

Antelope Valley
Air Quality Management District



Draft
Staff Report
Proposed Amendments to
Rule 1171 – *Solvent Cleaning Operations*

For amendment on
August 21, 2018

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STAFF REPORT

Rule 1171– *Solvent Cleaning Operations*

I. PURPOSE OF STAFF REPORT

A staff report serves several discrete purposes. Its primary purpose is to provide a summary and background material to the members of the Governing Board. This allows the members of the Governing Board to be fully informed before making any required decision. It also provides the documentation necessary for the Governing Board to make any findings, which are required by law to be made prior to the approval or adoption of a document. In addition, a staff report ensures that the correct procedures and proper documentation for approval or adoption of a document have been performed. Finally, the staff report provides evidence for defense against legal challenges regarding the propriety of the approval or adoption of the document.

II. EXECUTIVE SUMMARY

The Antelope Valley Air Pollution Control District (AVAPCD) was created by statute on July 1, 1997, with a jurisdiction of the Los Angeles County portion of the South Coast Air Quality Management District (SCAQMD) that was not within the South Coast Air Basin. SCAQMD rules in effect in the AVAPCD remained in effect until the AVAPCD Governing Board superseded or amended them. On January 1, 2002 the AVAQMD was formed pursuant to statute (Health & Safety Code §§41300 et seq.) to replace the AVAPCD. The rules of the AVAPCD also remain in effect until the AVAQMD Governing Board supersedes or amends them.

The Federal Clean Air Act (FCAA) requires areas designated non-attainment and classified moderate and above to implement Reasonably Available Control Technology (RACT) for sources subject to CTG documents issued by United States Environmental Protection Agency (USEPA) and for “major sources” of Volatile Organic Compounds (VOCs) and Oxides of Nitrogen (NO_x) which are ozone precursors. The District adopted the *8-Hour Reasonably Available Control Technology – State Implementation Plan Analysis (RACT SIP Analysis)* in July, 2015 for the 2008 75 ppb ozone National Ambient Air Quality Standards (NAAQS). This document committed to amending Rule 1171 to enhance work practices, adjust categories for consistency with source specific rules, reduce VOC limits and address the alternative composite vapor pressure. This rule is subject to the CTG titled *Control Techniques Guidelines: Industrial Cleaning Solvents, (EPA-453/R-06-001), September 2006*. The AVAQMD is now proposing to amend Rule 1171 – *Solvent Cleaning Operations* to reflect current federal RACT.

Rule 1171 was originally adopted on 08/02/91 by the SCAQMD and subsequently amended on 05/12/95, 09/13/96, and 06/13/97. The version of Rule 1171, as amended by SCAQMD on 06/13/97, was the initial rule of the AVAPCD. On 11/17/98 the AVAPCD amended Rule 1171. The 11/17/98 version is the current version in the AVAQMD rule book.

AVAQMD submitted the 11/17/98 version of Rule 1171 for inclusion to the SIP. USEPA finalized approval of the 11/17/98 version of Rule 1171 on 05/24/01 (66 FR 28666).

The proposed amendment of Rule 1171 – *Solvent Cleaning Operations* addresses the 2015 RACT SIP Analysis commitment. The proposed amendments are based on the Control Technique Guidelines: Industrial Cleaning Solvents, South Coast Air Quality Management District Rule 1171 - *Solvent Cleaning Operations*, amended 02/01/08, Yolo-Solano AQMD Rule 2.31 – *Solvent Cleaning and Degreasing*, amended 04/12/17, and San Joaquin Valley Air Pollution Control District Rule 4663 - *Organic Solvent Cleaning Storage and Disposal*, amended 09/20/07 and Rule 4605 - *Aerospace Assembly and Component Manufacturing Operations*, amended 06/16/11.

This item was noticed for the July 17, 2018 Governing Board meeting. The item was continued to the August 21, 2018 meeting to address substantive comments from USEPA.

III. STAFF RECOMMENDATION

Staff recommends that the Governing Board of the Antelope Valley Air Quality Management District (AVAQMD or District) amend proposed Rule 1171 – *Solvent Cleaning Operations* and approve the appropriate California Environmental Quality Act (CEQA) documentation. This action is necessary satisfy 42 U.S.C. §§7511a (FCAA) §182) which requires that ozone non-attainment areas implement RACT for sources that are subject to CTGs and for major sources of ozone precursors.

IV. LEGAL REQUIREMENTS CHECKLIST

The findings and analysis as indicated below are required for the procedurally correct amendments to Rule 1171 – *Solvent Cleaning Operations*. Each item is discussed, if applicable, in Section V. Copies of related documents are included in the appropriate appendices.

FINDINGS REQUIRED FOR RULES & REGULATIONS:

- Necessity
- Authority
- Clarity
- Consistency
- Nonduplication
- Reference
- Public Notice & Comment
- Public Hearing

REQUIREMENTS FOR STATE IMPLEMENTATION PLAN SUBMISSION (SIP):

- Public Notice & Comment
- Availability of Document
- Notice to Specified Entities (State, Air Districts, USEPA, Other States)
- Public Hearing
- Legal Authority to adopt and implement the document.
- Applicable State laws and regulations were followed.

ELEMENTS OF A FEDERAL SUBMISSION:

- Elements as set forth in applicable Federal law or regulations.

CALIFORNIA ENVIRONMENTAL QUALITY ACT REQUIREMENTS (CEQA):

- N/A Ministerial Action
- N/A Exemption
- Negative Declaration
- N/A Environmental Impact Report
- Appropriate findings, if necessary.
- Public Notice & Comment

SUPPLEMENTAL ENVIRONMENTAL ANALYSIS (RULES & REGULATIONS ONLY):

- Environmental impacts of compliance.
- N/A Mitigation of impacts.
- N/A Alternative methods of compliance.

OTHER:

- Written analysis of existing air pollution control requirements
- Economic Analysis
- Public Review

V. DISCUSSION OF LEGAL REQUIREMENTS

A. REQUIRED ELEMENTS/FINDINGS

This section discusses the State of California statutory requirements that apply to the proposed amendments Rule 1171. These are actions that need to be performed and/or information that must be provided in order to amend the rule in a procedurally correct manner.

1. State Findings Required for Adoption of Rules & Regulations:

Before adopting, amending, or repealing a rule or regulation, the District Governing Board is required to make findings of necessity, authority, clarity, consistency, non-duplication, and reference based upon relevant information presented at the hearing. The information below is provided to assist the Board in making these findings.

a. Necessity:

The proposed amendments to Rule 1171 are necessary to enhance work practices, adjust categories for consistency with source specific rules, reduce VOC limits and address the alternative composite vapor pressure.

b. Authority:

The District has the authority pursuant to California Health and Safety Code (H & S Code) §40702 to adopt, amend or repeal rules and regulations.

c. Clarity:

The proposed amendments to Rule 1171 are clear in that they are written so that the persons subject to the rule can easily understand the meaning.

d. Consistency:

The proposed amendments to Rule 1171 are in harmony with, and not in conflict with or contradictory to any state law or regulation, federal law or regulation, or court decisions. The proposed rule is consistent with the CTG provisions and other District rules deemed to meet RACT.

e. Nonduplication:

The proposed amendments to Rule 1171 do not impose the same requirements as any existing state or federal law or regulation, or

court decision. CTGs are primarily guidance documents and not enforceable in and of themselves. A rule is necessary to implement the applicable provisions of these documents.

f. Reference:

The District has the authority pursuant to H & S Code §40702 to adopt, amend or repeal rules and regulations.

g. Public Notice & Comment, Public Hearing:

Notice for the public hearing for the proposed amendments to Rule 1171 was published on June 15, 2018. This item was noticed for the July 17, 2018 Governing Board meeting. The item was continued to the August 21, 2018 meeting to address substantive comments from USEPA. See Appendix “B” for a copy of the public notice. See Appendix “C” for copies of comments, if any, and District responses.

