BOARD MEETING DATE: January 6, 2023 AGENDA NO. 17

PROPOSAL: Determine That Proposed Amended Rule 1106 – Marine and Pleasure Craft Coatings, and Proposed Amended Rule 1107 – Coating of Metal Parts and Products, Are Exempt from CEQA; and Amend Rule 1106 and Rule 1107

SYNOPSIS: Rule 1106 establishes VOC limits for marine and pleasure craft coatings and Rule 1107 establishes VOC limits for coatings used on metal parts and products. Proposed Amended Rules 1106 and 1107 will remove references to ASTM D7767 "Standard Test Method to Measure Volatiles from Radiation Curable Acrylate Monomers, Oligomers and Blends and Thin Coatings Made from Them" to address U.S. EPA's proposed limited disapproval. Since ASTM D7767 is a test method that has not been approved by U.S. EPA, this method cannot be used to enforce a SIP-approved rule. Proposed Amended Rule 1106 will also remove references to Elastomeric Adhesives and Metallic Heat Resistant Coatings, as recommended by U.S. EPA to align Rule 1106 with the U.S. EPA 1996 Marine Coatings Control Techniques Guidelines.

COMMITTEE: Stationary Source, November 18, 2022, Reviewed

RECOMMENDED ACTIONS:
Adopt the attached Resolution:
1. Determining that Proposed Amended Rule 1106 – Marine and Pleasure Craft Coatings, and Proposed Amended Rule 1107 – Coating of Metal Parts and Products, are exempt from the requirements of the California Environmental Quality Act; and
2. Amending Rules 1106 and 1107.

Wayne Nastri
Executive Officer

SR:MK:HF:YZ:EY

Background

Rule 1106 – Marine and Pleasure Craft Coatings (Rule 1106) was adopted in 1988 to reduce VOC emissions from marine and pleasure craft coatings formulated for use in the marine environment. Rule 1107 – Coating of Metal Parts and Products (Rule 1107) was adopted in 1979 to reduce VOC emissions from metal coating operations. The most recent amendments to Rule 1106 and Rule 1107 on May 3, 2019, and February 7, 2020, respectively, included a reference to ASTM[1] D7767-11 "Standard Test Method to Measure Volatiles from Radiation Curable Acrylate Monomers, Oligomers and Blends and Thin Coatings Made from Them" (ASTM D7767) in the definition for Energy Curable Coatings. ASTM D7767 is an alternative test method developed to determine the VOC content of thin film Energy Curable Coatings. Although this test method has not been approved by U.S. EPA, at the request of industry representatives, the Board approved including a reference to ASTM D7767 in Rules 1106 and 1107. Since U.S. EPA originally made no comment on this test method, the Board asked staff to send a letter to U.S. EPA directly inquiring if the test method could be approved.

On August 22, 2022, U.S. EPA proposed a limited SIP disapproval for Rules 1106 and 1107. The basis for the disapproval is the reference to ASTM D7767 in the rules. The U.S. EPA noted that while they had originally proposed approving Rules 1106 and 1107, they had recently become aware that ASTM D7767 is not a U.S. EPA-approved test method and therefore cannot be used to enforce a SIP-approved rule.[2] The U.S. EPA also recommended removing two product categories to improve Rule 1106, as they are not listed in the 1996 Shipbuilding and Ship Repair Operations (Surface Coating) Control Techniques Guidelines (1996 Marine Coatings CTG). If U.S. EPA issues a final SIP disapproval or partial disapproval of a rule submitted to the SIP, South Coast AQMD faces potential sanctions by the federal government and other consequences under the CAA unless the identified rule deficiencies are corrected and approved. Offset sanctions would be triggered 18 months after the effective date of a final disapproval and highway funding sanctions would be triggered six months after the offset sanctions are imposed. CAA would also require U.S. EPA to promulgate a Federal Implementation Plan within 24 months of the disapproval effective date. Sanctions will not be imposed if U.S. EPA determines that a subsequent SIP submission corrects the deficiencies before the applicable deadline.

Staff proposes to simultaneously amend Rules 1106 and 1107 to address the deficiency and incorporate U.S. EPA comments.

