Air Pollution Control Board

San Diego County Air Pollution Control District

AGENDA ITEM

DATE: **February 10, 2021**

AP04

TO: Air Pollution Control Board

SUBJECT

NOTICED PUBLIC HEARING - ADOPTION OF AMENDMENTS TO RULE 67.6.1 – COLD SOLVENT CLEANING AND STRIPPING OPERATIONS AND RULE 67.6.2 - VAPOR DEGREASING OPERATIONS (DISTRICTS: ALL)

OVERVIEW

The San Diego County Air Pollution Control District (District) is responsible, under federal and state law, for controlling and reducing air pollution from stationary (fixed) sources including power plants, industrial facilities, and certain activities such as paint application or the use of industrial solvents. Accordingly, the District prepares, adopts, and enforces rules that set limits on the amount of air pollutants emitted from these types of sources and/or by requiring specific emission control technologies. The District submits its adopted rules to the California Air Resources Board (CARB) and to the U.S. Environmental Protection Agency (EPA) for review and approval as meeting state and federal requirements.

Today's request is for the Air Pollution Control Board (Board) to adopt proposed amendments to Rule 67.6.1 (Cold Solvent Cleaning and Stripping Operations) and Rule 67.6.2 (Vapor Degreasing Operations). The rules were adopted on May 23, 2007 (AP2) and require sources to control and reduce vapors emitted into the air from certain solvent cleaning operations. These vapors contain volatile organic compounds (VOC) that contribute to the formation of ozone pollution. When inhaled, ozone irritates our lungs and can trigger health problems such as chest pain, coughing and shortness of breath.

Rules 67.6.1 and 67.6.2 apply specifically to solvent cleaning equipment categorized as cold cleaners, paint strippers or vapor degreasers. They are commonly used at various facilities such as automotive repair, military installations, and electronics manufacturing to remove grease, oils, paints and other substances from various items.

On October 30, 2019 (AP02), the District amended Rule 11 (Exemptions from Rule 10 Permitting Requirements) exempting from permit requirements solvent cleaning operations that emit negligible amounts of air pollutants. The rule amendments allowed facilities with very low-emitting solvent cleaning operations to retire their corresponding permits, which were no longer required. Rules 67.6.1 and 67.6.2 are now proposed for amendment to align with current Rule 11

and ensure that solvent cleaning operations with negligible emissions, which are already exempt from permit requirements, are also exempt from these rules.

In addition, in December 2020, the EPA indicated that an existing reference in Rule 67.6.1 to a separate federal regulation was unnecessary and should be removed. Today's proposal, if adopted, provides the necessary rule update.

The proposed rule amendments are consistent with requirements already in place in other California air districts. They were developed with input from the EPA, CARB, and the public. District staff conducted direct outreach to affected facilities and other stakeholders including conducting a public workshop. No concerns with the proposal were raised to the District.

RECOMMENDATION(S)
AIR POLLUTION CONTROL OFFICER

1. Find that the adoption of proposed amended Rule 67.6.1 – Cold Solvent Cleaning and Stripping Operations and Rule 67.6.2 – Vapor Degreasing Operations are categorically exempt from the provisions of the California Environmental Quality Act pursuant to California Code of Regulations, Title 14, Section 15308, as an action taken to assure the protection of the environment, where the regulatory process involves procedures for protection of the environment, and pursuant to California Code of Regulations, Title 14, Section 15061(b)(3), since it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment.

2. Adopt the Resolution entitled: RESOLUTION ADOPTING AMENDMENTS TO RULE 67.6.1 – COLD SOLVENT CLEANING AND STRIPPING OPERATIONS AND TO RULE 67.6.2 – VAPOR DEGREASING OPERATIONS, OF REGULATION IV OF THE RULES AND REGULATIONS OF THE SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT.

FISCAL IMPACT
There is no fiscal impact associated with the recommended actions. There will be no change in net General Fund cost and no additional staff years.

BUSINESS IMPACT STATEMENT
The proposed amendments to Rules 67.6.1 and 67.6.2 align with the provisions in recently amended Rule 11 (Exemptions from Rule 10 Permitting Requirements) and help ensure that negligible sources of air pollutant emissions are not subject to permits or associated rule requirements and thus will increase business confidence while preserving the environment.

ADVISORY BOARD STATEMENT
At its meeting on November 10, 2020, with a quorum present, the Air Pollution Control District Advisory Committee voted in support of staff's recommendations. No concerns with the proposal were raised to the District by Advisory Committee members.

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BACKGROUND

The San Diego region does not meet the California and National Ambient Air Quality Standards for ozone, and therefore is classified as an ozone nonattainment area. Both federal and state laws require the San Diego County Air Pollution Control District (District) to adopt and implement rules to further control and reduce ozone-forming emissions, specifically volatile organic compounds (VOC). Additionally, federal and state law requires the District to periodically update its rules to reflect advancements in air pollution control technology, and the proposed rule amendments are the result of these requirements.

Existing Rules 67.6.1 and 67.6.2 were adopted in 2007, and control VOC emissions from cold solvent cleaning and stripping operations, and vapor degreasing operations, respectively. These solvent cleaning operations are commonly used at different types of facilities such as automotive repair, military installations, and electronics manufacturing. The rules were approved by the Environmental Protection Agency (EPA) and are included in the State Implementation Plan (SIP) to attain and maintain national ambient air quality standards in the San Diego region.

The proposed amendments to Rules 67.6.1 and 67.6.2 make the rules consistent with provisions in recently amended Rule 11 (Exemptions from Rule 10 Permitting Requirements). The proposed amendments lower the solvent exemption limit from 50 grams of VOC per liter water-based to 25 grams of VOC per liter, thereby exempting from rule requirements degreasers with low or no VOC emissions. The proposed amendments also remove an unnecessary reference to a separate federal regulation as requested by the EPA. The EPA clarified that the referenced federal regulation is not included in the SIP and should not be referenced in District rules. The removal of this reference will not impact facilities and will enable EPA approval of the rules.

If adopted, proposed amended Rule 67.6.1 and Rule 67.6.2 will be submitted to the California Air Resources Board (CARB) and the EPA for approval into the SIP. The rules will take effect upon adoption by the Board.

Customer/Stakeholder Notification

District staff conducted a public workshop on November 28, 2018 to gather input on the proposed changes to Rules 67.6.1 and 67.6.2 from affected parties. A workshop notice was posted on the District's website and sent to approximately 5,000 recipients including each air quality permit holder and chamber of commerce in the region, members of the Air Pollution Control District Advisory Committee, subscribers to the County's email notification service, the EPA, and CARB.

The workshop was attended by 45 people, including industry representatives. District staff did not receive any comments from affected parties on the proposed amendments to Rules 67.6.1 and 67.6.2. The EPA provided comments that are addressed in this proposal. District staff prepared responses to address EPA’s comments, which were provided to the workshop participants and all affected permit holders in a Workshop Report (Attachment D).

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SOCIOECONOMIC IMPACT ASSESSMENT

State law requires the District to perform an assessment of the socioeconomic impacts when adopting, amending, or repealing a rule that will significantly affect air quality or emissions limitations. A review conducted by District staff found that the proposed amendments to Rules 67.6.1 and 67.6.2 will not significantly affect air quality or emissions limitations. Accordingly, a socioeconomic impact assessment is not required and has not been prepared.

ENVIRONMENTAL STATEMENT

The California Environmental Quality Act (CEQA) requires an environmental review for certain actions. The District has conducted a review of whether CEQA applies to the adoption of the proposed amendments to Rules 67.6.1 and 67.6.2. The proposed rule amendments are required by federal and State law, which calls for adoption of every feasible control measure to accelerate progress toward achieving the ambient air quality standard for ozone. Proposed amended Rule 67.6.1 and Rule 67.6.2 will not significantly affect air quality or emission limitations. Therefore, District staff determined that the adoption of the proposed amendments to Rule 67.6.1 and Rule 67.6.2 are exempt from the provisions of CEQA pursuant to California Code of Regulations, Title 14, Section 15308, as an action taken to assure the protection of the environment, and pursuant to Section 15061(b)(3), since it can be seen with certainty that there is no possibility that the activity in question may have a significant adverse effect on the environment.

LINKAGE TO THE COUNTY OF SAN DIEGO STRATEGIC PLAN

Today's proposed actions support the Sustainable Environments/Thriving Initiative in the County of San Diego's 2021-2026 Strategic Plan with an objective to provide and promote services that increase and maintain the well-being of residents and increase consumer and business confidence. The proposed amendments to Rule 67.6.1 and Rule 67.6.2 will help ensure that negligible sources of air pollutant emissions are not subject to permits or associated rule requirements and thus will increase business confidence while preserving the environment.

Respectfully submitted,

SARAH E. AGHASSI
Deputy Chief Administrative Officer

ROBERT REIDER
Interim Air Pollution Control Officer

ATTACHMENT(S)

Attachment A – Resolution Adopting Amendments to Rule 67.6.1 – Cold Solvent Cleaning and Stripping Operations and to Rule 67.6.2 – Vapor Degreasing Operations, of Regulation IV of the Rules and Regulations of the San Diego County Air Pollution Control District
Attachment B – Comparative Analysis
Attachment C – Incremental Cost-Effectiveness Analysis
Attachment D – Workshop Report

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Attachment E – Rule 67.6.1 – Cold Solvent Cleaning and Stripping Operations Change Copy
Attachment F – Rule 67.6.2 – Vapor Degreasing Operations Change Copy

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AGENDA ITEM INFORMATION SHEET

REQUIRES FOUR VOTES: ☐ Yes ☒ No

WRITTEN DISCLOSURE PER COUNTY CHARTER SECTION 1000.1 REQUIRED
☐ Yes ☒ No

PREVIOUS RELEVANT BOARD ACTIONS:
May 23, 2007 (AP02) Adoption of new Rule 67.6.1 – Cold Solvent Cleaning and Stripping Operations and new Rule 67.6.2 – Vapor Degreasing Operations

BOARD POLICIES APPLICABLE:
N/A

BOARD POLICY STATEMENTS:
N/A

MANDATORY COMPLIANCE:
N/A

ORACLE AWARD NUMBER(S) AND CONTRACT AND/OR REQUISITION NUMBER(S):
N/A

ORIGINATING DEPARTMENT: Air Pollution Control District

OTHER CONCURRENCE(S): None

CONTACT PERSON(S):

Robert Reider	Angela M. Fisch
Name	Name
(858) 586-2700	(858) 586-2753
Phone	Phone
Robert.Reider@sdcounty.ca.gov	Angela.Fisch@sdcounty.ca.gov
E-mail	E-mail

Resolution No: 21-021
Meeting Date: 02/10/2021 (AP4)

RESOLUTION ADOPTING AMENDMENTS TO RULE 67.6.1 – COLD SOLVENT CLEANING AND STRIPPING OPERATIONS AND TO RULE 67.6.2 – VAPOR DEGREASING OPERATIONS, OF REGULATION IV OF THE RULES AND REGULATIONS OF THE SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT

On motion of Member Anderson, seconded by Member Lawson-Remer, the following resolution is adopted:

WHEREAS, the San Diego County Air Pollution Control Board (Board), pursuant to Section 40702 of the Health and Safety Code, adopted Rules and Regulations of the Air Pollution Control District of San Diego County; and