2. Federal Elements (SIP Submittals, Other Federal Submittals).

Submittals to USEPA are required to include various elements depending upon the type of document submitted and the underlying Federal law that requires the submittal. The information below indicates which elements are required for the proposed amendments to Rule 1171 and how they were satisfied.

a. Satisfaction of Underlying Federal Requirements:

The FCAA requires areas designated non-attainment and classified moderate and above to implement RACT for sources subject to CTG documents issued by USEPA and for “major sources” of VOCs and NO_x that are ozone precursors. Because the District has an existing SIP rule for this CTG category, the District committed to adopting an updated RACT rule for solvent cleaning operations as part of the *RACT SIP Analysis*. The AVAQMD is proposing to update Rule 1171 – *Solvent Cleaning Operations* to reflect current federal RACT as determined by comments from USEPA, CTG requirements, other related national rules and guidance, and the rules of other California air districts with nonattainment designations. USEPA approved AVAQMD Rule 1171 – *Solvent Cleaning Operations* amended 11/17/98 as a RACT rule on 05/24/01 (66 FR 28666) and this rule was used as a basis for amendment

b. Public Notice and Comment:

Notice for the public hearing for the proposed amendments to Rule 1171 will be published on June 15, 2018. This item was noticed

for the July 17, 2018 Governing Board meeting. The item was continued to the August 21, 2018 meeting to address substantive comments from USEPA. See Appendix “B” for a copy of the public notice. See Appendix “C” for copies of comments, if any, and District responses.

c. Availability of Document:

Copies of the proposed amendments to Rule 1171 and the accompanying draft staff report were made available to the public on June 15, 2018.

d. Notice to Specified Entities:

Copies of the proposed amendments to Rule 1171 and the accompanying draft staff report were sent to all affected agencies. The proposed amendments were sent to the California Air Resources Board (CARB) and U.S. Environmental Protection Agency (USEPA) on June 15, 2018.

e. Public Hearing:

A public hearing to consider the proposed amendments to Rule 1171 has been set for July 17, 2018. The item was continued to the August 21, 2018 meeting to address substantive comments from USEPA.

f. Legal Authority to Adopt and Implement:

The District has the authority pursuant to H&S Code §40702 to adopt, amend, or repeal rules and regulations and to do such acts as may be necessary or proper to execute the duties imposed upon the District.

g. Applicable State Laws and Regulations Were Followed:

Public notice and hearing procedures pursuant to H&S Code §§40725-40728 have been followed. See Section (V)(A)(1) above for compliance with state findings required pursuant to H&S Code §40727. See Section (V)(B) below for compliance with the required analysis of existing requirements pursuant to H&S Code §40727.2. See Section (V)(C) for compliance with economic analysis requirements pursuant to H&S Code §40920.6. See Section (V)(D) below for compliance with provisions of the CEQA.

B. WRITTEN ANALYSIS OF EXISTING REQUIREMENTS

H & S Code §40727.2 requires air districts to prepare a written analysis of all existing federal air pollution control requirements that apply to the same equipment or source type as the rule proposed for modification by the district.

The FCAA requires areas designated non-attainment for ozone and classified moderate and above to adopt and maintain RACT rules to control the emissions of VOCs and NO_x for categories which the USEPA has adopted a CTG and for all categories where there are major stationary sources of air pollution (42 U.S.C. §7511a(b)(2), FCAA 182(b)(2)). For purposes of the FCAA, the District has been designated non-attainment for ozone and classified Severe-17.

The AVAQMD committed to amending Rule 1171 – *Solvent Cleaning Operations* as part of the recently adopted *RACT SIP Analysis*.

The AVAQMD has a solvent cleaning operations rule which was amended November 17, 1998 and approved as RACT into the SIP on May 24, 2001 (66 FR 28666). This rule is subject to the CTG titled Industrial Cleaning Solvents.

The proposed amendments are based on the CTG: *Industrial Cleaning Solvents*, and various district rules deemed as fulfilling RACT requirements, including but not limited to: South Coast Air Quality Management District Rule 1171 - *Solvent Cleaning Operations*, amended 02/01/08 (76 FR 60376), Yolo-Solano AQMD Rule 2.31 – *Solvent Cleaning and Degreasing*, amended 04/12/17, and San Joaquin Valley Air Pollution Control District Rule 4663 - *Organic Solvent Cleaning Storage and Disposal*, amended 09/20/07 (74 FR 37948) and Rule 4605 - *Aerospace Assembly and Component Manufacturing Operations*, amended 06/16/11 (76 FR 70886).

C. ECONOMIC ANALYSIS

1. General

RACT is defined as the lowest emissions limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility (44 FR 53762, September 17, 1979). Rule 1171 is equivalent to rules that were determined by USEPA to be RACT¹. This determination by USEPA means that the provisions of Rule 1171 are, by definition, cost effective. In addition, all sources are currently in compliance with this RACT limit without additional control equipment or cost. As a result, no cost impacts are expected from the proposed amendments.

¹ Yolo-Solano AQMD Rule 2.31 – Solvent Cleaning and Degreasing, (Amended 05/08/13, 80 FR 23449)

2. Incremental Cost Effectiveness

Pursuant to H&S Code §40920.6, incremental cost effectiveness calculations are required for rules and regulations which are adopted or amended to meet the California Clean Air Act (CCAA) requirements for Best Available Retrofit Control Technology (BARCT) or “all feasible measures” to control volatile compounds (VOCs), oxides of nitrogen (NO_x) or oxides of sulfur (SO_x). This requirement does not apply to the proposed amendments to Rule 1171 since it does not require BARCT or “all feasible measures.”

D. ENVIRONMENTAL ANALYSIS (CEQA)

Through the process described below the appropriate CEQA process for the proposed amendments to Rule 1171 was determined.

1. The proposed amendments to Rule 1171 meet the CEQA definition of “project”. They are not “ministerial” actions.

2. The proposed amendments to Rule 1171 are exempt from CEQA review because they will not create any adverse impacts on the environment. The proposed rule amendments are more stringent than the previous rule version. This rule has been strengthened by reducing VOC limits, establishing work practices and addressing the alternative composite vapor pressure limit. Because there is no potential that the amendment might cause the release of additional air contaminants or create any adverse environmental impacts, a Class 8 categorical exemption (14 Cal. Code Reg. §15308) applies. Copies of the documents relating to CEQA can be found in Appendix “D”.

E. SUPPLEMENTAL ENVIRONMENTAL ANALYSIS

1. Potential Environmental Impacts

The District does not anticipate any potential environmental impacts of compliance with the proposed amendments to Rule 1171, as the amendments will enhance work practices, adjust categories for consistency with source specific rules, reduce VOC limits and address the alternative composite vapor pressure.

2. Mitigation of Impacts

N/A

3. Alternative Methods of Compliance

N/A

F. PUBLIC REVIEW

See Staff Report Section (V)(A)(1)(g) and (2)(b), as well as Appendix “B”

VI. TECHNICAL DISCUSSION

A. SOURCE DESCRIPTION

This rule applies to all Persons who use VOC-containing materials in Solvent Cleaning operations during the production, repair, maintenance, or servicing of parts, products, tools, machinery, equipment, or general work areas and all persons who store and dispose of VOC-containing materials used in Solvent Cleaning Operations. This rule also exempts source operations subject to or specifically exempted by existing source specific District rules.

B. EMISSIONS

As an administrative action, this rule amendment would not have any direct impact on the issuance of air contaminants. This rule has been strengthened by enhancing work practices, adjusting categories for consistency with source specific rules, reducing VOC limits and addressing the alternative composite vapor pressure.

C. CONTROL REQUIREMENTS

Please see section (C) of the rule for control requirements. Control requirements consist of loading requirements for Class “A”, “B” and “C” facilities, transport vessels, switch loading, and leak inspection.

D. PROPOSED RULE SUMMARY

This section gives a brief overview of the proposed amendments to Rule 1171.

The rule formatting has been updated for consistency with other District rules.

Section (B) The following definitions have been added or updated:

- Aerospace Component
- Aerospace Vehicle or Components
- Aircraft
- District
- Pharmaceutical Facility
- Radiation Effect Coating
- Space Vehicle

Section (C) has been amended as follows:

- The table in (C)(1)(a) has been revised to reflect lower VOC limits.
- (C)(1)(b) now contains the Composite Partial Pressure limit, as that limit was removed from the table in (C)(1)(a).
- Subsection (C)(2)(b thru d) was moved from previous section (D).

- Subsection (C)(4)(a) has clarification on waste or used product and disposal.
- Subsection (C)(5)(a)(ii) removed Graphic Arts as it is cover by a source specific rule 1130.

Section (D) has been moved to (C)((2)(d) and new Section (D), previously (6) has been amended to require more comprehensive record keeping.

Section (F) Rule 442 Applicability is now Section (G).

Section (F) Exemptions

- Source specific Rules have been added, removed or renumbered for ascending order.
- (F)(1)(i) removed “Institutional cleaning” as per USEPA suggestion that it may provide a broader exemption than intended.

Work practices are currently in place within the existing document, but not specifically identified. The following subsections address each of the four recommended work practices:

- Cover open containers and used applicators is addressed in (C)(2)(a)(iii) and (C)(4)(a).
- Minimize air circulation around cleaning operations is addressed in (C)(2)(a)(ii).
- Properly dispose of used solvent and shop towels is addressed in (C)(4)(a).
- Implement equipment practices that minimize emissions is addressed in (C)(2).

E. SIP HISTORY

1. SIP History.

Prior to 1975 the original air district for the Antelope Valley region was the Los Angeles County Air Pollution Control District that had a jurisdiction covering the entire county of Los Angeles. In 1975, the Southern California APCD was created. It was a joint powers authority that had a jurisdiction covering all of the counties of Los Angeles, Orange, Riverside and San Bernardino. The SCAQMD came into existence pursuant to statute on February 1, 1976 and originally covered only the areas within the South Coast Air Basin (SCAB). The legislation was thereafter amended to allow non-SCAB areas to “opt in.” Los Angeles County exercised this option and thus the Antelope Valley became a part of SCAQMD. On July 1, 1997 the AVAPCD replaced the SCAQMD as the agency with jurisdiction over the Los Angeles County portion of the Mojave Desert Air Basin (MDAB). On January 1, 2002 the AVAPCD was replaced by the AVAQMD. Pursuant to both statutory changes, the rule and regulations of the predecessor district were retained until the Governing Board adopted, amended or rescinded them. At the first meeting of both the AVAPCD and the AVAQMD, the respective Governing Boards reaffirmed all the rules and regulations in effect at the time the agency changed.