Proposed Amendments

Proposed Amended Rule 1106 (PAR 1106) will remove the definition for Energy Curable Coatings with reference to ASTM D7767 and delete the language in the low-VOC coating exemption that references the test method. The revision does not change

[1] ASTM International, formerly known as American Society for Testing and Materials.
[2] 87 Fed. Reg. 51300, 51302 (August 22, 2022)

the exemption for low-VOC coatings in paragraph (i)(1). Proposed Amended Rule 1107 (PAR 1107) will remove the definition for Energy Curable Coatings which references ASTM D7767 and the reference to the test method in the Methods of Analysis: Determination of VOC Content: Thin Film Energy Curable Coatings subparagraph (e)(1)(C). The revisions will not impact other provisions of the rule. Removing the definition for Energy Curable Coatings does not impose an impact to the rule compliance of this coating type under PAR 1106 or PAR 1107.

In addition, PAR 1106 will remove two product categories, Elastomeric Adhesives and Metallic Heat Resistant Coating, as recommended by U.S. EPA as they are not listed in the U.S. EPA 1996 Marine Coatings CTG, and subject them to other appropriate categories. Products that formerly fell under the Elastomeric Adhesive category will have to comply with a lower VOC limit in Rule 1168 – Adhesive and Sealant Applications under the category All Other Adhesives. Staff has identified Elastomeric Adhesives that comply with the Rule 1168 VOC limit. In addition, Rule 1168 includes a low-use exemption for facilities that use 55 gallons or less that could assist a facility using a Marine Elastomeric Adhesive that does not comply with the Rule 1168 VOC limit. Products that formerly fell under the Metallic Heat Resistant Coating category will be subject to the Heat Resistant Coating category with a lower limit in PAR 1106 to be aligned with the U.S. EPA 1996 Marine Coatings CTG. Staff identified Metallic Heat Resistant Coatings that comply with the lower VOC limit and has not identified a need for a higher VOC coating category. Staff is not aware of any end user, Marine Elastomeric Adhesive manufacturer, or Metallic Heat Resistant Coating manufacturer that will be impacted by the VOC limit changes.

Public Process

PAR 1106 and PAR 1107 were developed through a public process. Staff held a Public Consultation meeting on November 9, 2022, for both proposed amended rules. One comment letter was received from a trade association representing the Ultraviolet/Electron Beam/Light Emitting Diode (UV/EB/LED) industry.

Key Issues

Staff is aware of one remaining key issue regarding ASTM D7767. Some stakeholders that represent the UV/EB/LED industry object to the removal of the references to ASTM D7767 and the definition of Energy Curable Coatings.

U.S. EPA proposed a limited SIP disapproval for Rules 1106 and 1107 due to the inclusion of ASTM D7767. ASTM D7767 is not a U.S. EPA-approved test method and cannot be used to enforce a SIP-approved rule. Removing the reference to this test method is necessary to avoid the potential imposition of sanctions and other consequences under the CAA. The removal of this test method will not create any barriers or deter the use of Energy Curable Coatings. Staff is not aware of any manufacturers that rely on ASTM D7767 to determine the VOC content of their thin film Energy Curable Coatings. Manufacturers can, and often do, rely on the formulation

data to calculate the VOC of their products. Using formulation data to calculate the VOC of products is an easier and less expensive approach for manufacturers to determine if their products will comply with rule limits.

California Environmental Quality Act (CEQA)
Pursuant to the CEQA Guidelines Sections 15002(k) and 15061, the proposed project (PAR 1106 and PAR 1107) is exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3). A Notice of Exemption has been prepared pursuant to CEQA Guidelines Section 15062 and is included as Attachment I to this Board Letter. If the proposed project is approved, the Notice of Exemption will be filed for posting with the county clerks of Los Angeles, Orange, Riverside, and San Bernardino counties, and with the State Clearinghouse of the Governor's Office of Planning and Research.

Socioeconomic Analysis
The proposed amendments are administrative in nature and are not expected to have socioeconomic impacts. Staff is not aware of any end user, Marine Elastomeric Adhesive manufacturer, or Metallic Heat Resistant Coating manufacturer that will be impacted by this change and is not anticipating any VOC reduction.

AQMP and Legal Mandates
Health and Safety Code Section 40460 requires South Coast AQMD to adopt an AQMP to meet state and federal ambient air quality standards in the South Coast Air Basin. In addition, Health and Safety Code Section 40440 requires the South Coast AQMD to adopt rules and regulations that carry out the objectives of the AQMP. The proposed amendments are not the result of an AQMP control measure but are needed to address the U.S. EPA's proposed limited disapproval of Rules 1106 and 1107.