WHEREAS, said Board now desires to amend said Rules and Regulations; and

WHEREAS, notice has been given and a public hearing has been held relating to the amendment of said Rules and Regulations pursuant to Section 40725 of the Health and Safety Code and Section 51.102 of Title 40 of the Code of Federal Regulations; and

WHEREAS, pursuant to Section 40727 of the Health and Safety Code, the San Diego County Air Pollution Control Board makes the following findings:

(1) (Necessity) The adoption of proposed amended Rule 67.6.1 and Rule 67.6.2 is necessary in order to implement federal requirements for Reasonably Available Control Technology and state requirements for all feasible control measures to achieve the ambient air quality standards for ozone in San Diego County;

(2) (Authority) The adoption of proposed amended Rule 67.6.1 and Rule 67.6.2 is authorized by Health and Safety Code Section 40702;

(3) (Clarity) Proposed amended Rule 67.6.1 and Rule 67.6.2 can be easily understood by persons directly affected by it;

(4) (Consistency) The adoption of proposed amended Rule 67.6.1 and Rule 67.6.2 is in harmony with, and not in conflict with or contrary to, existing statutes, court decisions, and state and federal regulations;

(5) (Non-duplication) The adoption of proposed amended Rule 67.6.1 and Rule 67.6.2 will not duplicate existing District, state, or federal requirements;

(6) (Reference) The adoption of proposed amended Rule 67.6.1 and Rule 67.6.2 is necessary to comply with: federal law, Clean Air Action Section 182(b)(2), which requires implementation of Reasonably Available Control Technology on stationary sources of volatile organic compound emissions; and state law, California Health and Safety Code Section 40914(b)(2), which requires adoption of every feasible control measure to reduce ozone-precursor emissions;

WHEREAS, the Board further finds pursuant to Health and Safety Code Section 40001 that adoption of proposed amended Rule 67.6.1 and Rule 67.6.2 will facilitate the attainment of ambient air quality standards; and

WHEREAS, the Board further finds that an analysis comparing proposed amended Rule 67.6.1 and Rule 67.6.2 with applicable requirements of federal and local regulations has been prepared pursuant to Health and Safety Code Section 40727.2; and

WHEREAS, the Board further finds that an incremental cost-effectiveness analysis pursuant to Health and Safety Code Section 40920.6(a) has been prepared for proposed amended Rule 67.6.1 and Rule 67.6.2 and has been made available for public review and comment, and has been actively considered; and

WHEREAS, the Board further finds that proposed amended Rule 67.6.1 and Rule 67.6.2 only adopt requirements that are substantially similar to, or required by, state or federal statutes, regulations, or formal guidance documents, and as such, the socioeconomic analysis required pursuant to Health and Safety Code section 40728.5 is not required to analyze the impact of the adoption of proposed amended Rule 67.6.1 and Rule 67.6.2 on employment and the economy of the region, or the availability and cost-effectiveness of alternatives to proposed amended Rule 67.6.1 and Rule 67.6.2.

NOW THEREFORE IT IS RESOLVED AND ORDERED by the San Diego County Air Pollution Control Board that the Rules and Regulations of the Air Pollution Control District of San Diego County be, and hereby are amended as follows:

1. Proposed amended Rule 67.6.1 is to read as follows:

RULE 67.6.1 COLD SOLVENT CLEANING AND STRIPPING OPERATIONS
(Rev. Adopted & Effective February 10, 2021)

(a) **APPLICABILITY**

(1) Except as provided in Section (b), this rule is applicable to all cold solvent cleaning and all stripping operations.

(2) Any cleaning of application equipment is not subject to this rule.

(3) Any dry cleaning operation subject to or exempt from the *Airborne Toxic Control Measure for Emissions of Perchloroethylene from Dry Cleaning Operations* or subject to or exempt from Rule 67.2 – Dry Cleaning Equipment Using Petroleum Based Solvents is not subject to this rule.

(4) Wipe cleaning operations are not subject to this rule.

(5) Any cold solvent cleaning or stripping operation subject to or exempt from this rule is not subject to Rule 66.1 – Miscellaneous Surface Coating Operations and Other Processes Emitting Volatile Organic Compounds.

(b) **EXEMPTIONS**

(1) This rule shall not apply to the following:

(i) Non-immersion stripping operations subject to or exempt from Rules 67.9 – Aerospace Coating Operations or 67.11 – Wood Products Coating Operations.

(ii) Cold solvent cleaning or stripping operations conducted in any cold solvent tank or stripping tank with a liquid surface area of one square foot (0.09 square meters) or less, or with a capacity of one gallon (3.8 liters) or less.

(iii) Cold solvent cleaning operation conducted in any remote reservoir with a capacity of 1 gallon (3.8 liters) or less.

(iv) Cold solvent degreasers used exclusively for educational purposes. This exemption does not apply to degreasers used for other purposes at an educational institution.

(v) Cold solvent cleaning or stripping operations that exclusively utilize materials with a volatile organic compound (VOC) content of 25 grams per liter (g/l) (0.21 lbs/gal) of material or less, as used.

It shall be the responsibility of any person conducting such operations to keep a current list of all cleaning materials and the VOC content of each material, as used, to substantiate this exemption.

(2) Subsection (d)(1) shall not apply to cold solvent cleaning of electronic components, electrical components, medical devices, aerospace components, or precision optics components.

(c) **DEFINITIONS**

(1) **"Aerospace Component"** means any raw material, partial or completed fabricated part, assembly of parts, or completed unit of any aircraft, helicopter, missile, or space vehicle, including mockups, test panels and prototypes.

(2) **"Airless/Air-Tight Cleaning System"** means a system that consists of a sealed cold solvent cleaner and the devices to condense and recover solvent and emission control devices to remove solvent from all gas streams that vent to the atmosphere. The system must have no open solvent-air interface, and be designed and operated in such a manner as to prevent the discharge or leakage of solvent emissions to the atmosphere during all cleaning and drying operations.

(3) **"Application Equipment"** means equipment used to apply coatings, inks, adhesives, or resins including, but not limited to: spray guns, rollers, brushes, and printing presses.

(4) **"Batch-loaded Solvent Cleaner"** means a degreaser in which any material is placed in solvent for cleaning and removed as a single batch after the cleaning is finished. This does not include remote reservoir cleaners.

(5) **"CFR"** means Code of Federal Regulations.

(6) **"Cold Solvent Cleaning (Degreasing) Operation"** means any solvent cleaning that is conducted in a tank, drum, or other container and that uses non-boiling solvent to remove contaminants.

(7) **"Cured"** means the coating, ink, adhesive, or resin is dry to the touch.

(8) **"Degreaser"** means a tank, drum, or other container in which objects to be cleaned are exposed to a solvent, in order to remove contaminants. This includes batch-loaded solvent cleaners and remote reservoirs cleaners.

(9) **"Electrical Components"** means internal components 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, generators, transformers, and electric motors.

(10) **"Electronic Components"** means components or assemblies of components including, but not limited to, circuit card assemblies, printed wire assemblies, printed circuit boards, soldered joints, ground wires, bus bars, and other electrical fixtures, except for the cabinet in which the components are to be housed.

(11) **"Freeboard Height"** means:

(i) For batch-loaded solvent cleaners, the distance from the solvent-air interface to the top of the degreaser tank, based on inside tank dimensions.

(ii) For remote reservoir cleaners, the height from the bottom of the sink or work area to the top of the sink or work area.

(12) **"Freeboard Ratio"** means the freeboard height divided by the smaller of the interior length or width of the degreaser tank.

(13) **"Liquid Leak"** means any visible leak of a VOC-containing liquid at a rate in excess of three drops per minute.

(14) **"Liquid Surface Area"** means the area of interface between the liquid solvent available for dipping and the air which is contiguous with the outside of the solvent degreaser or stripping tank.

(15) **"Medical Device"** means an instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent or other similar article including any component or accessory, that is intended for use in the diagnosis of disease or other conditions or in the cure, mitigation, treatment, or prevention of disease, or is intended to affect the structure or any function of the body.

(16) **"New Cold Solvent Cleaning or Stripping Operation"** means any cold solvent cleaning or stripping operation for which a complete application for an Authority to Construct in San Diego County was submitted after *(date of adoption)*.

(17) **"Precision Optics Components"** means the components used to create high resolution images in optical devices. This does not include eye glasses.

(18) **"Remote Reservoir Cleaner"** means a degreaser that consists of a sink or working area and a separate solvent tank that is not accessible for soaking parts and is completely enclosed except for a solvent return opening, which allows used solvent to drain into it from the sink or work area.

(19) **"Sealing Fluid"** means a fluid that prevents evaporation of a stripping solvent by forming a liquid or solid layer on the solvent's surface.

(20) **"Solvent"** means any substance containing an organic compound or combination of organic compounds which is liquid at atmospheric pressure and ambient temperature and which is used as a diluent, thinner, dissolver, viscosity reducer, or cleaning agent, or for other similar purposes.

(21) **"Solvent-Air Interface"** means the area of contact between the solvent and air that is contiguous with the air outside the degreaser.

(22) **"Solvent Carry-Out"** means solvent carried out of a degreaser that adheres to or is entrapped in the part being cleaned.

(23) **"Solvent Cleaning Operation"** means any solvent cleaning activity including subsequent drying that is conducted in a degreaser to remove contaminants from parts, products, tools, machinery, and/or equipment.

(24) **"Stripping Operation"** means a removal of cured coatings, inks, resins, or adhesives conducted with the use of solvents by immersion into a container such as tank or drum.

(25) **"Wipe Cleaning"** means the method of cleaning a surface, not conducted in a container, by physically rubbing it with a material or device such as a rag, paper, or cotton swab moistened with a solvent.

(26) **"Volatile Organic Compound (VOC)"** means the same as defined in Rule 2 – Definitions.

(27) **"VOC Content Per Volume of Material"** means the same as defined in Rule 2 – Definitions.

(d) **STANDARDS**

(1) VOC Content Requirements for Cold Solvent Cleaning Operations

Except as specified in Subsections (b)(2), (e)(1), or (e)(2), no cold solvent cleaning operation shall use materials with a VOC content exceeding 25 grams per liter (g/l) (0.21 lbs/gal) of material, as used.

(2) General Equipment Requirements for Cold Solvent Cleaning Operations

A person shall not conduct a cold solvent cleaning operation unless a degreaser is equipped with all of the following.

(i) A cover that completely covers the solvent when work is not being performed in the degreaser. This includes covers for the sink or basin of a remote reservoir cleaner.

(ii) A facility for draining parts such that the drained solvent returns to the degreaser.

(3) Equipment Specific Requirements for Cold Solvent Cleaning Operations

(i) A person shall not operate a batch-loaded cold solvent cleaner unless it has:

(A) a freeboard ratio greater than or equal to 0.5,

(B) a cover easily operable with one hand or mechanically assisted, and

(C) a readily visible, permanent mark or line indicating the maximum allowable solvent level that conforms to the freeboard ratio.

(ii) A person shall not operate a remote reservoir cleaner unless it has:

(A) a freeboard height of at least 6 inches (15 cm), and

(B) a sink-like work area for draining cleaned parts, which is sloped sufficiently towards the drain to preclude pooling of solvent.

