01 percent by weight of Group II exempt compounds listed in Rule

 102 Exempt Compounds—, except cyclic, branched, or linear, completely methylated siloxanes (VMS);
- (B) 0.1 percent by weight of any combination of VMS; or
- (C) 0.01 percent by weight of para-Chlorobenzotrifluoride (pCBtF), CAS 98-56-6, or tertiary-Butyl Acetate (t-BAc), CAS 540-88-5, beginning January 1, 2026.
- (4) 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.
- (5) No full service solvent Solvent Cleaner provider Supplier shall aid, abet or assist a facility or solvent cleaning operation any person to use a supplied solvent Solvent Cleaner in a non-compliant manner that does not meet the requirements of this rule.
- (6) No Solvent Cleaner shall be used when documentation cannot be provided pursuant to paragraph (g)(2) for that Solvent Cleaner.
- (7) 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 shall not be kept on-site, unless the Facility is complying with the paragraph (e)(1) Alternative Compliance Option using an Emission Control System.

(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 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) Documentation shall be maintained onsite for all Solvent Cleaning

 Materials used, and made available to the Executive Officer upon request,
 that includes but is not limited to the following:

- (A) Product name of each Solvent Cleaner used;
- (B) Name and address of the supplier for each Solvent Cleaner used;
- (C) Dates and quantities in which each Solvent Cleaner was supplied during the time period specified by the Executive Officer; and
- (D) VOC content of each Solvent Cleaner as supplied.
- (3) Any Solvent Cleaner Supplier supplying Solvent Cleaning Materials for use in the South Coast AQMD, shall maintain the following records for three 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 shall maintain at all times, and make available to the Executive Officer upon request, the correct written dilution instructions for each 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.

(e)(h) Test Methods

For the purpose of this rule, the following test methods shall be used. Other test methods determined to be equivalent after review by the staffs of the District, the California Air Resources Board, and the United States Environmental Protection Agency, and approved in writing by the District Executive Officer may also be used.

(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 Mater
 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;).; The exempt compounds' content shall be
 determined by the South Coast Air Quality Management District's
 (SCAQMD) Method 303 (Determination of Exempt Compounds)
 contained in the SCAQMD "Laboratory Methods of Analysis for
 Enforcement Samples" manual; or,
- (B) SCAQMD South Coast AQMD Test Method 304 {Determination of Volatile Organic Compounds (VOC) in Various Materials} contained in the SCAQMD—"Laboratory Methods of Analysis for Enforcement Samples" manual.; or
- (C) South Coast AQMD Test Method 313 Determination of Volatile

 Organic Compounds (VOC) by Gas Chromatography—Mass

 Spectrometry/Mass Spectrometry/Flame Ionization Detection
 (GC/MS/FID).

(C)(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) eyelieCyclic, branched, or linear, completely fluorinated alkanes;
- (B) eyelieCyclic, branched, or linear, completely fluorinated ethers with no unsaturations;
- (C) eyelieCyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and
- (D) <u>sulfurSulfur</u>-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

 will be analyzed as exempt compounds for compliance with subdivision (c), only when manufacturers specify which individual compounds are used in the solvent formulation and identify the

United States Environmental Protection Agency, California Air Resources Board, and the District approved test methods used to quantify the amount of each exempt compound.

(2) Determination of Presence of VOC in Cleaning Materials

The presence of VOC in the headspace over the cleaning material shall be determined by SCAQMD Test Method 313 [Determination of Presence of Volatile Organic Compounds (VOC) in a Headspace] contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

The presence of VOC in liquid cleaning materials shall be determined by SCAQMD Method 308 (Quantitation of Compounds by Gas Chromatography) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

- (3)(4) Determination of Efficiency of Emission Control Systems
- (A) The 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 an emission control system of the collection device in the Emission Control System by using as specified in subparagraph (c)(5)(A) shall be determined by verifying the use of a Permanent Total Enclosure (PTE) and 100% capture efficiency as defined by:
 - (i) -South Coast AQMD's "Protocol for Determination of

 Volatile Organic Compounds (VOC) Capture

 Efficiency," USEPA Method 204, "Criteria for and

 Verification of a Permanent or Temporary Total

 Enclosure."; or
 - (ii) Any other method approved by the U.S. EPA, CARB, and the South Coast AQMD Executive Officer.—Alternatively, iIf a USEPA Method 204 defined PTE is not employed, capture efficiency shall be determined using a minimum of three sampling runs subject to data quality criteria presented in the USEPA technical guidance document "Guidelines for Determining—Capture—Efficiency, January—9, 1995." Individual capture efficiency test runs subject to the USEPA technical guidelines shall be determined by:

- (iA) The Temporary Total Enclosure (TTE) approach of USEPA Methods 204 through 204F, June 4, 1997; or
- (ii<u>B</u>) The District "Protocol for Determination of Volatile Organic Compounds (VOC) Capture Efficiency," May 1995; and.
- (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.
- (B) The control equipment efficiency of an emission control system as specified in subparagraph (c)(5)(A), on a mass emissions basis, and the VOC concentrations in the exhaust gases, measured and calculated as carbon, shall be determined by USEPA 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. USEPA Test Method 18, or ARB Method 422 shall be used to determine emissions of exempt compounds.