Implementation and Resource Impact
The amendment is administrative in nature, with no additional resource impacts to implement PAR 1106 and PAR 1107.

Attachments
A. Summary of Proposal
B. Key Issues and Responses
C. Rule Development Process
D. Key Contacts List
E. Resolution
F. PAR 1106
G. PAR 1107
H. Final Staff Report
I. Notice of Exemption from CEQA
J. Board Meeting Presentation

ATTACHMENT A

SUMMARY OF PROPOSAL

Proposed Amended Rule 1106 – Marine and Pleasure Craft Coatings
Definitions • Delete the definition for Energy Curable Coatings, which references ASTM Test Method 7767, "Standard Test Method to Measure Volatiles from Radiation Curable Acrylate Monomers, Oligomers, and Blends and Thin Coatings Made from Them." • Delete the definition for Elastomeric Adhesive and Metallic Heat Resistant Coating based on the United States Environmental Protection Agency (U.S. EPA) recommendation. Requirements • Delete Elastomeric Adhesives and Metallic Heat Resistant Coatings from Table of Standards I, as these categories will be subject to other appropriate categories. Exemptions • Amend the low-VOC coatings exemption in paragraph (i)(1) related to Energy Curable Coatings to delete the reference to ASTM D7767.

Proposed Amended Rule 1107 – Coating of Metal Parts and Products
Definitions • Delete the definition for Energy Curable Coatings, which references ASTM Test Method 7767, "Standard Test Method to Measure Volatiles from Radiation Curable Acrylate Monomers, Oligomers, and Blends and Thin Coatings Made from Them." Methods of Analysis • Delete Thin Film Energy Curable Coatings subparagraph (e)(1)(C), which references ASTM D7767 for thin film energy curable coating VOC content determinization.

ATTACHMENT B

KEY ISSUES AND RESPONSES

Proposed Amended Rule 1106 – Marine and Pleasure Craft Coatings Proposed Amended Rule 1107 – Coating of Metal Parts and Products
Staff is aware of the following remaining issue. Issue Staff is proposing to delete the definition for Energy Curable Coatings, which was added during the previous rule amendments as a mechanism to include ASTM Test Method D7767, the test method for thin film UV/EB/LED materials, also referred to as Energy Curable materials. However, to avoid a SIP disapproval, staff is proposing to delete the definition. RadTech, the trade association that represents the UV/EB/LED industry, objects to the removal of this definition. Staff Response On August 22, 2022, U.S. EPA proposed a limited disapproval of Rule 1106 – Marine and Pleasure Craft Coatings and Rule 1107 – Coating of Metal Parts and Products. U.S. EPA had previously proposed approval of these rules, but noted that it had been brought to their attention that the rules included a reference to ASTM Test Method D7767. ASTM D7767 is not approved by U.S. EPA and therefore cannot be used to enforce a SIP approved rule. The U.S. EPA therefore deemed the provisions that reference ASTM Test Method D7767 do not satisfy the requirements of Section 110 and Part D of the Clean Air Act and preventing full approval of the rules. If U.S. EPA finalizes the limited disapproval they could impose sanctions and a Federal Implementation Plan. An alternative approach for the UV/EB/LED industry is to use formulation data to calculate the VOC content of these thin film materials. Manufacturers can, and often do, rely on the formulation data to calculate the VOC of their products. Using formulation data to calculate the VOC content of products is an easier and less expensive approach for manufacturers to determine if their products comply with rule limits. When there is no appropriate test method, South Coast AQMD relies on the manufacturer's formulation data to confirm the VOC content of Regulated Products. For UV/EB/LED products such as Energy Curable Thin Film products, formulation data can be used to determine if a product complies with the VOC limits in the rules or qualifies for the low-VOC exemption. Staff does not anticipate any adverse impact to the UV/EB/LED industry from the proposed amended rules.