(4) Operating Requirements for Cold Solvent Cleaning Operations

A person shall not conduct a cold solvent cleaning operation without meeting all of the following requirements.

(i) A permanent, conspicuous, legible label listing the applicable operating requirements is posted on or near the degreaser.

(ii) The solvent degreaser and any emission control system are properly installed and maintained in proper working order.

(iii) Any emission control system is properly operating at all times when parts are being cleaned.

(iv) The required cover is not removed except to process work or to perform maintenance.

(v) There are no liquid leaks from any portion of the degreaser. Upon detection of a liquid leak, the leak shall be repaired immediately, or the degreaser shall be shut down and drained in a manner that minimizes emissions.

(vi) No porous or absorbent materials, such as cloth, leather, wood, or rope are cleaned in the degreaser.

(vii) Solvent spraying, when necessary, is conducted by using only a continuous liquid stream (not a fine, atomized, fan, or shower type spray) at a pressure which does not cause liquid solvent to splash outside of the solvent container.

(viii) Solvent agitation, where necessary, is achieved exclusively through pump circulation or by means of a mechanical mixer or ultrasonic agitation. Air or gas agitation shall not be used.

(ix) For batch-loaded cleaners the actual solvent level is not above the marked maximum solvent level line at any time.

(x) The degreaser is not exposed to drafts greater than 131 feet (40 meters) per minute.

(xi) Solvent carry-out is minimized by all of the following methods:

(A) allowing for full drainage by racking parts or other means;

(B) tipping out any pools of solvent from the cleaned parts before removal; and

(C) allowing parts to dry within the degreaser until visually dry or dripping ceases.

(xii) Waste solvent and contaminated residue, if any, shall be recycled or disposed of according to requirements based on the California Health and Safety Code, Division 20, Chapter 6.5 (beginning at Section 25100) concerning hazardous waste disposal.

(5) Equipment Requirements for Stripping Operations

A person shall not operate stripping equipment unless it is equipped with all of the following.

(i) A cover that completely covers the solvent when work is not processed in the tank.

(ii) A facility for draining parts such that the drained solvent returns to the container.

(iii) A readily visible, permanent mark or line indicating the maximum allowable solvent level that conforms to the freeboard ratio in Subsection (d)(5)(iv) below, unless a sealing fluid is used.

(iv) Stripping equipment has:

(A) a freeboard ratio greater than or equal to 0.75; or

(B) a sealing fluid.

(6) Operating Requirements for Stripping Operations

A person shall not conduct a stripping operation without meeting all of the following requirements.

(i) A permanent, conspicuous, legible label listing the applicable operating requirements is posted on or near the stripping operation.

(ii) The stripping equipment and any emission control system are properly installed and maintained in proper working order.

(iii) Any emission control system is properly operating at all times when parts are being stripped.

(iv) The required cover is not removed except to process work or to perform maintenance.

(v) There are no liquid leaks from any portion of the stripping equipment. Upon detection of a liquid leak, the leak shall be repaired immediately, or the stripping tank drained and taken out of service, in a manner that minimizes emissions.

(vi) Solvent is not above the marked maximum solvent level line, unless a sealing fluid is used.

(vii) Solvent carry-out is minimized by all of the following methods:

(A) allowing for full drainage by racking parts or by other means;

(B) tipping out any pools of solvent from the stripped parts before removal; and

(C) allowing parts to dry within the stripping equipment until visually dry or dripping ceases.

(viii) Solvent agitation, where necessary, is achieved exclusively through pump circulation or by means of a mechanical mixer or ultrasonic agitation. Air or gas agitation shall not be used.

(ix) Solvent spraying, when necessary, is conducted by using only a continuous fluid stream (not a fine, atomized, fan, or shower type spray) at a pressure which does not cause liquid solvent to splash outside of the solvent container.

(x) Waste solvent and contaminated residue, if any, shall be recycled or disposed of according to requirements based on the California Health and Safety Code, Division 20, Chapter 6.5 (beginning at Section 25100) concerning hazardous waste disposal.

(e) **CONTROL EQUIPMENT**

(1) In lieu of complying with the requirements in Subsections (d)(1), (d)(2), and (d)(3) an owner/operator may use an airless/air-tight cold solvent cleaner provided that all of the following requirements are met:

(i) The equipment is operated in accordance with the manufacturer's specifications and with a door or other pressure sealing apparatus in place during all cleaning and drying cycles;

(ii) All associated pressure relief devices do not allow liquid solvents to drain out. Spills during any solvent transfer shall be cleaned up immediately;

(iii) A differential pressure gauge is installed to indicate the sealed chamber pressure;

(iv) The equipment complies with all applicable operating requirements of Subsection (d)(4).

(2) In lieu of complying with the requirements of Subsections (d)(1), (d)(2), (d)(3), and (d)(5) a person conducting a cold solvent cleaning or stripping operation may use an air pollution control system which:

(i) Has been installed in accordance with an Authority to Construct; and

(ii) Has a combined emissions capture and control efficiency of at least 85% by weight.

(3) A person electing to use control equipment pursuant to Subsection (e)(2) shall submit to the Air Pollution Control Officer for approval an Operation and Maintenance plan for the proposed emission control and collection system and receive approval prior to operation of the control equipment. Thereafter, the plan can be modified, with Air Pollution Control Officer approval, as necessary to ensure compliance. Such a plan shall:

(i) Identify all key system operating parameters. Key system operating parameters are those necessary to ensure compliance with Subsection (e)(2)(ii), such as temperature and/or pressure;

(ii) Include proposed inspection schedules, anticipated ongoing maintenance, and proposed recordkeeping practices regarding the key system operating parameters; and

(iii) Upon approval by the Air Pollution Control Officer, a person subject to the requirements of Subsection (e)(2) shall implement the Operation and Maintenance plan and shall comply with the all the provisions of the approved plan.

(f) **RECORD KEEPING REQUIREMENTS**

(1) Any person conducting a cold solvent cleaning or stripping operation subject to this rule shall maintain the following records:

(i) A current list of solvents and sealing fluids in use, which provides all of the data necessary to evaluate compliance, including but not limited to:

(A) Manufacturer name and identification for each solvent, and

(B) VOC content of solvent expressed in g/l (lbs/gal) of material as used, and density and mix ratios for each solvent.

(2) Any person using control equipment pursuant to Section (e) of this rule shall:

(i) Maintain records in accordance with the requirements of Subsection (f)(1); and

(ii) Maintain daily records of key system operating parameters as approved in the Operation and Maintenance plan pursuant to Subsection (e)(3). Such records shall be sufficient to document continuous compliance with Subsection (e)(2)(ii) during periods of emission producing activities.

All records shall be retained on site for at least three years and shall be made available to the District upon request.

(g) **TEST METHODS**

When more than one test method or set of test methods are specified in this Section, 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 the rule.

(1) The VOC content of cleaning materials shall be determined by the South Coast Air Quality Management District (SCAQMD) Method 313-91 (Determination of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry), February 1997, SCAQMD Method 308-91 (Quantitation of Compounds by Gas

Chromatography), February 1993, or any other test methods approved by the Environmental Protection Agency (EPA), California Air Resources Board (CARB), and the Air Pollution Control District.

(2) The overall control efficiency of air pollution control equipment operated pursuant to Subsection (e)(2)(ii) shall be determined by multiplying the capture efficiency of the emission collection system by the control efficiency of the air pollution control device. The control efficiency of the air pollution control device shall be determined using EPA Test Methods 18 and 25A (40 CFR 60, Appendix A), August 2017; and in accordance with a protocol approved by the Air Pollution Control Officer. Capture efficiency shall be determined according to EPA Test Methods 204 and 204A through 204F (40 CFR Part 51, Appendix M) as applicable, August 2017; and technical document "Guidelines for Determining Capture Efficiency," January 1995. Subsequent to the initial compliance demonstration period, appropriate key system operating parameters as determined by the Air Pollution Control Officer may be used as indicators of the performance of the emission control system.

(h) **COMPLIANCE SCHEDULE**

All new cold solvent cleaning or stripping operations shall comply with the applicable requirements of this rule upon initial startup.

2. Proposed amended Rule 67.6.2 is to read as follows:

RULE 67.6.2 VAPOR DEGREASING OPERATIONS
(Rev. Adopted & Effective February 10, 2021)

(a) **APPLICABILITY**

(1) Except as provided in Section (b) Exemptions, this rule is applicable to all vapor degreasing operations.

(2) Rule 66.1 – Miscellaneous Surface Coating Operations and Other Processes Emitting Volatile Organic Compounds shall not apply to any vapor degreasing operation.

(b) **EXEMPTIONS**

(1) This rule shall not apply to the following:

(i) Vapor degreasing operations that exclusively utilize materials with a volatile organic compound (VOC) content of 25 grams per liter (g/l) (0.21 lbs/gal) of material or less, as used.

It shall be the responsibility of any person conducting such operations to keep a current list of all cleaning materials and the VOC content of each material, as used, to substantiate this exemption.

(ii) Vapor-phase solder reflow units.

(iii) Vapor degreasing operations conducted in a container with a vapor-air interface area of one square foot (0.09 square meters) or less or with a maximum solvent capacity of one gallon (3.8 liters) or less.

(c) **DEFINITIONS**

(1) **"Airless/Air-Tight Vapor Degreaser"** means a system that consists of a sealed vapor degreaser and the devices to condense and recover solvent and emission control devices to remove solvent from all gas streams that vent to the atmosphere. The system must have no open vapor-air interface, and be designed and operated in such a manner as to prevent the discharge or leakage of solvent emissions to the atmosphere during all cleaning and drying operations.

(2) **"Batch-loaded Solvent Degreaser"** means a degreaser in which any material is placed for cleaning and removed as a single batch after the cleaning is finished.

(3) **"CFR"** means Code of Federal Regulations.

(4) **"Degreaser"** means a tank, drum, or other container in which objects to be cleaned are exposed to a solvent or solvent vapors, in order to remove contaminants.

(5) **"Freeboard Height"** means the distance from the solvent vapor-air interface to the top of the degreaser tank, based on inside tank dimensions.

(6) **"Freeboard Ratio"** means the freeboard height divided by the smaller of the interior length or width of the degreaser tank.

(7) **"Liquid Leak"** means any visible leak of a VOC-containing liquid at a rate in excess of three drops per minute.

(8) **"New Vapor Degreasing Operation"** means any vapor degreasing operation for which a complete application for an Authority to Construct in San Diego County was submitted after *(date of adoption)*.

(9) **"Open-top Vapor Degreaser"** means any batch-loaded vapor degreaser.

(10) **"Perimeter Trough"** means a receptacle within the vapor degreaser located below the primary condenser that conveys condensed solvent and atmospheric moisture to a water separator.

(11) **"Primary Condenser"** means a series of circumferential cooling coils on the inside of walls of a vapor degreaser through which a chilled substance is circulated or recirculated to provide continuous condensation of rising solvent vapors, thereby creating a concentrated solvent vapor zone.

(12) **"Refrigerated Freeboard Chiller"** means an emission control device which is mounted above the degreaser's water jacket or primary condenser coils, and which consists of secondary coils that carry a refrigerant to provide a chilled air blanket above the solvent vapor.