(5) 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.

(4)(6) 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.

(5)(7) All test methods referenced in this section shall be the most recently approved version.

(f)(i) Rule 442 Applicability

Any <u>solvent Solvent Cleaner</u>, <u>Solvent Cleaning Material</u>, <u>solvent cleaning activity Solvent Cleaning Activity</u>, <u>solvent cleaning unit operation Solvent Cleaning Operation</u>, or <u>personPerson</u>, <u>which that</u> is exempt from all or a portion of this rule except paragraph $\frac{(e)(6)(g)(1)}{(e)(6)(g)(1)}$, shall be subject to the applicable requirements of the applicable Regulation XI source specific rule or Rule 442 - Usage of Solvent.

(g)(j) Exemptions

- The provisions of this rule recordkeeping provisions in subdivision (g), except (c)(1), Solvent Requirements—shall not apply to eleaning operationsSolvent Cleaning Activities using a solventSolvent 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 provision of paragraph (e)(1)(d)(1) for any Solvent Cleaning Activities occurring, Solvent Requirements, then for a period of three years following the date of such violation, the recordkeeping requirements in paragraph (e)(6) subdivision (g) Recordkeeping Requirements, shall apply to the facility at which the violation occurred.
- (2) The following solvent cleaning operations or activities Solvent Cleaning Activities are not subject to any provision of this rule:
 - (A) Cleaning carried out in batch loaded cold cleaners, vapor degreasers, conveyorized degreasers, or motion picture film cleaning equipment.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, andor 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 application equipment cleaning, and storage and disposal of VOCcontaining materials used in solvent cleaningSolvent Cleaning operationsActivities.
- (E) Cleaning operations subject to Rule 1141 Control of Volatile
 Organic Compound Emissions from Resin Manufacturing, and Rule
 1141.1 Coatings and Ink Manufacturing.:
- (F) Janitorial cleaning, including graffiti removal-:
- (G) Stripping of cured coatings, cured ink, or cured adhesives-; and
- (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.
- (3) The VOC limits in Provisions of paragraph (e)(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-:

- (H) Cleaning of adhesive application equipment used for thin metal laminating operations provided the clean up solvent used contains no more than 950 grams of VOC per liter.
- (I) Cleaning of electronic or electrical cables provided the clean up solvent used contains no more than 400 grams of VOC per liter.
- (J) Touch up cleaning performed on printed circuit boards where surface mounted devices have already been attached provided that the solvent used contains no more than 800 grams of VOC per liter.
- (4) Cleaning with aerosol products shall not be subject to the provisions of paragraph (c)(1) and paragraph (d)(1) if 160 fluid ounces or less of non-compliant aerosol products are used per day, per facility. The use of such product shall comply with CARB regulations.
- (54) The provisions of VOC limit in subparagraph (e)(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 3 three gallons per day of ethyl acetate averaged over a 30-calendar day period-:
 - (B) Cleaning of application equipment Application Equipment used to apply coatings on satellites and radiation effect coatings.; and
 - (C) The eCleaning of solvent-based fluoropolymer coating application equipmentApplication Equipment, used to apply solvent-based fluoropolymer coatings provided the clean-up solvent used for such cleaning contains no more than 900 grams of VOC per literprovided less than one gallon per day of Solvent Cleaning Materials is used.
- (65) The provisions of VOC limit in subparagraph (e)(d)(1)(D) shall not apply to persons or facilities using less than 1.5 gallons per day of solvents Solvent Cleaning Materials to clean sterilization indicating ink application equipment Application Equipment.
- (7) Until January 1, 2010, the provisions of (c)(1)(D)(v) shall not apply to onpress cleaning of screens provided the clean up solvent used for such cleaning activity contains no more than 300 grams of VOC per liter.
- (8) Until January 1, 2010, the provisions of (c)(1)(D)(vi) shall not apply to the cleaning of ultraviolet or electron beam lamps and reflectors used for the curing of ultraviolet or electron beam (UV/EB) ink or coatings, and cleaning of metering rollers, dampening rollers and printing plates in UV/EB ink

- application equipment, provided the clean-up solvent used for such cleaning contains no more than 800 grams of VOC per liter.
- (9)(6) The Provisions provisions of paragraph (d)(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 (c)(d)(2)(B).
 - (C) Printing operations where the roller Roller Wash or blanket washBlanket Wash is applied automatically.
- (10) The provisions of this rule shall not apply to 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.