ATTACHMENT C

RULE DEVELOPMENT PROCESS

Proposed Amended Rule 1106 - Marine and Pleasure Craft Coatings
and
Proposed Amended Rule 1107 - Coating of Metal Parts and Products

Initiated Rule Development
October 2022

⬇

Meeting with U.S. EPA
October 13, 2022

⬇

Public Consultation
November 9, 2022

⬇

Stationary Source Committee
November 18, 2022

⬇

Notice of Public Hearing
December 2, 2022

⬇

Set Hearing
December 2, 2022

⬇

Public Hearing
January 6, 2023

Three (3) months spent in rule development

One (1) Public Consultation Meeting

One (1) Stationary Source Committee Meeting

ATTACHMENT D

KEY CONTACTS LIST

Proposed Amended Rule 1106 - Marine and Pleasure Craft Coatings and Proposed Amended Rule 1107 - Coating of Metal Parts and Products

Coating Manufacturers

- Akzo Nobel
- Cardinal Paint
- EPMAR Corporation
- ITW Polymer Sealants
- Pettit Marine Paints
- Sea Hawk Paints
- Sherwin Williams

Government Agencies

- California Air Resources Board
- Southern California Association of Governments
- U.S. Environmental Protection Agency

Other Interested Parties

- American Coatings Association
- Boeing
- E4 Strategic Solutions, Inc.
- Heraeus Noble Light America, LLC
- Metropolitan Water District of Southern California
- RADTECH International
- UV Specialties, LLC
- VACCO Industries
- WaveFront Technology

ATTACHMENT E

RESOLUTION NO. 23 - _____

A Resolution of the Governing Board of the South Coast Air Quality Management District (South Coast AQMD) determining that Proposed Amended Rule 1106 – Marine and Pleasure Craft Coatings, and Proposed Amended Rule 1107 – Coating of Metal Parts and Products are exempt from the requirements of the California Environmental Quality Act (CEQA).

A Resolution of the South Coast AQMD Governing Board amending Rule 1106 – Marine and Pleasure Craft Coatings, and Rule 1107 – Coating of Metal Parts and Products.

WHEREAS, the South Coast AQMD Governing Board finds and determines that Proposed Amended Rule 1106 and Proposed Amended Rule 1107 are considered a "project" as defined by CEQA; and

WHEREAS, the South Coast AQMD has had its regulatory program certified pursuant to Public Resources Code Section 21080.5 and CEQA Guidelines Section 15251(l), and has conducted a CEQA review and analysis of the proposed project pursuant to such program (South Coast AQMD Rule 110); and

WHEREAS, the South Coast AQMD Governing Board finds and determines that after conducting a review of the proposed project in accordance with CEQA Guidelines Section 15002(k) – General Concepts, the three-step process for deciding which document to prepare for a project subject to CEQA, and CEQA Guidelines Section 15061 – Review for Exemption, procedures for determining if a project is exempt from CEQA, that the proposed project is exempt from CEQA; and

WHEREAS, the South Coast AQMD Governing Board finds and determines that because the proposed project is comprised of administrative clarifications without requiring physical modifications, it can be seen with certainty that there is no possibility that the proposed project may have any significant adverse effects on the environment, and is therefore, exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3) – Common Sense Exemption; and

WHEREAS, the South Coast AQMD staff has prepared a Notice of Exemption for the proposed project, that is completed in compliance with CEQA Guidelines Section 15062 – Notice of Exemption; and

WHEREAS, Proposed Amended Rule 1106, Proposed Amended Rule 1107, and supporting documentation, including but not limited to, the Notice of Exemption and Final Staff Report, were presented to the South Coast AQMD Governing Board and the South Coast AQMD Governing Board has reviewed and considered this information, as well as has taken and considered staff testimony and public comment prior to approving the project; and

WHEREAS, the South Coast AQMD Governing Board finds and determines, taking into consideration the factors in Section (d)(4)(D) of the Governing Board Procedures (Section 30.5(4)(D)(i) of the Administrative Code), that no modifications have been made to the proposed project since notice of public hearing was published that are so substantial as to significantly affect the meaning of Proposed Amended Rule 1106 and Proposed Amended Rule 1107 within the meaning of Health and Safety Code Section 40726 because: (a) the changes do not impact emission reductions, (b) the changes do not affect the number or type of sources regulated by the rules, (c) the changes are consistent with the information contained in the notice of public hearing, and (d) the consideration of the range of CEQA alternatives is not applicable because the proposed project is exempt from CEQA; and

WHEREAS, Health and Safety Code Section 40727 requires that prior to adopting, amending, or repealing a rule or regulation, the South Coast AQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the public hearing and in the Final Staff Report; and