(13) **"Solvent"** means any substance containing an organic compound or combination of organic compounds which is liquid at atmospheric pressure and ambient temperature and which is used as a diluent, thinner, dissolver, viscosity reducer, or cleaning agent, or for other similar purposes.

(14) **"Solvent Carry-Out"** means solvent carried out of a degreaser that adheres to or is entrapped in the part being cleaned.

(15) **"Vapor-Air Interface"** means the area of contact between the solvent vapors and air that is contiguous with the air outside the degreaser. The area of the vapor-air interface shall be calculated as the product of the lengths between internal solvent cleaner walls behind the condensing coils.

(16) **"Vapor-Phase Solder Reflow Unit"** means a device in which parts are immersed in VOC-rich vapor generated by boiling a liquid for heating to melt or soften solder connections of electronic components.

(17) **"Vapor Degreaser"** means a degreaser in which objects to be cleaned are exposed to a boiling solvent or solvent vapors.

(18) **"Vapor Degreasing Operation"** means a cleaning operation that is conducted by immersing parts, products, tools or other items in a boiling solvent or in solvent vapors generated by boiling solvent.

(19) **"Volatile Organic Compound (VOC)"** means the same as defined in Rule 2 – Definitions.

(20) **"VOC Content Per Volume of Material"** means the same as defined in Rule 2 – Definitions.

(21) **"Water Separator"** means a device that isolates water from a solvent or a mixture of solvents through mechanical or chemical means.

(d) **STANDARDS**

(1) General Equipment Requirements

A person shall not operate any vapor degreaser unless it is equipped with all of the following:

(i) A cover that can be easily operated without disturbing the vapor layer and that completely covers the solvent tank when work is not performed in the degreaser;

(ii) A primary condenser situated above the boiling solvent;

(iii) A water separator that does not operate by means of evaporation or distillation;

(iv) A perimeter trough;

(v) For vapor degreasers employing sprays:

(A) spray nozzles having a pressure low enough to prevent liquid splashing outside of the tank, and

(B) spray nozzles which produce continuous liquid flow, rather than fine atomized or shower type sprays; or

(C) spray nozzles which are located below the vapor-air interface.

(2) Additional Equipment Requirements

All vapor degreasers shall have one of the following:

(i) A freeboard ratio of at least 1.0; or

(ii) A refrigerated freeboard chiller, where the chilled air blanket temperature measured in degrees Fahrenheit at the center of the air blanket is not greater than 40% of the initial boiling point of the solvent; or

(iii) Be designed in such a manner that its cover or door opens only when the dry part is entering or exiting the degreaser.

(3) Safety Devices

Vapor degreasers shall be equipped with the following safety devices:

(i) A device which shuts off the sump heat if the condenser's coolant stops circulating. This requirement does not apply to vapor degreasers equipped with refrigerated condensers; and

(ii) A device which shuts off the sump heat if the condenser's coolant or refrigerant temperature becomes higher than the designed operating temperature; and

(iii) A device which is only manually resettable and which shuts off the sump heat if the vapor level rises above the designed operating level;

(iv) For vapor degreasers employing sprays, a device that prevents spray pump operation if the solvent vapor-air interface temperature falls below the designed operating level.

(4) Operating Requirements

A person shall not operate a vapor degreaser unless all of the following requirements are met:

(i) A permanent, conspicuous, legible label listing the applicable operating requirements is posted on or near the degreaser;

(ii) The degreaser and any emission control equipment are installed and maintained in proper working order. The emission control equipment shall be properly operating at all times when parts are being cleaned or solvent is being heated in the degreaser;

(iii) The cover is not removed except to process workload or to perform maintenance;

(iv) There are no liquid leaks from any portion of the degreaser. Upon detection of a liquid leak, the leak shall be repaired immediately, or the degreaser shall be shut down and drained in a manner that minimizes emissions;

(v) Ventilation fans are not positioned near the degreaser openings in such a way as to disturb the vapor zone;

(vi) At startup, the primary condenser and the refrigerated freeboard chiller, if required, are turned on before the sump heater is turned on. At shutdown, the sump heater is turned off before the primary condenser and refrigerated freeboard chiller are turned off;

(vii) No porous or absorbent materials, such as cloth, leather, wood, or rope are cleaned in a vapor degreaser;

(viii) Solvent is not sprayed above the vapor-air interface;

(ix) Exhaust ventilation rate does not exceed 65 cubic feet per minute per square foot (20 cubic meters per minute per square meter) of the degreaser vapor-air interface area, unless necessary to meet OSHA requirements;

(x) Workloads placed in the degreaser occupy a horizontal cross-sectional area that is less than one half of the vapor-air interface area;

(xi) The water separator is maintained to prevent water from returning to the surface of the boiling solvent sump or from becoming visibly detectable in the solvent exiting the water separator; and

(xii) Solvent carry-out is minimized by all of the following methods:

(A) racking parts for full drainage;

(B) moving parts in and out of the degreaser at a speed of less than 11 feet per minute (3.3 meters per minute);

(C) cleaning the workload in the vapor zone until condensation ceases;

(D) tipping out any pools of solvent on the cleaned parts before removal; and

(E) not removing parts from the degreaser until they are visually dry.

(xiii) Waste solvent and contaminated residue, if any, shall be recycled, or disposed of according to requirements based on the California Health and Safety Code, Division 20, Chapter 6.5 (beginning at section 25100) concerning hazardous waste disposal.

(e) **CONTROL EQUIPMENT**

(1) In lieu of complying with the equipment requirements in Subsections (d)(1), (d)(2), and (d)(3), an owner/operator may use an airless/air-tight vapor degreaser provided that all of the following requirements are met:

(i) The degreaser is operated in accordance with the manufacturer's specifications and is equipped with a door or other pressure sealing apparatus in place during all cleaning and drying cycles;

(ii) All associated pressure relief devices do not allow liquid solvents to drain out. Spills during any solvent transfer shall be wiped up immediately;

(iii) A differential pressure gauge is installed to indicate the sealed chamber pressure;

(iv) The applicable operating requirements of Subsection (d)(4) are met.

(2) In lieu of complying with the requirements of Subsections (d)(1), (d)(2), and (d)(3), an owner/operator of a vapor degreaser may use an air pollution control system which:

(i) Has been installed in accordance with an Authority to Construct; and

(ii) Has a combined emissions capture and control efficiency of at least 85% by weight.

(3) A person electing to use control equipment pursuant to Subsection (e)(2) shall submit to the Air Pollution Control Officer for approval an Operation and Maintenance plan for the proposed air pollution control system and receive approval prior to operation of the control equipment. Thereafter, the plan can be modified, with Air Pollution Control Officer approval, as necessary to ensure compliance. Such plan shall

(i) Identify all key system operating parameters. Key system operating parameters are those necessary to ensure compliance with Subsection (e)(2)(ii), such as temperature and/or pressure;

(ii) Include proposed inspection schedules, anticipated ongoing maintenance, and proposed recordkeeping practices regarding the key system operating parameters; and

(iii) Upon approval of the Air Pollution Control Officer, a person subject to the requirements of Subsection (e)(2) shall implement the Operation and Maintenance plan and shall comply with the all the provisions of the approved plan.

(f) RECORD KEEPING REQUIREMENTS

(1) Any person conducting vapor degreasing operations subject to this rule shall maintain the following records:

(i) A current list of cleaning materials in use, which provides all of the data necessary to evaluate compliance, including but not limited to:

(A) Manufacturer name and identification for each material;

(B) VOC content expressed in g/l (lb/gal) of material as used, and density and mixed ratios for each component; and

(C) Initial boiling point of a cleaning material if a refrigerated freeboard chiller is used.

(2) Any person using control equipment pursuant to Section (e) Control Equipment of this rule shall:

(i) Maintain records in accordance with the requirements of Subsection (f)(1); and

(ii) Maintain daily records of key system operating parameters as approved in the Operation and Maintenance plan pursuant to Subsection (e)(3). Such records shall be sufficient to document continuous compliance with Subsection (e)(2)(ii) during periods of emission producing activities.

All records shall be retained on site for at least three years and shall be made available to the District upon request.

(g) TEST METHODS

When more than one test method or set of test methods are specified in this Section, 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 the rule.

(1) The VOC content of cleaning materials shall be determined by the South Coast Air Quality Management District (SCAQMD) Method 313-91 (Determination of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry), February 1997, SCAQMD Method 308-91 (Quantitation of Compounds by Gas

Chromatography), February 1993, or any other test methods approved by the Environmental Protection Agency (EPA), California Air Resources Board (CARB), and the Air Pollution Control District.

(2) Measurement of initial boiling point of solvents shall be conducted in accordance with ASTM Standard Test Method D1078-11(2019) (Standard Test Method for Distillation Range of Volatile Organic Liquids), or its most current version.

(3) Hoist speed shall be determined by measuring the distance traveled by the hoist per unit of time.

(4) Temperatures in the vapor zone shall be measured with the use of a properly calibrated temperature probe, with an accuracy of ± 1° F.

(5) The overall control efficiency of air pollution control equipment operated pursuant to Subsection (e)(2)(ii) shall be determined by multiplying the capture efficiency of the emission collection system by the control efficiency of the air pollution control device. The control efficiency of the air pollution control device shall be determined using EPA Test Methods 18 and 25A (40 CFR 60, Appendix A), August 2017; and in accordance with a protocol approved by the Air Pollution Control Officer. Capture efficiency shall be determined according to EPA Test Methods 204 and 204A through 204F (40 CFR Part 51, Appendix M) as applicable, August 2017; and technical document "Guidelines for Determining Capture Efficiency," January 1995. Subsequent to the initial compliance demonstration period, appropriate key system operating parameters as determined by the Air Pollution Control Officer may be used as indicators of the performance of the emission control system.

(h) **COMPLIANCE SCHEDULE**

All new vapor degreasing operations shall comply with the applicable requirements of this rule upon initial startup.

IT IS FURTHER RESOLVED AND ORDERED that proposed amended Rule 67.6.1 and Rule 67.6.2 of Regulation IV shall take effect on February 10, 2021.

APPROVED AS TO FORM AND LEGALITY
COUNTY COUNSEL

BY: Paula Forbis, Senior Deputy

The foregoing Resolution was passed and adopted by the Air Pollution Control District, County of San Diego, State of California, on this 10th day of February, 2021, by the following vote:

AYES: Vargas, Anderson, Lawson-Remer, Fletcher, Desmond

- - -

STATE OF CALIFORNIA)
County of San Diego)SS

I hereby certify that the foregoing is a full, true and correct copy of the Original Resolution entered in the Minutes of the San Diego County Air Pollution Control Board.