The jurisdiction of the AVAPCD and the AVAQMD were specified in the statutes as the portion of the Los Angeles County contained within the MDAB. The MDAB was formerly known as the Southeast Desert Air Basin (SEDAB). In 1997 the SEDAB was split into the MDAB and the Salton Sea Air Basin. Descriptions of these air basins can be found in 17 Cal. Code Regs. §§60109 and 60144. Since USEPA adopts SIP revisions in California as effective within jurisdictional boundaries of local air districts, when the local air district boundaries change the SIP as approved by USEPA for that area up to the date of the change remains as the SIP in that particular area. Thus, upon creation of the AVAPCD on July 1, 1997 the AVAPCD acquired the SIP applicable to the Antelope Valley portion of the SCAQMD that was effective as of June 30, 1997. Likewise the AVAQMD acquired the SIP that was effective in the jurisdiction of the AVAPCD as of December 31, 2000. Therefore, the SIP history for this region is based upon the rules adopted, effective, and approved for the Antelope Valley by SCAQMD.

Rule 1171 was originally adopted on 08/02/91 by the SCAQMD and subsequently amended on 05/12/95, 09/13/96, and 06/13/97. The version of Rule 1171, as amended by SCAQMD on 06/13/97, was the initial rule of the AVAPCD. On 11/17/98 the AVAPCD amended Rule 1171.

The 11/17/98 version is the current version in the AVAQMD rule book.

SCAQMD submitted the 05/12/95 version of Rule 1171 to USEPA for inclusion in the SIP on 06/16/1995 and received final approval on 07/14/95 (60 FR 36230).

AVAQMD submitted the 11/17/98 version of Rule 1171 to USEPA for inclusion in the SIP on 12/10/98 and received final approval on 05/24/01 (66 FR 28666). Therefore the 11/17/98 version of Rule 1171 is the current version in the AVAQMD SIP

2. SIP Analysis.

The District will request CARB to submit the proposed amendments to Rule 1171 – *Solvent Cleaning Operations* to USEPA for inclusion into the State Implementation Plan. This submission is necessary to satisfy 42 U.S.C. §§7511a (FCAA §182) which requires that ozone non-attainment areas implement RACT for sources that are subject to CTGs and for major sources of ozone precursors. The District will request that this version, upon approval, supersede the current SIP version as well as any potential outstanding SIP submissions made prior to the adoption date.

The proposed amendments to Rule 1171 – *Solvent Cleaning Operations* are more stringent in that the rule has been strengthened by enhancing work practices, adjusting categories for consistency with source specific rules, reducing VOC limits and addressing the alternative composite vapor pressure.

Appendix “A”
Rule 1171 – *Solvent Cleaning Operations* Iterated Version

The iterated version is provided so that the changes to an existing rule may be easily found. The manner of differentiating text is as follows:

1. Underlined text identifies new or revised language.
2. ~~Lined-out text~~ identifies language which is being deleted.
3. Normal text identifies the current language of the rule which will remain unchanged by the adoption of the proposed amendments.
4. [*Bracketed italicized text*] is explanatory material that is not part of the proposed language. It is removed once the proposed amendments are adopted.

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RULE 1171

Solvent Cleaning Operations

(A) General

(1) Purpose

- (a) The purpose of this rule is to ~~limit~~~~reduce~~ emissions of ~~v~~Volatile ~~o~~Organic ~~e~~Compounds (VOCs) ~~and stratospheric ozone depleting or global-warming compounds~~ from Solvent Cleaning operations and activities, and from the storage and disposal of these materials used ~~in Solvent Cleaning~~~~for such operations~~. *[Derived from Yolo Solano AQMD Rule 2.31]*

(2) Applicability

- (a) This rule applies to all Persons who use VOC-containing materials in Solvent Cleaning operations during the production, repair, maintenance, or servicing of parts, products, tools, machinery, equipment, or general work areas, and to all Persons who store and dispose of VOC-containing materials used in Solvent Cleaning.

(B) Definitions

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

- (1) “Aerosol Product”: - ~~a~~ hand-held, non-refillable container which expels pressurized product by means of a propellant-induced force.
- (2) “Aerospace Vehicle or Components”: - ~~Any fabricated part, processed part, assembly of parts or completed unit, with the exception of electronic components, of any Aircraft, including but not limited to airplanes, helicopters, missiles, rockets, or Space Vehicle, including, but not limited to, integral equipment such as models, mock-ups, prototypes, molds, jigs, tooling, hardware jackets, and test coupons. [Derived from Yolo Solano Rule 2.31 and AVAQMD Rule 1124, (B)(6). Added to define sub-category added to (C)(1)(a)(iii). Definition has been modified per Nicole Law, USEPA Region 9, email dated 07/16/2018.]~~
- (3) “Aircraft” - ~~Any machine designed to travel through the air, without leaving the earth's atmosphere, whether heavier or lighter than air, including airplanes, balloons, dirigibles, helicopters, and missiles. [Derived from AVAQMD Rule 1124, (B)(9). Added to define verbiage in (B)(2).]~~

- (24) “Air Pollution Control Officer (APCO)”: - ~~€~~€The ~~p~~person appointed to the position of Air Pollution Control Officer of the District pursuant to the provisions of the California Health & Safety Code §40750, and his or her designee.
- (35) “Application Equipment”: - ~~a~~a device used to apply adhesive, coating, ink, or polyester resin materials.
- (46) “Cured Coatings, Cured Inks, and Cured Adhesives”: - ~~e~~eCoatings, inks, and adhesives which are dry to the touch.
- (7) “District” - The Antelope Valley Air Quality Management District that includes the geographical area described in District Rule 103. [Derived from AVAQMD Rule 102 (M)].
- (58) “Electrical Apparatus Components”: - ~~a~~aAll internal components such as wires, windings, stators, rotors, magnets, contacts, relays, energizers, and connections in apparatus that generates or transmits electrical energy including, but not limited to generators, transformers, and electric motors.
- (69) “Electronic Components”: - ~~a~~aAll portions of an assembly, including circuit card assemblies, printed wire assemblies, printed circuit boards, soldered joints, ground wires, bus bars, and other electrical fixtures, except for the actual cabinet in which the components are housed.
- (710) “Exempt Compounds”: - ~~€~~€Those compounds listed as excluded from the definition of Volatile Organic Compounds in 40 CFR 51.100(~~Ss~~)(4). [Verbiage changed per USEPA Attorney Adviser, Douglas Bushey in email dated 07/17/2016. Strikethrough of uppercase letters in Volatile Organic Compound contained in this definition have been modified to lowercase letters and the term has been made plural per Douglas Bushey, USEPA Attorney Advisor, in email dated 08/08/2018.]
- (811) “Facility”: - ~~a~~a business or businesses engaged in ~~s~~solvent ~~e~~ecleaning ~~o~~operations which are owned or operated by the same Person or Persons and are located on the same or contiguous parcels.
- ~~(9) — Flexographic Printing: the method in which the image area is raised relative to the nonimage area and utilizes flexible rubber or other elastomeric plate and rapid drying liquid inks. [Term was included in the amendment of AV Rule 1130 on 11/19/13, no longer necessary in Rule 1171]~~
- (1012) “Grams Of VOC Per Liter Of Material”: - ~~€~~€The weight of VOC per volume of material, ~~and can be~~ calculated by the following equation:

$$\text{Grams of VOC per liter of material} = \frac{W_s - W_w - W_{ec}}{Vm}$$

Where:	Ws	=	Weight of volatile compounds in grams
	Ww	=	Weight of water in grams
	Wesc	=	Weight of Exempt Compounds in grams
	Vm	=	Volume of material in liters