WHEREAS, the South Coast AQMD Governing Board has determined that a need exists to amend Rule 1106 and Rule 1107 to ensure consistency with the United States Environmental Protection Agency (U.S. EPA) 1996 Control Techniques Guidelines for Shipbuilding and Ship Repair Operations (Surface Coating) and address the U.S. EPA's proposed partial State Implementation Plan (SIP) disapproval citing the deficiency of referencing test method ASTM D7767-11, which is not approved by the U.S. EPA and cannot be used to enforce a SIP-approved rule; and

WHEREAS, the South Coast AQMD Governing Board obtains its authority to adopt, amend or repeal rules and regulations from Sections 39002, 40000, 40001, 40440, 40441, 40702, 40725 through 40728, and 41508 of the Health and Safety Code; and

WHEREAS, the South Coast AQMD Governing Board has determined that Proposed Amended Rule 1106 and Proposed Amended Rule 1107 are written or displayed so that its meaning can be easily understood by the persons directly affected by it; and

WHEREAS, the South Coast AQMD Governing Board has determined that Proposed Amended Rule 1106 and Proposed Amended Rule 1107 are in harmony with, and not in conflict with or contradictory to, existing statutes, court decision, or state or federal regulations; and

WHEREAS, the South Coast AQMD Governing Board has determined that Proposed Amended Rule 1106 and Proposed Amended Rule 1107 do not impose the same requirements as any existing state or federal regulations, and the proposed amended

rules are necessary and proper to execute the powers and duties granted to, and imposed upon, the South Coast AQMD; and

WHEREAS, the South Coast AQMD Governing Board, in amending Rule 1106 and Rule 1107, references the following statutes which the South Coast AQMD hereby implements, interprets or makes specific: Health and Safety Code Sections 39002, 40001,40406, 40702, 40440(a), 40725 through 40728.5, and Clean Air Act Sections 110, 172, and 182(e); and

WHEREAS, the South Coast AQMD Governing Board finds that Proposed Amended Rule 1106 and Proposed Amended Rule 1107 do not significantly affect air quality or emissions limitations, and can be met with existing coatings, and therefore a socioeconomic analysis pursuant to Health and Safety Code Section 40440.8, 40728.5, or 40920.6 is not required; and

WHEREAS, the South Coast AQMD staff conducted a Public Consultation Meeting regarding Proposed Amended Rule 1106 and Proposed Amended Rule 1107 on November 9, 2022; and

WHEREAS, the Public Hearing has been properly noticed in accordance with the provisions of Health and Safety Code Sections 40725 and 40440.5; and

WHEREAS, the South Coast AQMD Governing Board has held a Public Hearing in accordance with all provisions of law; and

WHEREAS, the South Coast AQMD Governing Board specifies the Planning, Rule Development and Implementation Manager overseeing the rule development for Proposed Amended Rule 1106 and Proposed Amended Rule 1107 as the custodian of the documents or other materials which constitute the record of proceedings upon which the adoption of this proposed project is based, which are located at the South Coast Air Quality Management District, 21865 Copley Drive, Diamond Bar, California; and

WHEREAS, Proposed Amended Rule 1106 and Proposed Amended Rule 1107 will be submitted to the California Air Resources Board (CARB) and U.S. EPA for inclusion into the State Implementation Plan; and

NOW, THEREFORE, BE IT RESOLVED, that the South Coast AQMD Governing Board does hereby determine, pursuant to the authority granted by law, that the proposed project is exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3) – Common Sense Exemption. This information was presented to the South Coast AQMD Governing Board, whose members exercised their independent judgement and reviewed, considered, and approved the information therein prior to acting on the proposed project; and

BE IT FURTHER RESOLVED, that the South Coast AQMD Governing Board does hereby adopt, pursuant to the authority granted by law, Proposed Amended Rule 1106 and Proposed Amended Rule 1107 as set forth in the attached, and incorporated herein by reference; and

BE IT FURTHER RESOLVED, that the South Coast AQMD Governing Board requests that Proposed Amended Rule 1106 and Proposed Amended Rule 1107 be submitted for inclusion in the State Implementation Plan; and

BE IT FURTHER RESOLVED, that the Executive Officer is hereby directed to forward a copy of this Resolution, Proposed Amended Rule 1106, and Proposed Amended Rule 1107 to CARB for approval and subsequent submittal to U.S. EPA for inclusion into the State Implementation Plan.