ANDREW POTTER
Clerk of the Air Pollution Control Board

By: C. Rodriguez
Chrystal Rodriguez, Deputy

Resolution No. 21-021
Meeting Date: 02/10/2021 (AP4)

COMPARATIVE ANALYSIS

PROPOSED AMENDED RULE 67.6.1 – COLD SOLVENT CLEANING AND STRIPPING OPERATIONS AND RULE 67.6.2 VAPOR DEGREASING OPERATIONS

Statutory Requirements

Prior to adopting, amending, or repealing a rule or regulation, California Health and Safety Code Section 40727 requires findings of necessity, authority, clarity, consistency, non-duplication, and reference, as defined therein. As part of the consistency finding and to ensure proposed rule requirements do not conflict with or contradict other Air Pollution Control District (District) or federal regulations, Health and Safety Code Section 40727.2(a) requires the District to perform a written analysis identifying and comparing the air pollution control standards and other provisions of proposed amended Rule 67.6.1 and Rule 67.6.2 with existing or proposed District rules and guidelines and existing federal rules, requirements, and guidelines applying to the same source category.

Analysis

Proposed amended Rule 67.6.1 and Rule 67.6.2 apply to cold solvent cleaning and stripping operations, and vapor degreasing operations, respectively. The proposed amended exempt degreasers with low or no volatile organic compound (VOC) emissions from rule requirements and include a lower, more health-protective, solvent emission limit consistent with analogous rules of other California air districts. Additionally, the proposed amendments address minor deficiencies identified by the U.S. Environmental Protection Agency (EPA) that require correction to assure federal approval of the rules.

Comparison with Existing District rules and regulations

District New Source Review (NSR) Rule 20.2 – Non-Major Stationary Sources, applies to any new or modified vapor or cold solvent cleaning and stripping operation. Rule 20.2 requires that any non-major new or modified emission unit that has a post-project potential to emit of 10 pounds per day or more of VOC be equipped with Best Available Control Technology (BACT). For vapor and cold solvent cleaning and stripping operations, BACT is identified as either the use of an add-on emission control system or, if such system is determined to be not cost-effective, compliance with the requirements of current Rule 67.6.1 or Rule 67.6.2. Since the proposed amended rules contain lower VOC content limits for solvent materials than those in the existing rules, the proposed limits will become the new BACT requirements.

Comparison with federal Control Techniques Guidelines

Control Techniques Guidelines (CTG) for Industrial Cleaning Solvents (2006) applies to facilities that emit more than 15 pounds per day of VOC and has a solvent material VOC content limit of 50 grams per liter. Proposed amended Rule 67.6.1 and Rule 67.6.2 specify a solvent material VOC content limit of 25 grams per liter and does not have an emission-based applicability threshold.

Conclusion

There are no conflicts or contradictions between proposed amended Rule 67.6.1 and Rule 67.6.2, and BACT requirements. Also, no conflicts exist between proposed amended Rule 67.6.1 and Rule 67.6.2 and the CTG for Industrial Cleaning Solvents.

INCREMENTAL COST-EFFECTIVENESS ANALYSIS

PROPOSED AMENDED RULE 67.6.1 – COLD SOLVENT CLEANING AND STRIPPING OPERATIONS AND RULE 67.6.2 VAPOR DEGREASING OPERATIONS

Health and Safety Code Section 40920.6(a) requires air districts to identify one or more potential control options that achieve at least the same benefit as the proposed rule, assess the cost-effectiveness of those options, and calculate the incremental cost-effectiveness of each identified option. Incremental cost-effectiveness is defined as the difference in control costs divided by the difference in emission reductions between two potential control options achieving the same emission reduction goal.

The primary objectives in the proposed amendments to Rule 67.6.1 and Rule 67.6.2 are: 1) to align the volatile organic compound (VOC) content limits with the existing limit specified in Rule 11 – Exemptions from Rule 10 Permitting Requirements, and 2) satisfy federal requirements to implement current Reasonably Available Control Technology (RACT). The proposed amendments lower the solvent volatile organic compound (VOC) content limit to be consistent with analogous rules of other California air districts.

There are no potential control options providing equivalent emission reductions from vapor and cold solvent cleaning and stripping operations other than the mandatory use of add-on emission control systems with potential capital costs upwards of $200,000. Due to high costs, this control option would have very unfavorable cost-effectiveness and incremental cost-effectiveness values and is therefore not feasible.

Most affected facilities voluntarily comply with the lower VOC content limits in the proposed amended rules and are consequently exempt from permitting requirements. Therefore, no additional costs will be incurred by those facilities. For the remaining facilities that maintain current Permits to Operate, their cleaning operations are exempt from the VOC content requirements of current Rule 67.6.1 due to the types of components being cleaned, and the proposed amendments will have no impact on their operations.

ATTACHMENT D

AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN DIEGO

DRAFT PROPOSED AMENDMENTS TO RULE 67.6.1 – COLD SOLVENT CLEANING AND STRIPPING OPERATIONS, AND TO RULE 67.6.2 – VAPOR DEGREASING OPERATIONS

WORKSHOP REPORT

On November 28, 2018, the San Diego County Air Pollution Control District (District) conducted a public workshop to present and receive comments on draft proposed amendments to Rule 11 – Exemptions from Rule 10 Permit Requirements, and related amendments to Rule 67.6.1 – Cold Solvent Cleaning and Stripping Operations, and Rule 67.6.2 – Vapor Degreasing Operations. The original amendments consisted of exempting degreasers with low or no volatile organic compound (VOC) emissions from permit and rule requirements.

The U.S. Environmental Protection Agency (EPA) provided numerous comments on the draft proposed amendments to Rules 67.6.1 and 67.6.2. Due to the nature of these comments and the December 2018 shutdown of the EPA, the effort to update Rules 67.6.1 and 67.6.2 was temporarily suspended. Nevertheless, the proposed amendments to Rule 11 moved forward and were adopted by the Air Pollution Control Board on October 30, 2019.

The District has since held discussions with EPA staff to better understand their comments and now proposes to move forward with the proposed amendments to Rules 67.6.1 and 67.6.2 to make the rules consistent with related provisions in Rule 11, and to address minor deficiencies identified by the EPA that require correction to assure federal approval of the rules.

A summary of the EPA comments and the District responses to these comments are as follows:

EPA COMMENTS FOR RULE 67.6.1

1. EPA COMMENT

The District should remove the reference to 40 CFR Part 63, Subpart T, National Emission Standards for Hazardous Air Pollutants: Halogenated Solvent Cleaning in existing Subsection (b)(1)(ii).

DISTRICT RESPONSE

The District agrees. The exemption in existing Subsection (b)(1)(ii) referencing Subpart T, National Emission Standards for Hazardous Air Pollutants: Halogenated Solvent Cleaning has been removed as suggested.

2. EPA COMMENT

The District should revise Subsection (a)(2) to expand the applicability of the rule to the cleaning of application equipment.

DISTRICT RESPONSE

The District disagrees. The cleaning of application equipment is already regulated under each District source-specific rule or Rule 66.1 – Miscellaneous Surface Coating Operations and Other Processes Emitting Volatile Organic Compounds.

3. EPA COMMENT

The District should amend Subsection (a)(5), to clarify that operations subject to or exempt from Rule 67.6.1 are not subject to Rule 66.1 – Miscellaneous Surface Coating Operations and Other Processes Emitting Volatile Organic Compounds.

DISTRICT RESPONSE

The District agrees. Subsection (a)(5) has been revised as suggested.

4. EPA COMMENT

The District should clarify what is meant by "educational purposes" or "educational institution" in existing Subsection (b)(1)(v).

DISTRICT RESPONSE

At this time, the District is pursuing only those changes related to approvability issues or to incorporate minor language clarifications recommended by EPA. The District will perform a more thorough review and consideration of this recommendation during future amendments of Rule 67.6.1.

5. EPA COMMENT

The District should revise existing Subsection (b)(1)(vi) to only exempt materials with a VOC content of less than 25 grams per liter (g/l) (0.21 labs/gal) as used. The current language seems to be in conflict with the language in Subsection (d)(1).

DISTRICT RESPONSE

The District disagrees. The proposed rule would exempt the use of solvent cleaning materials with a VOC content of 25 g/l or less. Subsection (d)(1) prohibits (unless otherwise noted) the use of solvent cleaning materials with a VOC content exceeding 25 g/l. There is no conflicting language and these provisions are consistent with the analogous rules of other California air districts.

6. EPA COMMENT

The District should add a definition for "VOC content per volume of material."

DISTRICT RESPONSE

The District agrees. The definition for "VOC Content Per Volume of Material" was added to Section (c) Definitions as suggested.

7. EPA COMMENT

The District should revise Subsection (d)(3)(i)(A) to have a freeboard ratio greater than or equal to 0.7 as per the 1977 Control Techniques Guidelines (CTG) on Solvent Metal Cleaning recommendation of a freeboard ratio for cold cleaners of ≥0.7 (for highly volatile solvents >33 mm or 0.6 psi at 100F or if the solvent is heated about 120F 1977 CTG Table 1 pg v).

DISTRICT RESPONSE

At this time, the District is focused on only making changes related to approvability issues or to minor language clarifications recommended by EPA. The District will perform a more thorough review and consideration of this recommendation during future rule amendments to Rule 67.6.1.

8. EPA COMMENT

The District should modify Subsections (d)(4)(xii), and (d)(6)(x), to incorporate the latest changes to the California Health & Safety Code for waste solvent and contaminated residue disposal/recycling.

DISTRICT RESPONSE

The District agrees. Subsections (d)(4)(xii) and (d)(6)(x) have been revised to reflect the most current California Health & Safety Code reference as suggested.

9. EPA COMMENT

The District should revise Subsection (e)(1)(ii) to include instructions on what to do with contaminated cloths, rags, etc., used to clean up a spill.

DISTRICT RESPONSE

The District disagrees. All operations, including the use of cloths and rags used to clean up a spill, are subject to District Rule 67.17 – Storage of Materials Containing Volatile Organic Compounds. Rule 67.17 is referenced in the Permit to Operate for each individual degreaser.

EPA COMMENTS FOR RULE 67.6.2

1. EPA COMMENT

The District should revise existing Subsection (b)(1)(i) to only exempt materials with a VOC content of less than 25 grams per liter (g/l) (0.21 lobs/gal) as used.

DISTRICT RESPONSE

The District disagrees. The language is consistent with language in Rule 67.6.1 – Cold Solvent Cleaning and Stripping Operations and Rule 11 – Exemptions from Rule 10 Permit Requirements.

2. EPA COMMENT

The District should add a definition for "VOC content per volume of material."

DISTRICT RESPONSE

The District agrees. The definition for "VOC Content Per Volume of Material" was added to Section (c) Definitions as suggested.

3. EPA COMMENT

The District should modify the Standards Subsection (d)(4)(xiii) to incorporate the latest changes to the California Health & Safety Code for waste solvent and contaminated residue disposal/recycling.

DISTRICT RESPONSE

The District agrees. Subsection (d)(4)(xiii) has been revised to reflect the most current California Health & Safety Code reference as suggested.

4. EPA COMMENT

The District should revise Subsection (e)(1)(ii) to include instructions on what to do with contaminated cloths, rags, etc., used to clean up a spill.

DISTRICT RESPONSE

The District disagrees. All operations, including the use of cloths and rags used to clean up a spill, are subject to District Rule 67.17 – Storage of Materials Containing Volatile Organic Compounds. Rule 67.17 is referenced in the Permit to Operate for each individual degreaser.