- ~~(11) **Graphic Arts:** all Gravure, Letterpress, Flexographic, and Lithographic Printing processes. *[Term was included in the amendment of AV Rule 1130 on 11/19/13, no longer necessary in Rule 1171.]*~~
- ~~(12) **Gravure Printing:** an intaglio process in which the ink is carried in minute etched or engraved wells on a roll or cylinder. The excess ink is removed from the surface by a doctor blade. *[Term was included in the amendment of AV Rule 1130 on 11/19/13, no longer necessary in Rule 1171]*~~
- (13) **“High Precision Optics”:** - eOptical elements used in electro-optical devices which are designed to sense, detect, or transmit light energy, including specific wavelengths of light energy and changes in light energy levels.
- ~~(14) **Institutional Cleaning:** cleaning activities conducted at organizations, societies, or corporations including, but not limited to schools, hospitals, sanitariums, and prisons. *[Definition deleted per USEPA suggestion via email on 11/28/17, #1, as it includes “cleaning activities conducted at organizations, societies, or corporations...” which may provide a broader exemption than intended. All reference to Institutional Cleaning will be removed.]*~~
- ~~(15) **Janitorial Cleaning:** - tThe cleaning of building or Facility components, such as the floors, ceilings, walls, windows, doors, stairs, bathrooms, etc.~~
- ~~(16) **Letterpress Printing:** the method in which the image area is raised relative to the nonimage area and the ink is transferred to the paper directly from the image surface. *[Term was included in amendment of Rule 1130 on 11/19/13, no longer necessary in Rule 1171]*~~
- ~~(17) **Liquid Leak:** - tThe visible liquid solvent leak from the container at a rate of more than three (3) drops per minute, or a visible liquid mist.~~
- ~~(18) **Liquid Tight Food Container:** a paperboard container that can hold liquid food and food products without leaking even when it is held upside-down. *[Definition is only here and in red-lined definition #36-Specialty Flexographic Printing- definition #36 is being deleted]*~~
- ~~(19) **Lithographic Printing:** a plane o graphic method in which the image and nonimage areas are on the same plane. *[Term was included in the amendment of AV Rule 1130 on 11/19/13, no longer necessary in Rule 1171.]*~~

- ~~(20) Maintenance Cleaning: - a Solvent Cleaning operation or activity carried out to keep tools, machinery, equipment excluding Application Equipment, or general work areas in clean and good operational condition. *[Moved to definition for "Repair and Maintenance Cleaning" definition #26 for clarity.]*~~
- (216) "Manufacturing Process": - ~~¶~~The process of making goods or articles by hand or by machinery.
- (217) "Medical Device": - ~~a~~An instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent or other similar article, including any component or accessory, that meets one of the following conditions:
- (a) ~~¶~~Is intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease; or
 - (b) ~~¶~~Is intended to affect the structure or any function of the body; or
 - (c) ~~¶~~Is defined in the National Formulary or the United States Pharmacopeia, or any supplement to them.
- (218) "Non-Absorbent Containers": - ~~e~~Containers made of nonporous material which ~~do~~does not allow the migration of the liquid Solvent through them.
- (219) "Non-Atomized Solvent Flow": - ~~¶~~The use of a solvent in the form of a liquid stream without atomization to remove uncured adhesives, uncured inks, uncured coatings, and contaminants from an article.
- (220) "Non-Leaking Containers": - ~~e~~Containers without Liquid Leaks.
- (221) "Person": - ~~a~~Any firm, business establishment, association, partnership, corporation or individual, whether acting as principal, agent, employee, or other capacity including any governmental entity or charitable organization.
- (22) "Pharmaceutical Facility": - Any facility producing or blending chemicals for use in pharmaceutical products and/or employing chemical processes in the manufacture of pharmaceutical products or medical devices. Pharmaceutical facilities may include, but are not limited to, establishments primarily engaged in manufacturing, fabricating, or processing medicinal chemicals and pharmaceutical products for human or veterinary use. *[Derived from Yolo Solano Rule 2.31, 240]*
- ~~(27) Printing: - in the Graphic Arts is any operation that imparts color, design, alphabet, or numerals on a substrate. *[Term was included in the amendment of AV Rule 1130 on 11/19/13, no longer necessary in Rule 1171.]*~~
- (23) "Radiation Effect Coating": - ~~A material that prevents radar detection. *[Derived from SCAQMD Rule 1171, (b)(42). Definition is no longer needed as it will not be used in this rule.]*~~

- (2823) “Remote Reservoir Cleaner”: - ~~a~~A cleaning device in which liquid solvent is pumped from a solvent container to a sink-like work area and the solvent from the sink-like area drains into an enclosed solvent container while parts are being cleaned.
- (2924) “Repair and Maintenance Cleaning”: - ~~a~~A Solvent Cleaning ~~o~~Operation or activity carried out during:
- (a) Return a damaged object or an object not operating properly to good condition; or
- (b) Maintain tools, machinery equipment (excluding Application Equipment) or general work areas, in clean and good operational condition. ~~a Repair Process. [Throughout the rule Repair Cleaning it is referred to as Repair and Maintenance Cleaning. This definition combines #20 “Maintenance Cleaning” and #29 “Repair Cleaning” for clarification. “Repair Process” definition #30 is only used in the rule in the definition of Repair Cleaning. “Repair Cleaning” language has now been included in “Repair and Maintenance Cleaning” definition.]~~
- ~~(30) Repair Process: - the process of returning a damaged object or an object not operating properly to good condition. [Only used to define #29 above. Combined definitions #29 & #30 for clarification.]~~
- (3125) “Scientific Instruments”: - ~~i~~Instruments (including the components, assemblies, and subassemblies used in their manufacture) and associated accessories and reagents which are used for the detection, measurement, analysis, separation, synthesis, or sequencing of various compounds.
- (3226) “Screen Printing”: - ~~a~~A process in which ~~the Printing~~ ink passes through a web or a fabric to which a refined form of stencil has been applied. The stencil openings determine the form and dimensions of the imprint.
- (3327) “Solvent”: - ~~a~~A VOC-containing liquid used to perform Solvent Cleaning.
- (3428) “Solvent Cleaning”: - ~~t~~The removal of ~~-~~loosely held uncured adhesives, uncured inks, uncured coatings, and contaminants which include, but are not limited to, dirt, soil, and grease from parts, products, tools, machinery, equipment, and general work areas. Each distinct method of cleaning in a cleaning process, which consists of a series of cleaning ~~methods, methods,~~ shall constitute a separate Solvent Cleaning operation.
- (3529) “Solvent Flushing”: - ~~t~~The use of a Solvent to remove uncured adhesives, uncured inks, uncured coatings, or contaminants from the internal surfaces and passages of the equipment by flushing Solvent through the equipment.

~~(30) “Space Vehicle” – A vehicle designed to travel beyond earth's atmosphere. [Derived from AVAQMD Rule 1124, (B)(85), to clarify verbiage in Rule 1171 (B)(2).]~~

~~(36) Specialty Flexographic Printing: Flexographic Printing on polyethylene or polypropylene food packaging, fertilizer bags, or Liquid-Tight Food Containers. [Term was included in the amendment of AV Rule 1130 on 11/19/13, no longer necessary in Rule 1171]~~

~~(3731) “Sterilization Indicating Inks”: - ~~ink~~s that changes color to indicate that sterilization has occurred. Such inks ~~are~~ used to monitor the sterilization of medical instruments, autoclave efficiency, and the thermal processing of foods for prevention of spoilage.~~

~~(3832) “Stripping”: - ~~the~~ removal of Cured Coatings, Cured Inks, and Cured Adhesives.~~

~~(3933) “Surface Preparation”: - ~~the~~ removal of contaminants such as dust, soil, oil, grease, etc., prior to coating, adhesive, or ink applications.~~

~~(40) Ultraviolet Inks: inks which dry by polymerization reaction induced by ultraviolet energy. [Term was included in the amendment of AV Rule 1130 on 11/19/13, no longer necessary in Rule 1171]~~

~~(4134) “United States Environmental Protection Agency (USEPA)”: - ~~the~~ The United States Environmental Protection Agency, the Administrator of the USEPA and his or her authorized representative.~~

~~(4235) “VOC Composite Partial Pressure”: - ~~the~~ The sum of the partial pressures of the compounds defined as VOCs. VOC Composite Partial Pressure is calculated as follows:~~

$$PP_c = \frac{\sum_{i=1} \frac{(W_i)(VP_i)}{MW_i}}{\frac{W_w}{MW_w} + \frac{W_e}{MW_e} + \sum_{i=1}^n \frac{W_i}{MW_i}}$$

Where: W_i = Weight of the "i"th VOC compound, in grams
 W_w = Weight of water in grams
 W_e = Weight of exempt compound, in grams
 MW_i = Molecular weight of the "i"th VOC compound, in grams per gram-mole
 MW_w = Molecular weight of water, in grams per gram-mole
 MW_e = Molecular weight of exempt compound, in grams per gram-mole
 PP_c = VOC Composite Partial Pressure at 20°C, in mm Hg
 VP_i = Vapor pressure of the "i"th VOC compound at 20°C, in mm Hg

(4336) “Volatile Organic Compound (VOC)”: - ~~a~~Any volatile compound of carbon, excluding ~~methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and~~ Exempt Compounds. *[Definition is being amended to reflect change in definition #10 “Exempt Compounds”, at the request of USEPA Attorney Adviser, Douglas Bushey in email dated 07/17/2016.]*

(4437) “Wipe Cleaning”: - ~~t~~The method of cleaning a surface by physically rubbing it with a material such as a rag, paper, sponge or a cotton swab moistened with a Solvent.