DATE: _____ _____

CLERK OF THE BOARDS

ATTACHMENT F

(Adopted November 4, 1988)(Amended May 5, 1989)(Amended June 2, 1989)
(Amended March 2, 1990)(Amended November 2, 1990)(Amended December 7, 1990)
(Amended August 2, 1991)(Amended January 13, 1995)
(Amended May 3, 2019)*(Amended [Date of Adoption])*

[RULE INDEX TO BE ADDED AFTER RULE ADOPTION]

PROPOSED AMENDED RULE 1106. MARINE AND PLEASURE CRAFT COATINGS

(a) Purpose

The purpose of this rule is to reduce emissions of Volatile Organic Compounds (VOC) from Marine and Pleasure Craft Coatings.

(b) Applicability

This rule is applicable to any person who supplies, sells, offers for sale, markets, manufactures, blends, packages, repackages, possesses or distributes any Marine or Pleasure Craft Coating and any associated solvent used with a Marine or Pleasure Craft Coating for use within the South Coast AQMD Jurisdiction, as well as any person who applies, stores at a worksite, or solicits the application of any Marine or Pleasure Craft Coating and any associated solvent used with a Marine or Pleasure Craft Coating within the South Coast AQMD Jurisdiction.

(c) Definitions

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

(1) AEROSOL COATING PRODUCT means a pressurized coating product containing pigments, resins, and/or other coating solids that dispenses product ingredients by means of a propellant, and is packaged in a disposable aerosol container for hand-held application.

(2) AIR DRIED COATING is any coating that is formulated by the manufacturer to be cured at a temperature below 90 °C (194 °F).

(3) ANTENNA COATING is any coating applied to equipment and associated structural appurtenances that are used to receive or transmit electromagnetic signals.

(4) ANTIFOULANT COATING is any coating applied to the underwater portion of boats, ships, vessels, or pleasure craft to prevent or reduce the attachment of biological organisms and shall be registered with the United States Environmental

Protection Agency ("U.S. EPA") as a pesticide under the Federal Insecticide, Fungicide, and Rodenticide Act (7 United States Code Section 136).

(5) BAKED COATING is any coating that is formulated by the manufacturer to be cured at a temperature at or above 90 °C (194 °F).

(6) CLEAR WOOD COATINGS are clear and semi-transparent topcoats applied to wood substrates to provide a transparent or translucent film.

(7) DISTRIBUTOR means any person to whom a product is sold or supplied for the purposes of resale or distribution in commerce, except that manufacturers, retailers, and consumers are not distributors.

~~(8) ELASTOMERIC ADHESIVE is any adhesive containing natural or synthetic rubber.~~

~~(9) ENERGY CURABLE COATINGS are single-component reactive products that cure upon exposure to visible light, ultra-violet light or to an electron beam. The VOC content of thin film Energy Curable Marine and Pleasure Craft Coatings may be determined by manufacturers using ASTM Test Method 7767-11 "Standard Test Method to Measure Volatiles from Radiation Curable Acrylate Monomers, Oligomers, and Blends and Thin Coatings Made from Them".~~

(~~10~~8) EXEMPT COMPOUNDS (See Rule 102 - Definition of Terms.)

(~~11~~9) EXTREME HIGH GLOSS COATING is any coating that achieves at least 95 percent reflectance on a 60° meter when tested by ASTM Test Method D-523-14 "Standard Test Method for Specular Gloss".

(~~12~~10) FINISH PRIMER/SURFACER is any coating applied with a wet film thickness of less than 10 mils (one mil = 0.001 of an inch) and is applied prior to the application of a Marine or Pleasure Craft Coating for the purpose of providing corrosion resistance, adhesion for subsequent coatings, a moisture barrier, or promotes a uniform surface necessary for filling in surface imperfections.

(~~13~~11) GRAMS OF VOC PER LITER OF COATING LESS WATER AND LESS EXEMPT COMPOUNDS (REGULATORY VOC) is the weight of VOC per combined volume of VOC and coating solids and can be calculated by the following equation:

$$\text{Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Where: W_s = weight of volatile compounds in grams
W_w = weight of water in grams
W_{es} = weight of exempt compounds in grams

V_m = volume of material in liters
V_w = volume of water in liters
V_{es} = volume of exempt compounds in liters

(~~14~~12) GRAMS OF VOC PER LITER OF MATERIAL (ACTUAL VOC) is the weight of VOC per volume of material and shall be calculated by the following equation:

$$\text{Grams of VOC per Liter of Material} = \frac{W_s - W_w - W_{es}}{V_m}$$

Where: W_s = weight of volatile compounds in grams
W_w = weight of water in grams
W_{es} = weight of exempt compounds in grams
V_m = volume of material in liters

(~~15~~13) HEAT RESISTANT COATING is any coating that during normal use must withstand temperatures of at least 204 °C (400 °F).