JH:AMF:jlm
10/28/20

RULE 67.6.1 COLD SOLVENT CLEANING AND STRIPPING OPERATIONS

(~~Adopted & Effective 5/23/07;~~ Rev. Adopted & Effective *(date of adoption)*)

(a) **APPLICABILITY**

(1) Except as provided in Section (b), this rule is applicable to all cold solvent cleaning and all stripping operations.

(2) Any cleaning of application equipment is not subject to this rule.

(3) Any dry cleaning operation subject to or exempt from the *Airborne Toxic Control Measure for Emissions of Perchloroethylene from Dry Cleaning Operations* or subject to or exempt from Rule 67.2 – Dry Cleaning Equipment Using Petroleum Based Solvents is not subject to this rule.

(4) Wipe cleaning operations are not subject to this rule.

(5) Any cold solvent cleaning or stripping operation subject to or exempt from this rule is not subject to Rule 66.1 – ~~(~~Miscellaneous Surface Coating Operations and Other Processes Emitting Volatile Organic Compounds~~) shall not apply to any cold solvent cleaning or stripping operation~~.

(b) **EXEMPTIONS**

(1) This rule shall not apply to the following:

(i) Non-immersion stripping operations subject to or exempt from Rules 67.9 - Aerospace Coating Operations~~,~~ or 67.11 - Wood Products Coating Operations~~, or 67.11.1~~.

~~(ii) Solvent cleaning operations regulated by the 40 CFR Part 63, Subpart T *National Emission Standards for Hazardous Air Pollutants: Halogenated Solvent Cleaning*, 40 CFR Part 63, Subpart T.~~

(~~iii~~ii) Cold solvent cleaning or stripping operations conducted in any cold solvent tank or stripping tank with a liquid surface area of one square foot (0.09 square meters) or less, or with a capacity of one gallon (3.8 liters) or less.

(~~iv~~iii) Cold solvent cleaning operation conducted in any remote reservoir with a capacity of 1 gallon (3.8 liters) or less.

(~~v~~iv) Cold solvent degreasers used exclusively for educational purposes. This exemption does not apply to degreasers used for other purposes at an educational institution.

(~~vi~~v) ~~Except for requirements for waste solvent disposal in Subsections (d)(4)(xii) or (d)(6)(x), as applicable, c~~ Cold solvent cleaning or stripping operations that exclusively utilize ~~water-based~~ materials with a volatile organic

compound (VOC) content of ~~50~~ 25 grams per liter (g/l) ~~of material~~ (~~0.42 pounds per gallon~~ 0.21 lbs/gal) of material or less, as used.

It shall be the responsibility of any person conducting such operations to keep a current list of all cleaning materials and the VOC content of each material, as ~~applied~~ used, to substantiate this exemption.

(2) Subsection (d)(1) shall not apply to cold solvent cleaning of electronic components, electrical components, medical devices, aerospace components, or precision optics components.

(c) **DEFINITIONS**

(1) **"Aerospace Component"** means any raw material, partial or completed fabricated part, assembly of parts, or completed unit of any aircraft, helicopter, missile, or space vehicle, including mockups, test panels and prototypes.

(2) **"Airless/Air-Tight Cleaning System"** means a system that consists of a sealed cold solvent cleaner and the devices to condense and recover solvent and emission control devices to remove solvent from all gas streams that vent to the atmosphere. The system must have no open solvent-air interface, and be designed and operated in such a manner as to prevent the discharge or leakage of solvent emissions to the atmosphere during all cleaning and drying operations.

(3) **"Application Equipment"** means equipment used to apply coatings, inks, adhesives, or resins including, but not limited to: spray guns, rollers, brushes, and printing presses.

(4) **"Batch-loaded Solvent Cleaner"** means a degreaser in which any material is placed in solvent for cleaning and removed as a single batch after the cleaning is finished. This does not include remote reservoir cleaners.

(5) **"CFR"** means Code of Federal Regulations.

(6) **"Cold Solvent Cleaning (Degreasing) Operation"** means any solvent cleaning that is conducted in a tank, drum, or other container and that uses non-boiling solvent to remove contaminants.

(7) **"Cured"** means the coating, ink, adhesive, or resin is dry to the touch.

(8) **"Degreaser"** means a tank, drum, or other container in which objects to be cleaned are exposed to a solvent, in order to remove contaminants. This includes batch-loaded solvent cleaners and remote reservoirs cleaners.

(9) **"Electrical Components"** means internal components 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, generators, transformers, and electric motors.

(10) **"Electronic Components"** means components or assemblies of components including, but not limited to, circuit card assemblies, printed wire assemblies, printed circuit boards, soldered joints, ground wires, bus bars, and other electrical fixtures, except for the cabinet in which the components are to be housed.

~~(11) **"Exempt Compounds"** means the same as defined in Rule 2.~~

~~(12) **"Existing Cold Solvent Cleaning or Stripping Operation"** means any cold solvent cleaning or stripping operation that is not new.~~

(~~13~~11) **"Freeboard Height"** means:

(i) For batch-loaded solvent cleaners, the distance from the solvent-air interface to the top of the degreaser tank, based on inside tank dimensions.

(ii) For remote reservoir cleaners, the height from the bottom of the sink or work area to the top of the sink or work area.

(~~14~~12) **"Freeboard Ratio"** means the freeboard height divided by the smaller of the interior length or width of the degreaser tank.

(~~15~~13) **"Liquid Leak"** means any visible leak of a VOC-containing liquid at a rate in excess of three drops per minute.

(~~16~~14) **"Liquid Surface Area"** means the area of interface between the liquid solvent available for dipping and the air which is contiguous with the outside of the solvent degreaser or stripping tank.

(~~17~~15) **"Medical Device"** means an instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent or other similar article including any component or accessory, that is intended for use in the diagnosis of disease or other conditions or in the cure, mitigation, treatment, or prevention of disease, or is intended to affect the structure or any function of the body.

(~~18~~16) **"New Cold Solvent Cleaning or Stripping Operation"** means any cold solvent cleaning or stripping operation for which a complete application for an Authority to Construct in San Diego County was submitted after *(date of adoption)*.

(~~19~~17) **"Precision Optics Components"** means the components used to create high resolution images in optical devices. This does not include eye glasses.

(~~20~~18) **"Remote Reservoir Cleaner"** means a degreaser that consists of a sink or working area and a separate solvent tank that is not accessible for soaking parts and is completely enclosed except for a solvent return opening, which allows used solvent to drain into it from the sink or work area.

(~~21~~19) **"Sealing Fluid"** means a fluid that prevents evaporation of a stripping solvent by forming a liquid or solid layer on the solvent's surface.

(~~22~~20) **"Solvent"** means any substance containing an organic compound or combination of organic compounds which is liquid at atmospheric pressure and ambient temperature and which is used as a diluent, thinner, dissolver, viscosity reducer, or cleaning agent, or for other similar purposes.

(~~23~~21) **"Solvent-Air Interface"** means the area of contact between the solvent and air that is contiguous with the air outside the degreaser.

(~~24~~22) **"Solvent Carry-Out"** means solvent carried out of a degreaser that adheres to or is entrapped in the part being cleaned.

(~~25~~23) **"Solvent Cleaning Operation"** means any solvent cleaning activity including subsequent drying that is conducted in a degreaser to remove contaminants from parts, products, tools, machinery, and/or equipment.

(~~26~~24) **"Stripping Operation"** means a removal of cured coatings, inks, resins, or adhesives conducted with the use of solvents by immersion into a container such as tank or drum.

~~(27) **"Water-Based Material"** means any solvent that consists only of water and VOC and does not contain exempt compounds.~~

(~~28~~25) **"Wipe Cleaning"** means the method of cleaning a surface, not conducted in a container, by physically rubbing it with a material or device such as a rag, paper, or cotton swab moistened with a solvent.

(~~29~~26) **"Volatile Organic Compound (VOC)"** means ~~any volatile compound containing at least one atom of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds~~ the same as defined in Rule 2 - Definitions.

(27) **"VOC Content Per Volume of Material"** means the same as defined in Rule 2 – Definitions.

(d) **STANDARDS**

(1) VOC Content Requirements for Cold Solvent Cleaning Operations

Except as specified in Subsections (b)(2), (e)(1), or (e)(2), ~~each solvent utilized in a cold solvent cleaning operation subject to this rule shall have a VOC content of 50 g/l (0.42 lbs/gal) of material or less, as used~~ no cold solvent cleaning operation shall use materials with a VOC content exceeding 25 grams per liter (g/l) (0.21 lbs/gal) of material, as used.

(2) General Equipment Requirements for Cold Solvent Cleaning Operations

A person shall not conduct a cold solvent cleaning operation unless a degreaser is equipped with all of the following.

(i) A cover that completely covers the solvent when work is not being performed in the degreaser. This includes covers for the sink or basin of a remote reservoir cleaner.

(ii) A facility for draining parts such that the drained solvent returns to the degreaser.

(3) Equipment Specific Requirements for Cold Solvent Cleaning Operations

(i) A person shall not operate a batch-loaded cold solvent cleaner unless it has:

(A) a freeboard ratio greater than or equal to 0.5,

(B) a cover easily operable with one hand or mechanically assisted, and

(C) a readily visible, permanent mark or line indicating the maximum allowable solvent level that conforms to the freeboard ratio.

(ii) A person shall not operate a remote reservoir cleaner unless it has:

(A) a freeboard height of at least 6 inches (15 cm), and

(B) a sink-like work area for draining cleaned parts, which is sloped sufficiently towards the drain to preclude pooling of solvent.

(4) Operating Requirements for Cold Solvent Cleaning Operations

A person shall not conduct a cold solvent cleaning operation without meeting all of the following requirements.

(i) A permanent, conspicuous, legible label listing the applicable operating requirements is posted on or near the degreaser.

(ii) The solvent degreaser and any emission control system are properly installed and maintained in proper working order.

(iii) Any emission control system is properly operating at all times when parts are being cleaned.

(iv) The required cover is not removed except to process work or to perform maintenance.

(v) There are no liquid leaks from any portion of the degreaser. Upon detection of a liquid leak, the leak shall be repaired immediately, or the degreaser shall be shut down and drained in a manner that minimizes emissions.

(vi) No porous or absorbent materials, such as cloth, leather, wood, or rope are cleaned in the degreaser.

(vii) Solvent spraying, when necessary, is conducted by using only a continuous liquid stream (not a fine, atomized, fan, or shower type spray) at a pressure which does not cause liquid solvent to splash outside of the solvent container.

(viii) Solvent agitation, where necessary, is achieved exclusively through pump circulation or by means of a mechanical mixer or ultrasonic agitation. Air or gas agitation shall not be used.

(ix) For batch-loaded cleaners the actual solvent level is not above the marked maximum solvent level line at any time.

(x) The degreaser is not exposed to drafts greater than 131 feet (40 meters) per minute.

(xi) Solvent carry-out is minimized by all of the following methods:

(A) allowing for full drainage by racking parts or other means;

(B) tipping out any pools of solvent from the cleaned parts before removal; and

(C) allowing parts to dry within the degreaser until visually dry or dripping ceases.

(xii) Waste solvent and contaminated residue, if any, shall be recycled or disposed of according to requirements based on the California Health and Safety Code, Division 20, Chapter ~~6.3~~ 6.5 (beginning at Section 25100) concerning hazardous waste disposal.