(C) Requirements

(1) Solvent Requirements

- (a) A Person shall not ~~use a Solvent to~~ perform Solvent Cleaning unless the Solvent complies with the applicable requirements set forth below or:

SOLVENT CLEANING ACTIVITY	CURRENT LIMITS		Effective 1/1/1997		Effective 1/1/1999	
	VOC g/l (lb/gal)	VOC Composite Partial Pressure mm Hg @ 20°C (68°F)	VOC g/l (lb/gal)	VOC Composite Partial Pressure mm Hg @ 20°C (68°F)	VOC g/l (lb/gal)	VOC Composite Partial Pressure mm Hg @ 20°C (68°F)
(i) Product Cleaning During Manufacturing Process Or Surface Preparation For Coating, Adhesive, Or Ink Application						
1. General	70 (0.58)					
2. Electronic Components or Medical Devices	900 (7.5)	33				
(ii) Repair and Maintenance Cleaning						
1. General	900 (7.5)	20				
2. Electrical Apparatus Components	900 (7.5)	20				
3. Medical Devices	900 (7.5)	33				
(iii) Cleaning of Coatings, or Adhesives Application Equipment	950 (7.9)	35				
(iv) Cleaning of Ink Application Equipment						
1. General	100 (0.83)	3				
2. Flexographic or Gravure Printing	100 (0.83)	3				
3. Lithographic or Letter Press Printing	900 (7.5)	25				10
4. Screen Printing	1070 (8.9)	5				
5. Ultraviolet Inks (except Screen Printing)	800 (6.7)	33				
6. Specialty Flexographic Printing	810 (6.8)	21				
(v) Cleaning of Polyester Resin Application Equipment	200 (1.7)		50 (0.42)			
or		±				

[Subsection (C)(1)(a)(iv)(1)(2),(3),(5) and (6) have limits stated in AV Rule 1130 – Graphic Arts, subsection (C)(7)(a) Table 5 (D).]

<u>Solvent Cleaning Activity</u>		<u>VOC Content Limit*</u> <u>grams/liter</u> <u>(lb/gal)</u>	
		<u>Limit</u>	
<u>(i) Product Cleaning During Manufacturing Process or Surface Preparation for Adhesive, Coatings or Ink Application</u>	<u>General</u>	<u>50</u> <u>(0.42)</u>	
	<u>Electrical Components and Electronic Apparatus Components</u>	<u>100</u> <u>(0.83)</u>	
	<u>Medical Devices & Pharmaceuticals</u>	<u>800</u> <u>(6.7)</u>	
<u>(ii) Repair and Maintenance Cleaning</u>	<u>General</u>	<u>50</u> <u>(0.42)</u>	
	<u>Electrical Components and Electronic Apparatus Components</u>	<u>100</u> <u>(0.83)</u>	
	<u>Medical Devices & Pharmaceuticals</u>	<u>Tools, Equipment & Machinery</u>	<u>800</u> <u>(6.7)</u>
		<u>General Work Surface</u>	<u>600</u> <u>(5.0)</u>
<u>(iii) Cleaning of Adhesives or Coating Application Equipment</u>	<u>General</u>	<u>50</u> <u>(0.42)</u>	
	<u>Aerospace Vehicle or Component</u>	<u>200</u> <u>(1.67)</u> <u>or</u> <u>45</u> <u>mmHg</u>	
<u>(iv) Cleaning of Ink Application Equipment</u>	<u>General</u>	<u>50</u> <u>(0.42)</u>	
	<u>Screen Printing</u>	<u>100</u> <u>(0.83)</u>	
<u>(v) Cleaning of Polyester Resin Application Equipment</u>		<u>50</u> <u>(0.42)</u>	

**For Aerospace Vehicle or Components, the solvent must comply with either the VOC Content limit in grams/Liter (g/L) or the VOC Composite Partial Pressure limit in millimeters mercury (mmHg). [New VOC limits Derived from CTG - Industrial Cleaning Solvents, EPA 453/R-06-001, September 2006. Limits in (i), (ii) (iii) and (iv) and Aerospace Vehicle or Component sub-category are derived from Yolo-Solano AQMD Rule 2.31, (C)(1)(a), Revised May 8, 2013 and recorded on 04/28/15, 80 FR 23449. Aerospace sub-category limits derived from the CTG for Aerospace, EPA-453/R-97-004, 1997/12, model rule page B-5, subsection (c)(ii). New limits effective upon amendment. The format of the "Limit" column in (C)(1)(a)(iii), Aerospace Vehicle or Component, has been modified in response to USEPA comment #2 dated 08/02/18]*

(b) Has a VOC Composite Partial Pressure of 8 mmHg at 20° C (68° F), calculated using the equation in subsection (B)(36) of this rule:

(i) Except for Cleaning of Ink Application Equipment, Screen Printing, which has a VOC Composite Partial Pressure of 5 mmHg at 20° C (68° F). [Derived from the CTG-Industrial Cleaning Solvents, EPA 453/R-06-001, September 2006]

(2) Cleaning Devices and Methods Requirements

(a) A Person shall not perform Solvent Cleaning unless one of the following cleaning devices or methods is used:

(i) Wipe Cleaning;

(ii) Cleaning within ~~C~~losed containers or by using hand held spray bottles from which Solvents are applied without a propellant-induced force;

(iii) Cleaning equipment which has a Solvent container that ~~can be, and~~ is closed during cleaning operations, except when depositing and removing objects to be cleaned, and is closed during nonoperation with the exception of maintenance and repair to the cleaning equipment itself;

(iv) Remote Reservoir Cleaner used pursuant to the provisions of subsection (C)(3);

(v) Non-Atomized Solvent Flow method where the cleaning Solvent is collected in a container or a collection system which is closed except for Solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container; or

(vi) Solvent Flushing method where the cleaning Solvent is discharged into a container which is closed except for Solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container. The discharged Solvent from the equipment must be collected into containers without atomizing into the open air. The Solvent may be flushed through the system by air or hydraulic pressure, or by pumping.

(b) A Person shall not atomize any Solvent unless it is vented to an air pollution control equipment which meets the requirements of subsection (C)(5). [Moved from (D) General Prohibitions]

(c) A Person shall not specify or require any Person to use Solvent or equipment subject to the provisions of this rule that does not meet the requirements of this rule. [Moved from (D) General Prohibitions]

(d) A Person shall not perform Solvent Cleaning activities or operations subject to the provisions of this rule with any material which contains any of the following compounds:

- 1,1,1-trichloroethane (methyl chloroform);
- trichlorofluoromethane (CFC-11);
- dichlorodifluoromethane (CFC-12);
- 1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113);
- 1,2-dichloro-1,1,2,2-tetrafluoroethane (CFC-114);
- chloropentafluoroethane (CFC-115);
- ethylfluoride (HFC-161);
- 1,1,1,3,3,3-hexafluoropropane (HFC-236fa);
- 1,1,2,2,3-pentafluoropropane (HFC-245ca);
- 1,1,2,3,3-pentafluoropropane (HFC-245ea);
- 1,1,1,2,3-pentafluoropropane (HFC-245eb);
- 1,1,1,3,3-pentafluoropropane (HFC-245fa);
- 1,1,1,2,3,3-hexafluoropropane (HFC-236ea);
- 1,1,1,3,3-pentafluorobutane (HFC-365mfc);
- chlorofluoromethane (HCFC-31);
- 1-chloro-1-fluoroethane (HCFC-151a); or
- 1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a).*[moved from (D) General Prohibitions]*

(3) Remote Reservoir Cleaners

(a) ~~Regardless of Rule 1122 requirements, a~~Any Person owning or operating a Remote Reservoir Cleaner shall comply with all of the following requirements, in addition to the VOC limits for Repair and Maintenance Cleaning specified in ~~clause subsection~~ (C)(1)(a)(ii):

- (i) Prevent Solvent vapors from escaping from the Solvent container by using such devices as a cover or a valve when the remote reservoir is not being used, cleaned, or repaired;
- (ii) Direct Solvent flow in a manner that will prevent liquid Solvent from splashing outside of the Remote Reservoir Cleaner;
- (iii) Do not clean porous or absorbent materials, such as cloth, leather, wood, or rope; and
- (iv) Use only Solvent containers free of all Liquid Leaks. Auxiliary equipment, such as pumps, pipelines, or flanges, shall not have any Liquid Leaks, visible tears, or cracks. Any Liquid Leak, visible tear, or crack detected shall be repaired within one (1) calendar day, or the leaking section of the remote reservoir cold cleaner

shall be drained of all Solvent and shut down until it is replaced or repaired.