(~~16~~14) HIGH GLOSS COATING is any coating that achieves at least 85 percent reflectance on a 60° meter when tested by ASTM Method D-523-14 "Standard Test Method for Specular Gloss".

(~~17~~15) HIGH TEMPERATURE COATING is any coating that during normal use must withstand temperatures of at least 426 °C (800 °F).

(~~18~~16) HIGH BUILD PRIMER/SURFACER is any coating applied with a wet film thickness of 10 mils or more (one mil = 0.001 of an inch) prior to the application of a topcoat for purposes of providing corrosion resistance, adhesion of subsequent coatings, a moisture barrier, or promoting a uniform surface necessary for filling in surface imperfections.

(~~19~~17) HIGH-VOLUME, LOW-PRESSURE (HVLP) means spray application equipment designed to atomize 100 percent by air pressure only and is operated between 0.1 and 10 pounds per square inch gauge (psig), air atomizing pressure measured dynamically at the center of the air cap and at the air horns.

(~~20~~18) INORGANIC ZINC COATING is a coating that contains 960 grams per liter or more elemental zinc incorporated into an inorganic silicate binder that is applied to steel to provide galvanic corrosion resistance.

(~~21~~19) LOW ACTIVATION INTERIOR COATING is any coating used on interior surfaces aboard boats, ships, and vessels to minimize the activation of pigments on painted surfaces within a radiation environment.

(~~22~~20) LOW-SOLIDS COATINGS are coatings containing one pound or less of solids per gallon of material.

(~~23~~21) MARINE COATING is any coating, except unsaturated polyester resin (fiberglass) coatings, containing volatile organic materials and applied by any means to boats, ships, and vessels, their appurtenances, and structures such as piers, docks, buoys and oil drilling rigs intended for the exposure to either a marine or fresh water environment.

(~~24~~22) MARINE DECK SEALANT PRIMER is any sealant primer intended by the manufacturer to be applied to wooden marine decks. A sealant primer is any product intended by the manufacturer to be applied to a substrate, prior to the application of a sealant, to enhance the bonding surface.

~~(25) METALLIC HEAT RESISTANT COATING is any coating that contains more than 5 grams of metal particles per liter of coating as applied and must withstand temperatures over 80 °C (176 °F).~~

(~~26~~23) MIST COATING is any low viscosity thin film epoxy coating applied to an inorganic zinc primer that penetrates the porous zinc primer and allows the occluded air to escape through the film prior to curing.

(~~27~~24) NAVIGATIONAL AIDS COATING is any coating that is applied to buoys or other Coast Guard waterway markers that are recoated at their usage site aboard ship and immediately returned to the water.

(~~28~~25) NONSKID COATING means any coating applied to the horizontal surface of a marine vessel for the specific purpose of providing slip resistance for personnel.

(~~29~~26) ORGANIC ZINC COATING is a coating that contains 960 grams per liter or more elemental zinc incorporated into an organic silicate binder that is applied to steel to provide galvanic corrosion resistance.

(~~30~~27) PLEASURE CRAFT are marine or fresh water vessels that are less than 20 meters in length and are manufactured or operated primarily for recreational purposes, or are leased, rented, or chartered to a person or business for recreational purposes. Vessels operated in amusement theme parks in a fresh water environment solely for the purpose of an amusement park attraction shall be considered pleasure craft vessels regardless of their length. The owner or operator of a pleasure craft vessel shall be responsible for certifying that the intended use is for recreational purposes.

(~~31~~28) PLEASURE CRAFT COATING is any marine coating, except unsaturated polyester resin (fiberglass) coatings, applied by brush, spray, roller, or other means to a pleasure craft.

(~~32~~29) PRETREATMENT WASH PRIMER is a coating that contains a minimum of 1/2 percent acid, by weight, applied directly to bare metal surfaces to provide necessary surface etching.

(~~33~~30) REPAIR AND MAINTENANCE THERMOPLASTIC COATING is any resin-bearing coating, such as vinyl, chlorinated rubber, or bituminous coatings where the resin becomes pliable with the application of heat, and is used to recoat portions of a previously coated substrate that has sustained damage to following the initial coating.