(5) Equipment Requirements for Stripping Operations

A person shall not operate stripping equipment unless it is equipped with all of the following.

(i) A cover that completely covers the solvent when work is not processed in the tank.

(ii) A facility for draining parts such that the drained solvent returns to the container.

(iii) A readily visible, permanent mark or line indicating the maximum allowable solvent level that conforms to the freeboard ratio in Subsection (d)(5)(iv) below, unless a sealing fluid is used.

(iv) Stripping equipment has:

(A) a freeboard ratio greater than or equal to 0.75; or

(B) a sealing fluid.

(6) Operating Requirements for Stripping Operations

A person shall not conduct a stripping operation without meeting all of the following requirements.

(i) A permanent, conspicuous, legible label listing the applicable operating requirements is posted on or near the stripping operation.

(ii) The stripping equipment and any emission control system are properly installed and maintained in proper working order.

(iii) Any emission control system is properly operating at all times when parts are being stripped.

(iv) The required cover is not removed except to process work or to perform maintenance.

(v) There are no liquid leaks from any portion of the stripping equipment. Upon detection of a liquid leak, the leak shall be repaired immediately, or the stripping tank drained and taken out of service, in a manner that minimizes emissions.

(vi) Solvent is not above the marked maximum solvent level line, unless a sealing fluid is used.

(vii) Solvent carry-out is minimized by all of the following methods:

(A) allowing for full drainage by racking parts or by other means;

(B) tipping out any pools of solvent from the stripped parts before removal; and

(C) allowing parts to dry within the stripping equipment until visually dry or dripping ceases.

(viii) Solvent agitation, where necessary, is achieved exclusively through pump circulation or by means of a mechanical mixer or ultrasonic agitation. Air or gas agitation shall not be used.

(ix) Solvent spraying, when necessary, is conducted by using only a continuous fluid stream (not a fine, atomized, fan, or shower type spray) at a pressure which does not cause liquid solvent to splash outside of the solvent container.

(x) Waste solvent and contaminated residue, if any, shall be recycled or disposed of according to requirements based on the California Health and Safety Code, Division 20, Chapter ~~6.3~~ 6.5 (beginning at Section 25100) concerning hazardous waste disposal.

(e) **CONTROL EQUIPMENT**

(1) In lieu of complying with the requirements in Subsections (d)(1), (d)(2), and (d)(3) an owner/operator may use an ~~airtight/~~airless/air-tight cold solvent cleaner provided that all of the following requirements are met:

(i) The equipment is operated in accordance with the manufacturer's specifications and with a door or other pressure sealing apparatus in place during all cleaning and drying cycles;

(ii) All associated pressure relief devices do not allow liquid solvents to drain out. Spills during any solvent transfer shall be cleaned up immediately;

(iii) A differential pressure gauge is installed to indicate the sealed chamber pressure;

(iv) The equipment complies with all applicable operating requirements of Subsection (d)(4).

(2) In lieu of complying with the requirements of Subsections (d)(1), (d)(2), (d)(3), and (d)(5) a person conducting a cold solvent cleaning or stripping operation may use an air pollution control system which:

(i) Has been installed in accordance with an Authority to Construct; and

(ii) Has a combined emissions capture and control efficiency of at least 85% by weight.

(3) A person electing to use control equipment pursuant to Subsection (e)(2) shall submit to the Air Pollution Control Officer for approval an Operation and Maintenance plan for the proposed emission control and collection system and receive approval prior to operation of the control equipment. Thereafter, the plan can be modified, with Air Pollution Control Officer approval, as necessary to ensure compliance. Such a plan shall:

(i) Identify all key system operating parameters. Key system operating parameters are those necessary to ensure compliance with Subsection (e)(2)(ii), such as temperature and/or pressure;

(ii) Include proposed inspection schedules, anticipated ongoing maintenance, and proposed recordkeeping practices regarding the key system operating parameters; and

(iii) Upon approval by the Air Pollution Control Officer, a person subject to the requirements of Subsection (e)(2) shall implement the Operation and Maintenance plan and shall comply with the all the provisions of the approved plan.

(f) **RECORD KEEPING REQUIREMENTS**

(1) Any person conducting a cold solvent cleaning or stripping operation subject to this rule shall maintain the following records:

(i) A current list of solvents and sealing fluids in use, which provides all of the data necessary to evaluate compliance, including but not limited to:

(A) Manufacturer name and identification for each solvent, and

(B) VOC content of solvent expressed in g/l (lbs/gal) of material as used, and density and mix ratios for each solvent.

(2) Any person using control equipment pursuant to Section (e) of this rule shall:

(i) Maintain records in accordance with the requirements of Subsection (f)(1); and

(ii) Maintain daily records of key system operating parameters as approved in the Operation and Maintenance plan pursuant to Subsection (e)(3). Such records shall be sufficient to document continuous compliance with Subsection (e)(2)(ii) during periods of emission producing activities.

All records shall be retained on site for at least three years and shall be made available to the District upon request.

(g) **TEST METHODS**

When more than one test method or set of test methods are specified in this Section, 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 the rule.

(1) The VOC content of cleaning materials shall be determined by the South Coast Air Quality Management District (SCAQMD) Method 313-91 (Determination of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry), February 1997, SCAQMD Method 308-91 (Quantitation of Compounds by Gas Chromatography), February 1993, or any other test methods approved by the Environmental Protection Agency (EPA), California Air Resources Board (CARB), and the Air Pollution Control District.

(2) The overall control efficiency of air pollution control equipment operated pursuant to Subsection (e)(2)(ii) shall be determined by multiplying the capture efficiency of the emission collection system by the control efficiency of the air pollution control device. The control efficiency of the air pollution control device shall be

determined using EPA Test Methods 18 and ~~25 or~~ 25A (40 CFR 60, Appendix A), August 2017; and in accordance with a protocol approved by the Air Pollution Control Officer. Capture efficiency shall be determined according to EPA Test Methods 204 and 204A through 204F (40 CFR Part 51, Appendix M) as applicable, August 2017; and technical document "Guidelines for Determining Capture Efficiency," January 1995. Subsequent to the initial compliance demonstration period, appropriate key system operating parameters as determined by the Air Pollution Control Officer may be used as indicators of the performance of the emission control system.

(h) **COMPLIANCE SCHEDULE**

~~(1)~~ All new cold solvent cleaning or stripping operations shall comply with the applicable requirements of this rule upon initial startup.

~~(2) All existing cold solvent cleaning or stripping operations shall comply with the applicable requirements of this rule not later than May 23, 2008.~~

~~(3) The owner or operator of existing cold solvent cleaning or stripping equipment that will require modifications pursuant to the requirements of Subsections (d)(1), (d)(3), and/or (d)(5), except for those switching to a water-based solvent with a VOC content 50 g/l or less shall:~~

~~(i) By November 23, 2007, submit to the Air Pollution Control Officer an application to modify a Permit to Operate for complying with the applicable requirements of Subsections (d)(1), (d)(3), and/or (d)(5).~~

~~(ii) By May 23, 2008, comply with all applicable rule requirements.~~

~~(4) The owner or operator of existing cold solvent cleaning or stripping equipment that chooses to comply with the rule by installing air pollution control equipment pursuant to Section (e) of this rule shall comply with the following increments of progress:~~

~~(i) By November 23, 2007, submit to the Air Pollution Control Officer an application for an Authority to Construct and a Permit to Operate an air pollution control system as specified in Section (e).~~

~~(ii) By May 23, 2008, comply with all applicable rule requirements.~~

RULE 67.6.2 VAPOR DEGREASING OPERATIONS

(~~Adopted & Effective 5/23/07;~~ Rev. Adopted & Effective *(date of adoption)*)

(a) APPLICABILITY

(1) Except as provided in Section (b) Exemptions, this rule is applicable to all vapor degreasing operations.

(2) Rule 66.1 – Miscellaneous Surface Coating Operations and Other Processes Emitting Volatile Organic Compounds shall not apply to any vapor degreasing operation.

(b) EXEMPTIONS

(1) This rule shall not apply to the following:

(i) ~~Except for requirements for waste solvent disposal in Subsection (d)(4)(xiii), v~~ Vapor degreasing operations that exclusively utilize ~~water-based cleaning~~ materials with a volatile organic compound (VOC) content of ~~50~~ 25 grams per liter (g/l) ~~of material~~ (~~0.42 pounds per gallon~~ (0.21 lbs/gal) of material or less, as used.

It shall be the responsibility of any person conducting such operations to keep a current list of all cleaning materials and the VOC content of each material, as ~~applied~~ used, to substantiate this exemption.

(ii) Vapor-phase solder reflow units.

(iii) Vapor degreasing operations conducted in a container with a vapor-air interface area of one square foot (0.09 square meters) or less or with a maximum solvent capacity of one gallon (3.8 liters) or less.

(c) DEFINITIONS

(1) **"Airless/Air-Tight Vapor Degreaser"** means a system that consists of a sealed vapor degreaser and the devices to condense and recover solvent and emission control devices to remove solvent from all gas streams that vent to the atmosphere. The system must have no open vapor-air interface, and be designed and operated in such a manner as to prevent the discharge or leakage of solvent emissions to the atmosphere during all cleaning and drying operations.

(2) **"Batch-loaded Solvent Degreaser"** means a degreaser in which any material is placed for cleaning and removed as a single batch after the cleaning is finished.

(3) **"CFR"** means Code of Federal Regulations.

(4) **"Degreaser"** means a tank, drum, or other container in which objects to be cleaned are exposed to a solvent or solvent vapors, in order to remove contaminants.

~~(5) **"Exempt Compounds"** means the same as defined in Rule 2.~~

~~(6) **"Existing Vapor Degreasing Operation"** means any vapor degreasing operation that is not new.~~

(~~7~~5) **"Freeboard Height"** means the distance from the solvent vapor-air interface to the top of the degreaser tank, based on inside tank dimensions.

(~~8~~6) **"Freeboard Ratio"** means the freeboard height divided by the smaller of the interior length or width of the degreaser tank.

(~~9~~7) **"Liquid Leak"** means any visible leak of a VOC-containing liquid at a rate in excess of three drops per minute.

(~~10~~8) **"New Vapor Degreasing Operation"** means any vapor degreasing operation for which a complete application for an Authority to Construct in San Diego County was submitted after ~~May 23, 2007~~ *(date of adoption)*.

(~~11~~9) **"Open-top Vapor Degreaser"** means any batch-loaded vapor degreaser.

(~~12~~10) **"Perimeter Trough"** means a receptacle within the vapor degreaser located below the primary condenser that conveys condensed solvent and atmospheric moisture to a water separator.

(~~13~~11) **"Primary Condenser"** means a series of circumferential cooling coils on the inside of walls of a vapor degreaser through which a chilled substance is circulated or recirculated to provide continuous condensation of rising solvent vapors, thereby creating a concentrated solvent vapor zone.

(~~14~~12) **"Refrigerated Freeboard Chiller"** means an emission control device which is mounted above the degreaser's water jacket or primary condenser coils, and which consists of secondary coils that carry a refrigerant to provide a chilled air blanket above the solvent vapor.