(4) Storage and Disposal

- (a) All VOC-containing Solvents, used in Solvent Cleaning operations, or a waste or used product, including items such as cloth or paper laden with VOC containing materials, shall be stored in ~~non-absorbent, Non-Leaking Containers~~ which shall be kept closed at all times except when filling or emptying, and disposed of in a manner to prevent evaporation of VOCs into the atmosphere at the facility. ~~It is recommended that cloth and paper moistened with VOC-containing Solvents be stored in closed, non-absorbent, Non-Leaking Containers.~~ [Derived from Yolo-Solano Rule 2.31, 302.1 (f)]

(5) Control Equipment

- (a) In lieu of complying with the requirements in ~~subsection paragraphs~~ (C)(1)(a) or ~~(C)~~(2), a Person may comply by using a VOC emission collection and control system in association with the Solvent Cleaning operation provided:
- (i) ~~The~~ emission control system shall collect at least ~~ninety percent~~ (90%) percent, by weight, of the emissions generated by the Solvent Cleaning operation; and
1. have a destruction efficiency of at least 95 percent, by weight, or
 2. have an output of less than 50 parts per million (PPM) calculated as carbon with no dilution; or
- (ii) ~~The~~ emission control system meets the requirements of the applicable source specific rule of the District's Regulation XI. The collection system for cleaning in ~~Graphic Arts and~~ Screen Printing and cleaning of Application Equipment used for ~~Graphic Arts materials and~~ Screen Printing materials; shall collect at least 70 percent, by weight, of the emissions generated. This control system shall reduce emissions from the emission collection system by at least 95 percent. [Graphic Arts collection system requirements and cleaning of Application Equipment for Graphic Arts have been included in amended Rule 1130, subsection (C)(4) and (C)(7)]

(6D) Recordkeeping Requirements

- (a1) Records shall be maintained pursuant to Rule 109 for all applications subject to this rule, including those exempted under section ~~(6F)~~, except the following:

- (a) Facilities required to keep records of VOC used pursuant to any other ~~not~~ subject to recordkeeping requirements from any other Regulation XI rules. [Per USEPA suggestion via email, #2, 11/28/17. Derived from SC 1171, 05/01/2009]
- ~~(b) Cleaning performed with a Solvent which has a water content of 98 percent or more, by weight, or a VOC Composite Partial Pressure of 0.1 mm Hg or less at 20°C (68°F), or contains VOC consisting of more than 12 carbon atoms [Removed per USEPA suggestion via email #3, 11/28/17, that the existing verbiage may provide a broader exemption than intended.]~~
- ~~(e2) Records shall be maintained to record the amount and type of each solvent used at each process on a daily basis. The following information should be included:~~
- ~~(i) The name of the solvent;~~
- ~~(ii) The name of the solvent manufacturer;~~
- ~~(iii) The VOC content of the solvent expressed in grams/liter or lb/gallon;~~
- ~~(d) Solvent usage; and~~
- ~~(e) The mix ratio for the cleaning solvent as applied. [Derived from Yolo Solano Rule 2.31, section 501.2]~~
- ~~(d3) If compliance with this rule is achieved through the use of an Emission Control System, in addition to the provisions of subsection (D)(2), records shall also include:~~
- ~~(a) Daily records of temperatures, pressures, flowrates, and hours of operation of the control device to verify compliance of the capture and control device; and~~
- ~~(b) Records of maintenance work which interferes with the operation of the control device.~~
- ~~(24) All records shall be maintained and on site for a period of five (5) years and made available to the APCO or District staff upon request. [Derived from Yolo Solano Rule 2.31, section 501.2]~~

~~(D) General Prohibitions~~

- ~~(1) A Person shall not atomize any Solvent unless it is vented to air pollution control equipment which meets the requirements of subsection (C)(5). [moved to (C)(2)(b)]~~
- ~~(2) A Person shall not specify or require any Person to use Solvent or equipment subject to the provisions of this rule that does not meet the requirements of this rule.~~

~~(3) On and after January 1, 1997, a Person shall not perform Solvent Cleaning activities or operations subject to the provisions of this rule with any material which contains any of the following compounds: 1,1,1 trichloroethane (methyl chloroform); trichlorofluoromethane (CFC-11); dichlorodifluoromethane (CFC-12); 1,1,2 trichloro-1,2,2 trifluoroethane (CFC-113); 1,2 dichloro-1,1,2,2 tetrafluoroethane (CFC-114); chloropentafluoroethane (CFC-115); ethylfluoride (HFC-161); 1,1,1,3,3,3 hexafluoropropane (HFC-236fa); 1,1,2,2,3 pentafluoropropane (HFC-245ca); 1,1,2,3,3 pentafluoropropane (HFC-245ea); 1,1,1,2,3 pentafluoropropane (HFC-245eb); 1,1,1,3,3 pentafluoropropane (HFC-245fa); 1,1,1,2,3,3 hexafluoropropane (HFC-236ea); 1,1,1,3,3 pentafluorobutane (HFC-365mfe); chlorofluoromethane (HCFC-31); 1-chloro-1-fluoroethane (HCFC-151a); or 1,2 dichloro-1,1,2 trifluoroethane (HCFC-123a).[moved to (C)(2)(d)]~~

(E) Test Methods

- (1) For the purpose of this rule, the following test methods shall be used. Other test methods determined to be equivalent after review by ~~the staffs of the~~ District staff, the Air Resources Board, and the USEPA, and approved in writing by the APCO and the USEPA, may also be used. [Vergiage changed per USEPA suggestion via email, #4, 11/28/17.]
- (a) The VOC content of materials subject to the provisions of this rule shall be determined by the following methods:
- (i) USEPA Reference Method 24 (Code of Federal Regulations, Title 40, Part 60, Appendix A) and subsection (B)(12) of this rule.~~The Exempt Compounds' content shall be determined by the South Coast Air Quality Management District's (SCAQMD) Method 303 (Determination of Exempt Compounds) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual; or,~~
- (b) Exempt Perfluorocarbon Compounds
- (i) The following classes of compounds will be analyzed as Exempt Compounds for compliance with Section (C), only when manufacturers specify which individual compounds are used in the Solvent formulation and identify the USEPA, California Air Resources Board, and other USEPA-approved test methods used to quantify the amount of each exempt compound:
1. cyclic, branched, or linear, completely fluorinated alkanes;
 2. cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;

3. cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and
 4. sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.
- (c) Determination of VOC Composite Partial Pressure
- (i) The identity and quantity of components in Solvents shall be determined by ASTM Method D323-94. The VOC Composite Partial Pressure is calculated using the equation in subsection (B)(~~4235~~) of this rule.
- (d) Determination of Presence of VOC in Cleaning Materials
- (i) The presence of VOC in liquid cleaning materials shall be determined by SCAQMD Method 308 (Quantitation of Compounds by Gas Chromatography) contained in the SCAQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.
- (e) Determination of Efficiency of Emission Control System
- (i) The efficiency of the collection device of the emission control system as specified in subsection (C)(5)(a)(i) shall be determined by the USEPA method cited in USEPA's publication entitled "Guidelines for Determining Capture Efficiency", January 9, 1995, in conjunction with USEPA Method 204, 204A, 204B, 204C, 204D, 204E or 204F, as appropriate, or any other alternative method approved by USEPA, the California Air Resources Board, and the District.
 - (ii) The efficiency of the control device of the emission control system as specified in subsection (C)(5)(a)(i) and the VOC content in the control device exhaust gases, measured and calculated as carbon, shall be determined by USEPA Test Method 25 or 25A, as applicable. USEPA Test Method 18, or ARB Method 422 shall be used to determine emissions of Exempt Compounds.
- (f) Multiple Test Methods
- (i) When more than one test method or set of test methods is specified for any testing, a violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of this rule.
- (g) Unless otherwise specified, all test methods referenced in this section shall be the version most recently approved by USEPA, ~~version.~~ [Per USEPA suggestion via email, #6, 11/03/17.]

~~(F) Rule 442 Applicability~~

~~Any Solvent, Solvent Cleaning activity, Solvent Cleaning unit operation, or Person, which is exempt from all or a portion of this rule except subsection (C)(6), shall be subject to the applicable requirements of the applicable Regulation XI source specific rule or Rule 442—Usage of Solvent. *[moved to (G)]*~~

~~(GF) Exemptions~~

~~(1) The provisions of this Rule shall not apply to: following Solvent Cleaning operations or activities are not subject to any provision of this rule: *[changed for clarity as per Nicole Law, USEPA, recommendation, email dated 07/16/2018.]*~~

~~(a) Cleaning carried out in batch-loaded cold cleaners, open-top vapor degreasers, conveyorized degreasers, or film cleaning machines which are regulated under Rule 1122—Solvent Degreasers. *[Rule 1122 was moved to (F)(1)(ea)(iii) for ascending Rule order]*~~

~~(a) Any source operation that is subject to or specifically exempted by any of the following:~~

~~(i) Rule 1102 - Petroleum Solvent Dry Cleaners~~

~~(ii) Rule 1113 – Architectural Coatings~~

~~(iii) Rule 1122 – Solvent Degreasers *[moved from prior (G)(1)(a)]*~~

~~(iv) Rule 1124 - Aerospace Assembly and Component Manufacturing Operations, except coating Application Equipment cleaning, and storage and disposal of VOC-containing materials used in Solvent Cleaning operations.~~

~~(v) Rule 1141.1 – Coatings and Ink Manufacturing~~

~~(vi) Rule 1151 – Motor Vehicle and Mobile Equipment Coating Operations~~

~~(vii) Rule 1151.1 – Motor Vehicle Assembly Coating Operations~~

~~(viii) Rule 1164 - Semiconductor Manufacturing.~~

~~(b) Cleaning operations subject to Rules 1102—Petroleum Solvent Dry Cleaners, and 1421—Control of Perchloroethylene Emissions from Dry Cleaning Operations *[Rule 1102 is being moved to (a) for ascending rule order and Rule 1421 will be removed as an exempt rule in amended Rule 1171 as it is not SIP approved, per USEPA via email, #7, dated 11/03/2017]*~~

~~(c) Cleaning operations subject to Rule 1164—Semiconductor Manufacturing. *[moved to (h) for ascending Rule order]*~~

~~(d) Cleaning operations subject to Rule 1124—Aerospace Assembly and Component Manufacturing Operations, except coating Application Equipment cleaning, and storage and disposal of VOC-containing materials used in Solvent Cleaning operations. *[moved to (d) for ascending rule order]*~~

- ~~(e _____)~~ ~~Cleaning operations subject to Rule 1141—Control of Volatile Organic Compound Emissions from Resin Manufacturing, and Rule 1141.1—Coatings and Ink Manufacturing. [Rule 1141 was rescinded 03/06/92 and Rule 1141.1 was moved to (e) for ascending Rule order]~~
- (fb) Janitorial ~~and Institutional cleaning~~ Cleaning, including graffiti removal. [Removed Institutional cleaning to address suggestion per USEPA via email 11/28/17 #1., as it includes “cleaning activities conducted at organizations, societies, or corporations...” which may provide a broader exemption than intended. “Cleaning” was erroneously deleted in rule version D1.]
- (gc) Stripping of Cured Coatings, Cured Adhesives, and Cured Inks.
- (hd) Cleaning operations using Solvents with a water content of 98% or more, by weight.
- (2) The provisions of subsection (C)(1)(a) shall not apply when carried out for any of the following applications:
- (a) Cleaning of solar cells, laser hardware, Scientific Instruments, and High Precision Optics.
- (b) Cleaning for: conducting performance laboratory tests on coatings, adhesives, or inks; research and development programs; and laboratory tests in quality assurance laboratories.
- (c) Cleaning of polycarbonate plastics.
- (d) Cleaning of cotton swabs to remove cottonseed oil before cleaning of high-precision optics. [Moved from original (G)(5)]
- (3) Cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems, and cleaning with spray bottles or containers described in subsection (C)(2)(a)(ii), are not subject to the provisions of subsection (D)(1).
- (4) Cleaning with Aerosol Products shall not be subject to the provisions of subsections (C)(1)(a) and (D)(1) if 160 fluid ounces or less of Aerosol Product are used per day, per Facility.
- ~~(5) Cleaning of cotton swabs to remove cottonseed oil before cleaning of high-precision optics shall not be subject to subsection (C)(1)(a). [Moved to (F)(2)(d) for consistency.]~~
- (65) Medical Device and pharmaceutical facilities may use up to 1.5 gallons per day of Solvents that are not in compliance with subsection (C)(1)(a).

(76) The provisions of subsection (C)(1)(a)(iii) shall not apply to cleaning of coating and adhesive application processes utilized to manufacture transdermal drug delivery product using less than 3 gallons per day of ethyl acetate averaged over a 30 calendar day period.

~~(7) Cleaning of application equipment used to apply coatings on satellites and radiation effect coatings shall not be subject to (C)(1)(a)(iii).. [Derived from SCAQMD Rule 1171, section (g)(5)(B), May 1, 2009 and SJVAPCD Rule 4663, section 4.6, amended September 20, 2007.] [This exemption is not necessary after further conversation with industry.]~~

(87) The provisions of subsection (C)(1)(a)(iv) shall not apply to Persons or Facilities using less than 1.5 gallons per day of solvents to clean Sterilization Indicating Ink Application Equipment.

(FG) Rule 442 Applicability

Any Solvent, Solvent Cleaning activity, Solvent Cleaning unit operation, or Person, which is exempt from all or a portion of this rule except subsection ~~(C)(6)(D)~~, shall be subject to the applicable requirements of the applicable Regulation XI source specific rule or Rule 442 - *Usage of Solvent*.

~~{SIP: Submitted as amended 11/17/98 on _____; Submitted as amended 06/13/97 on _____; Approved 5/24/01, 66 FR 28666, 40 CFR 52.220(e)(262)(i)(e)(2); Approved 07/14/95, 60 FR 36230, 40 CFR 52.220(e)(222)(i)(A)(1); Approved 12/20/93, 58 FR 66285, 40 CFR 52.220(e)(188)(i)(e)(1)}~~

See SIP Table at www.avaqmd.ca.gov

Appendix “B”
Public Notice Documents

1. Proof of Publication – Antelope Valley Press 06/15/2018

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AFFIDAVIT OF PUBLICATION

(2015.5 C.C.P.)

STATE OF CALIFORNIA

County of Los Angeles

} s s

The space above for filing stamp only

**NOTICE OF HEARING
SOLVENT CLEANING OPERATIONS**

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of the printer of the **Antelope Valley Press**, a newspaper of general circulation, printed and published daily in the City of Palmdale, County of Los Angeles, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Los Angeles, State of California, under date of October 24, 1931, Case Number 328601; Modified Case Number 657770 April 11, 1956; also operating as the Ledger-Gazette, adjudicated a legal newspaper June 15, 1927, by Superior Court decree No. 224545; also operating as the Desert Mailer News, formerly known as the South Antelope Valley Foothill News, adjudicated a newspaper of general circulation by the Superior Court of the County of Los Angeles, State of California on May 29, 1967, Case Number NOC564 and adjudicated a newspaper of general circulation for the City of Lancaster, State of California on January 26, 1990, Case Number NOC10714, Modified October 22, 1990; that the notice, of which the annexed is a printed copy (set in type not smaller than nonpareil), has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

June 15, 2018

I certify (or declare) under penalty of perjury that the fore-going is true and correct.

Signature

Dated: June 15, 2018
Executed at Palmdale, California

NOTICE OF HEARING

NOTICE IS HERBY GIVEN that the Governing Board of the Antelope Valley Air Quality Management District (AVAQMD) will conduct a public hearing on July 17, 2018 at 10:00 A.M. to consider the proposed amendment of Rule 1171 - Solvent Cleaning Operations.

SAID HEARING will be conducted in the Governing Board Chambers located at the AVAQMD offices, 43301 Division Street, Suite 206, Lancaster, CA 93535-4649 where all interested persons may be present and be heard. Copies of the proposed amendment of Rule 1171 - Solvent Cleaning Operations and the Staff Report are on file and may be obtained at the AVAQMD Office, at the above address. Written comments may be submitted to Bret Banks, Executive Officer/APCO at the above office address, and should be received no later than July 16, 2018 to be considered. If you have any questions, you may contact Barbara Lods at (661) 723-8070 x3 or via E-mail at blods@avaqmd.ca.gov for further information. Traducción este disponible por solicitud.

The proposed amendment of Rule 1171 - Solvent Cleaning Operations will satisfy 42 U.S.C. §1751a (Federal Clean Air Act §192) which requires that ozone non-attainment areas implement Reasonably Available Control Technology (RACT) for sources that are subject to Control Techniques Guidelines (CTG) documents issued by United States Environmental Protection Agency (USEPA) and for "major sources" of volatile organic compounds (VOCs) and oxides of nitrogen (NOx) which are ozone precursors.

The proposed amendments to Rule 1171 are necessary to enhance work practices, adjust categories for consistency with source specific rules, reduce VOC limits and address the alternative composite vapor pressure.

Pursuant to the California Environmental Quality Act (CEQA) the AVAQMD has determined that a Categorical Exemption (Class 8 - 14 Cal. Code Reg. §15308) applies and has prepared a Notice of Exemption for this action.

Deanna Hernandez
Senior Executive Analyst
Antelope Valley Air Quality Management District

Publish: June 15, 2018

Valley Press
37404 SIERRA HWY., PALMDALE CA 93550
Telephone (661)267-4112/Fax (661)947-4870

**AVAQMD
JUN 25 2018
RECEIVED**

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Appendix “C”
Public Comments and Responses

1. USEPA Comments on AV Rule 1171, July 16, 2018
2. USEPA Comments on AV Rule 1171, August 2, 2018
3. USEPA Legal Comments on AV Rule 1171, August 8, 2018

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Barbara Lods

From: Law, Nicole <Law.Nicole@epa.gov>
Sent: Monday, July 16, 2018 9:31 AM
To: Barbara Lods
Subject: EPA comments on Rule 1171 Solvent Cleaning Operations

Hi Barbara,

Thanks for the opportunity to comment on AVAQMD Rule 1171 Solvent Cleaning Operations as was attached to the staff report dated 05/31/2018. I noticed you addressed all our comments from the 9/28/2017 email, however, we have a few remaining comments on Rule 1171.