(~~15~~13) **"Solvent"** means any substance containing an organic compound or combination of organic compounds which is liquid at atmospheric pressure and ambient temperature and which is used as a diluent, thinner, dissolver, viscosity reducer, or cleaning agent, or for other similar purposes.

(~~16~~14) **"Solvent Carry-Out"** means solvent carried out of a degreaser that adheres to or is entrapped in the part being cleaned.

(~~17~~15) **"Vapor-Air Interface"** means the area of contact between the solvent vapors and air that is contiguous with the air outside the degreaser. The area of the vapor-air interface shall be calculated as the product of the lengths between internal solvent cleaner walls behind the condensing coils.

(~~18~~16) **"Vapor-Phase Solder Reflow Unit"** means a device in which parts are immersed in VOC-rich vapor generated by boiling a liquid for heating to melt or soften solder connections of electronic components.

(~~19~~17) **"Vapor Degreaser"** means a degreaser in which objects to be cleaned are exposed to a boiling solvent or solvent vapors.

(~~20~~18) **"Vapor Degreasing Operation"** means a cleaning operation that is conducted by immersing parts, products, tools or other items in a boiling solvent or in solvent vapors generated by boiling solvent.

(~~21~~19) **"Volatile Organic Compound (VOC)"** means ~~any volatile compound containing at least one atom of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds~~ the same as defined in Rule 2 – Definitions.

(20) **"VOC Content Per Volume of Material"** means the same as defined in Rule 2 – Definitions.

~~(22) **"Water-Based Cleaning Material"** means cleaning material that consists only of water and VOC and does not contain any exempt compounds.~~

(~~23~~21) **"Water Separator"** means a device that isolates water from a solvent or a mixture of solvents through mechanical or chemical means.

(d) **STANDARDS**

(1) General Equipment Requirements

A person shall not operate any vapor degreaser unless it is equipped with all of the following:

(i) A cover that can be easily operated without disturbing the vapor layer and that completely covers the solvent tank when work is not performed in the degreaser;

(ii) A primary condenser situated above the boiling solvent;

(iii) A water separator that does not operate by means of evaporation or distillation;

(iv) A perimeter trough;

(v) For vapor degreasers employing sprays:

(A) spray nozzles having a pressure low enough to prevent liquid splashing outside of the tank, and

(B) spray nozzles which produce continuous liquid flow, rather than fine atomized or shower type sprays; or

(C) spray nozzles which are located below the vapor-air interface.

(2) Additional Equipment Requirements

All vapor degreasers shall have one of the following:

(i) A freeboard ratio of at least 1.0; or

(ii) A refrigerated freeboard chiller, where the chilled air blanket temperature measured in degrees Fahrenheit at the center of the air blanket is not greater than 40% of the initial boiling point of the solvent; or

(iii) Be designed in such a manner that its cover or door opens only when the dry part is entering or exiting the degreaser.

(3) Safety Devices

Vapor degreasers shall be equipped with the following safety devices:

(i) A device which shuts off the sump heat if the condenser's coolant stops circulating. This requirement does not apply to vapor degreasers equipped with refrigerated condensers; and

(ii) A device which shuts off the sump heat if the condenser's coolant or refrigerant temperature becomes higher than the designed operating temperature; and

(iii) A device which is only manually resettable and which shuts off the sump heat if the vapor level rises above the designed operating level;

(iv) For vapor degreasers employing sprays, a device that prevents spray pump operation if the solvent vapor-air interface temperature falls below the designed operating level.

(4) Operating Requirements

A person shall not operate a vapor degreaser unless all of the following requirements are met:

(i) A permanent, conspicuous, legible label listing the applicable operating requirements is posted on or near the degreaser;

(ii) The degreaser and any emission control equipment are installed and maintained in proper working order. The emission control equipment shall be properly operating at all times when parts are being cleaned or solvent is being heated in the degreaser;

(iii) The cover is not removed except to process workload or to perform maintenance;

(iv) There are no liquid leaks from any portion of the degreaser. Upon detection of a liquid leak, the leak shall be repaired immediately, or the degreaser shall be shut down and drained in a manner that minimizes emissions;

(v) Ventilation fans are not positioned near the degreaser openings in such a way as to disturb the vapor zone;

(vi) At startup, the primary condenser and the refrigerated freeboard chiller, if required, are turned on before the sump heater is turned on. At shutdown, the sump heater is turned off before the primary condenser and refrigerated freeboard chiller are turned off;

(vii) No porous or absorbent materials, such as cloth, leather, wood, or rope are cleaned in a vapor degreaser;

(viii) Solvent is not sprayed above the vapor-air interface;

(ix) Exhaust ventilation rate does not exceed 65 cubic feet per minute per square foot (20 cubic meters per minute per square meter) of the degreaser vapor-air interface area, unless necessary to meet OSHA requirements;

(x) Workloads placed in the degreaser occupy a horizontal cross-sectional area that is less than one half of the vapor-air interface area;

(xi) The water separator is maintained to prevent water from returning to the surface of the boiling solvent sump or from becoming visibly detectable in the solvent exiting the water separator; and

(xii) Solvent carry-out is minimized by all of the following methods:

(A) racking parts for full drainage;

(B) moving parts in and out of the degreaser at a speed of less than 11 feet per minute (3.3 meters per minute);

(C) cleaning the workload in the vapor zone until condensation ceases;

(D) tipping out any pools of solvent on the cleaned parts before removal; and

(E) not removing parts from the degreaser until they are visually dry.

(xiii) Waste solvent and contaminated residue, if any, shall be recycled, or disposed of according to requirements based on the California Health and Safety Code, Division 20, Chapter ~~6.3~~ 6.5 (beginning at section 25100) concerning hazardous waste disposal.

(e) **CONTROL EQUIPMENT**

(1) In lieu of complying with the equipment requirements in Subsections (d)(1), (d)(2), and (d)(3), an owner/operator may use an ~~airtight/~~ airless/air-tight vapor degreaser provided that all of the following requirements are met:

(i) The degreaser is operated in accordance with the manufacturer's specifications and is equipped with a door or other pressure sealing apparatus in place during all cleaning and drying cycles;

(ii) All associated pressure relief devices do not allow liquid solvents to drain out. Spills during any solvent transfer shall be wiped up immediately;

(iii) A differential pressure gauge is installed to indicate the sealed chamber pressure;

(iv) The applicable operating requirements of Subsection (d)(4) are met.

(2) In lieu of complying with the requirements of Subsections (d)(1), (d)(2), and (d)(3), an owner/operator of a vapor degreaser may use an air pollution control system which:

(i) Has been installed in accordance with an Authority to Construct; and

(ii) Has a combined emissions capture and control efficiency of at least 85% by weight.

(3) A person electing to use control equipment pursuant to Subsection (e)(2) shall submit to the Air Pollution Control Officer for approval an Operation and Maintenance plan for the proposed air pollution control system and receive approval prior to operation of the control equipment. Thereafter, the plan can be modified, with Air Pollution Control Officer approval, as necessary to ensure compliance. Such plan shall

(i) Identify all key system operating parameters. Key system operating parameters are those necessary to ensure compliance with Subsection (e)(2)(ii), such as temperature and/or pressure;

(ii) Include proposed inspection schedules, anticipated ongoing maintenance, and proposed recordkeeping practices regarding the key system operating parameters; and

(iii) Upon approval of the Air Pollution Control Officer, a person subject to the requirements of Subsection (e)(2) shall implement the Operation and Maintenance plan and shall comply with the all the provisions of the approved plan.

(f) **RECORD KEEPING REQUIREMENTS**

(1) Any person conducting vapor degreasing operations subject to this rule shall maintain the following records:

(i) A current list of cleaning materials in use, which provides all of the data necessary to evaluate compliance, including but not limited to:

(A) Manufacturer name and identification for each material;

(B) VOC content expressed in g/l (lb/gal) of material as used, and density and mixed ratios for each component; and

(C) Initial boiling point of a cleaning material if a refrigerated freeboard chiller is used.

(2) Any person using control equipment pursuant to Section (e) Control Equipment of this rule shall:

(i) Maintain records in accordance with the requirements of Subsection (f)(1); and

(ii) Maintain daily records of key system operating parameters as approved in the Operation and Maintenance plan pursuant to Subsection (e)(3). Such records shall be sufficient to document continuous compliance with Subsection (e)(2)(ii) during periods of emission producing activities.

All records shall be retained on site for at least three years and shall be made available to the District upon request.

(g) **TEST METHODS**

When more than one test method or set of test methods are specified in this Section, 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 the rule.

(1) The VOC content of cleaning materials shall be determined by the South Coast Air Quality Management District (SCAQMD) Method 313-91 (Determination of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry), February 1997, SCAQMD Method 308-91 (Quantitation of Compounds by Gas Chromatography), February 1993, or any other test methods approved by the Environmental Protection Agency (EPA), California Air Resources Board (CARB), and the Air Pollution Control District.

(2) Measurement of initial boiling point of solvents shall be conducted in accordance with ASTM Standard Test Method D1078-~~03~~ 11(2019) (Standard Test Method for Distillation Range of Volatile Organic Liquids), ~~November 2011 for distillation range of volatile organic liquids,~~ or its most current version~~,~~.

(3) Hoist speed shall be determined by measuring the distance traveled by the hoist per unit of time.

(4) Temperatures in the vapor zone shall be measured with the use of a properly calibrated temperature probe, with an accuracy of ± 1º F.

(5) The overall control efficiency of air pollution control equipment operated pursuant to Subsection (e)(2)(ii) shall be determined by multiplying the capture efficiency of the emission collection system by the control efficiency of the air pollution control device. The control efficiency of the air pollution control device shall be determined using EPA Test Methods 18 and ~~25 or~~ 25A (40 CFR 60, Appendix A), August 2017; and in accordance with a protocol approved by the Air Pollution Control Officer. Capture efficiency shall be determined according to EPA Test Methods 204 and 204A through 204F (40 CFR Part 51, Appendix M) as applicable, August 2017; and technical document "Guidelines for Determining Capture Efficiency," January 1995. Subsequent to the initial compliance demonstration period, appropriate key system operating parameters as determined by the Air Pollution Control Officer may be used as indicators of the performance of the emission control system.

(h) **COMPLIANCE SCHEDULE**

~~(1)~~ All new vapor degreasing operations shall comply with the applicable requirements of this rule upon initial startup.

~~(2) All existing vapor degreasing operations, except for those specified in Subsection (h)(3) or (h)(4), shall comply with the applicable requirements of this rule after May 23, 2007.~~

~~(3) An owner or operator of any existing vapor degreaser that currently does not comply with one of the requirements of Subsection (d)(2) shall:~~

~~(i) By November 23, 2007, submit to the Air Pollution Control Officer an application to modify a Permit to Operate for complying with the applicable requirements of Subsections (d)(2);~~

~~(ii) By May 23, 2008, comply with all applicable rule requirements.~~

~~(4) An owner or operator of an existing vapor degreaser that chooses to comply with the rule by installing air pollution control equipment pursuant to Section (e) of this rule shall comply with the following increments of progress:~~

~~(i) By November 23, 2007, submit to the Air Pollution Control Officer an application for an Authority to Construct and a Permit to Operate an air pollution control system as specified in Section (e);~~

~~(ii) By May 23, 2008, comply with all applicable rule requirements.~~