1. →
 - Section (B)(2) definition for Aerospace Vehicle or Components. This definition is inconsistent with the definition of section (B)(3) as it says, "Aircraft, including but not limited to...Space Vehicles." And the definition of Aircraft is, "Any machine designed to travel through the air, without leaving the earth's atmosphere..." We suggest the following edit, "Aircraft, ~~including but not limited to airplanes, helicopters, missiles,~~ or Space Vehicles. Including..." since definition of Aircraft already says "including airplanes, balloons, dirigibles, helicopters, and missiles."
2. →
 - Section (B)(10) definition for Exempt Compounds. This definition includes a reference to a very broad section of 40 CFR 51.100 (s) and would exempt all volatile compounds from the rule. We have discussed resolutions to this issue with the district on other district rules.
3. →
 - Section (F)(1) exempts solvent cleaning operations and activities subject to a list of rules. However, this language is not clear as it is meant that cleaning operations and activities subject to the rules is exempt. We suggest you precede each rule with "Activities and operations subject to..." Additionally, in section (F)(1)(i), "Janitorial" should be changed to "Janitorial Cleaning" to refer back to the definition. So the rule would read as follows:
 - The following Solvent Cleaning operations or activities are not subject to any provision of this rule:
 - Activities and operations subject to Rule 1102- Petroleum Solvent Dry Cleaners
 - Activities and operations subject to Rule 1113 Architectural Coatings
 - Activities and operations subject to rule 1122- Solvent Degreasers
 - (...)
 - Janitorial Cleaning, including graffiti removal.
 - Stripping of Cured Coatings, Cured Adhesives, and Cured inks.
 - Cleaning operations using Solvents with a water content of 98% or more, by weight.
4. →
 - A new exemption in section (F)(7) has been added for cleaning of application equipment used to apply coatings on satellites and radiation effect coatings. However, the district staff report has not described whether this rule change would constitute Clean Air Act 110(l) backsliding of the rule.

Please give me a call if you'd like to discuss. Thanks.

Nicole

Nicole Law
Rules Office, Air Division
U.S. EPA Region 9
75 Hawthorne Street
San Francisco, 94105
Office: (415) 947-4128

District Response to USEPA Comment #1 dated 07/16/18

1. Section (B)(2) definition for Aerospace Vehicle or Components was amended as suggested.
2. Section (B)(10) definition for Exempt Compounds was changed as per email thread between District Counsel Karen K. Nowak and USEPA Attorney Advisor, Douglas Bushey in email dated 07/17/2018.
3. Section (F)(1) has been changed for clarification.
4. The new exemption in Section (F)(7) has been removed.

2. USEPA Comment, 08/02/18

Barbara Lods

From: Schwartz, Robert <schwartz.robert@epa.gov>
Sent: Thursday, August 2, 2018 2:51 PM
To: Barbara Lods
Cc: Law, Nicole; Lo, Doris
Subject: Three minor comments on AV Rule 1171

Hi Barbara,

Thank you for taking our call this afternoon. To recap our call, there are three items I came across while reviewing the rule:

1.  1. Under the "Aircraft" definition on page 1, B3, we recommend modifying slightly to add "but not limited to", so as to be more inclusive of other aircraft, e.g. drones. Should read as ""Aircraft" - Any machine designed to travel through the air, without leaving the earth's atmosphere, whether heavier or lighter than air, including, **but not limited to** airplanes, balloons, dirigibles, helicopters, and missiles."
2.  2. Under Requirements, C 1a, the far right table column with VOC limits is expressed in g/L and lb/gal. In section iii of the table, Aerospace Vehicle or Component, the limit of 200 is also stated in g/L again. We understand that it must also include the composite partial pressure limit (mmHg), but the addition of g/L may be redundant.
3.  3. On our track-changes version of the Rule (D2, 7-20-18) there appears to be some formatting issues on page 11 (3 aiii), page 14 (E 1 ai), and page 15 (E 1 di) of the Rule (they should be indented but they show up on our copy as far left-justified. I see that you've just sent over a Word version in which the formatting seems fine. When I open the PDF, I still see the formatting problem. So, it may have to do with a version of Adobe, etc. I guess it's something to be aware of in case you get similar comments in the future.

Thank you for taking these late comments.

Best Regards,
Robert

Robert Schwartz
Rules Office, Air Division
U.S. EPA, Region 9
75 Hawthorne St., San Francisco, CA 94105
(415) 972-3286

1. The District appreciates the recommendation to modify the “Aircraft” definition, but feels the current definition is all inclusive.
2. The formatting in the limit column for Aerospace Vehicle and Component in (C)(1)(a)(iii) has been modified for clarity.
3. Word version was re-sent at the request of Nicole Law to verify formatting was correct and somehow corrupt when converted to PDF. No change has been made.

3. USEPA Legal Comment, 08/08/18

From: Bushey, Douglas [mailto:bushey.douglas@epa.gov]
Sent: Wednesday, August 8, 2018 3:41 PM
To: Karen Nowak
Cc: Law, Nicole; Schwartz, Robert
Subject: RE: Exempt Compound definition wording

Hello Karen,

Thank you again for working with us on the Exempt Compound definition. Once I saw the new definition in context in the draft rule, another small issue occurred to me. As of now, in (B)(10) it refers to "Volatile Organic Compound". The term that is being defined in 51.100(s) is "Volatile organic compounds". The capitalization, combined with it not being plural may suggest a reference back to the definition in the rule itself. Apologies for not seeing this the first time, but given that we are hopefully coming up with a definition that will work in a number of rules, I thought that shooting for the maximum clarity this time would be a good goal. I am hopeful that it's not a challenge to make a minor edit like this at this point.

As always, please give a call if you'd like to discuss or have any other ideas regarding the phrasing.

Thanks,
Doug

Douglas Bushey
Attorney Adviser

1. The definition for “Exempt Compound” in subsection (B)(10) has been modified. The capitalization of “Volatile Organic Compound” has been changed to lowercase and the term has been made plural.

Appendix “D”
California Environmental Quality Act
Documentation

1. Draft Notice of Exemption – Los Angeles County

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NOTICE OF EXEMPTION

TO: Los Angeles County Clerk
12400 E. Imperial Hwy, #1001
Norwalk, CA 90650

FROM: Antelope Valley
Air Quality Management District
43301 Division Street, Suite 206
Lancaster, CA 93535-4649

X AVAQMD Senior Executive Analyst

PROJECT TITLE: Amendment of Rule 1171 – *Solvent Cleaning Operations*

PROJECT LOCATION – SPECIFIC: Los Angeles County portion of the Mojave Desert Air Basin.

PROJECT LOCATION – COUNTY: Los Angeles County

DESCRIPTION OF PROJECT: The proposed amendment of Rule 1171 – *Solvent Cleaning Operations* will satisfy 42 U.S.C. §§7511a (Federal Clean Air Act §182) which requires that ozone non-attainment areas implement Reasonably Available Control Technology (RACT) for sources that are subject to Control Techniques Guidelines (CTG) documents issued by United States Environmental Protection Agency (USEPA) and for “major sources” of volatile organic compounds (VOCs) and oxides of nitrogen (NOX) which are ozone precursors.

NAME OF PUBLIC AGENCY APPROVING PROJECT: Antelope Valley AQMD

NAME OF PERSON OR AGENCY CARRYING OUT PROJECT: Antelope Valley AQMD

EXEMPT STATUS (CHECK ONE)

Ministerial (Pub. Res. Code §21080(b)(1); 14 Cal Code Reg. §15268)

Emergency Project (Pub. Res. Code §21080(b)(4); 14 Cal Code Reg. §15269(b))

X Categorical Exemption – Class 8 (14 Cal Code Reg. §15308)

REASONS WHY PROJECT IS EXEMPT: The proposed amendments to Rule 1171 are exempt from CEQA review because they will not create any adverse impacts on the environment. This rule has been strengthened by enhancing work practices, adjusting categories for consistency with source specific rules, reducing VOC limits and addressing the alternative composite vapor pressure. Because there is no potential that the amendments might cause the release of additional air contaminants or create any adverse environmental impacts, a Class 8 categorical exemption (14 Cal. Code Reg. §15308) applies. Copies of the documents relating to CEQA can be found in Appendix “D”.

LEAD AGENCY CONTACT PERSON: Bret Banks **PHONE:** (661) 723-8070

SIGNATURE: _____

TITLE: Executive Director/APCO **DATE:** August 21, 2018

DATE RECEIVED FOR FILING:

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Appendix “E” Bibliography

The following documents were consulted in the preparation of this staff report.

1. *Control Techniques Guidelines: Industrial Cleaning Solvents*, (EPA 453/R-06-001 September 2006).
2. Yolo-Solano AQMD Rule 2.31 – *Solvent Cleaning and Degreasing*, Revised May 8, 2013.
3. SJVUAPCD Rule 4663 – *Organic Solvent Cleaning, Storage, and Disposal*, Amended September 20, 2007.
4. SCAQMD Rule 1171 – *Solvent Cleaning Operations*, Amended February 1, 2008.

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