(~~34~~31) SEALANT FOR WIRE-SPRAYED ALUMINUM is any coating of up to one mil (one mil = 0.001 of an inch) in thickness of an epoxy material that is reduced for application with an equal part of an appropriate solvent (e.g. naphtha or ethylene glycol monoethyl ether).

(~~35~~32) SEALER is a coating applied to bare wood to seal surface pores to prevent subsequent coatings from being absorbed into the wood.

(~~36~~33) SOLVENT CLEANING is as defined in Rule 1171 - Solvent Cleaning Operations.

(~~37~~34) SPECIAL MARKING COATING is any coating used for items such as flight decks, vessel identification numbers and other demarcations for safety or identification.

(~~38~~35) TACK COAT is an epoxy coating of up to two mils (one mil = 0.001 of an inch) thick applied to an existing epoxy coating that has aged beyond the time limit specified by the manufacturer.

(~~39~~36) TEAK PRIMER is a coating applied to teak wood or previously oiled teak wood decks in order to improve the adhesion of a seam sealer.

(~~40~~37) TOPCOAT is any final coating applied to the interior or exterior of a marine or pleasure craft.

(~~41~~38) TOUCH-UP COATING is any coating applied incidental to the main coating process but necessary to cover minor imperfections or minor mechanical damage incurred prior to use.

(~~42~~39) TRANSFER EFFICIENCY means the amount of coating solids adhering to the object being coated divided by the total amount of coating solids sprayed expressed as a percentage.

(~~43~~40) UNDERSEA WEAPONS SYSTEM COATING is any coating applied to any components of a weapons system intended for exposure to a marine environment that is intended to be launched or fired undersea.

(~~44~~41) VARNISHES are clear or pigmented wood topcoats formulated with various resins to dry by chemical reaction.

(~~45~~42) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102 - Definition of Terms.

(~~46~~43) WIRE-SPRAYED ALUMINUM is any molten multi-aluminum coating applied to a steel substrate using oxygen fueled combustion spray equipment.

(d) Requirements

(1) VOC Content of Marine Coatings

Except as otherwise provided in this rule, a person shall not apply a marine coating within the South Coast AQMD jurisdiction with a VOC content in excess of the following limits shown in the Table of Standards I that are expressed as grams of VOC per liter of coating, as applied, less water and exempt solvents:

TABLE OF STANDARDS I

MARINE COATING CATEGORY	VOC LIMITS Less water and exempt compounds Grams per Liter (g/L)	
	BAKED	AIR DRIED
	CURRENT LIMIT	CURRENT LIMIT
Antenna Coating		340
Antifoulant Coatings:		
Aluminum Substrates		560
Other Substrates		400
~~Elastomeric Adhesives (with 15%, by Weight, Natural or Synthetic Rubber)~~		~~730~~
Inorganic Zinc Coating		340
Low Activation Interior Coating		420
Mist Coating		610
Navigational Aids Coating		340
Nonskid Coating		340
Organic Zinc Coating		340
Pre-Treatment Wash Primer	420	420
Repair and Maintenance Thermoplastic Coating		340
Sealant for Wire-Sprayed Aluminum		610
Special Marking Coating		420
Specialty Coatings:		
Heat Resistant Coating	360	420
~~Metallic Heat Resistant Coating~~		~~530~~
High Temperature Coating		500
Tack Coating		610
Topcoats:		
Extreme High-Gloss Coating	420	490
High Gloss Coating	275	340
Undersea Weapons Systems Coating	275	340
Any Other Coating Type	275	340

(2) VOC Content of Pleasure Craft Coatings

Except as otherwise provided in this rule, a person shall not apply a pleasure craft coating within the South Coast AQMD jurisdiction with a VOC content in excess of the following limits shown in the Table of Standards II that are expressed as grams of VOC per liter of coating, as applied, less water and exempt solvents:

TABLE OF STANDARDS II

VOC LIMITS Less water and exempt compounds Grams per Liter (g/L)	
PLEASURE CRAFT COATING CATEGORY	CURRENT LIMIT
Antifoulant Coatings:	
Aluminum Substrate	560
Other Substrate	330
Clear Wood Coatings:	
Sealers	550
Varnishes	490
Primer Coatings:	
Finish Primer/Surfacer	420
High Build Primer/Surfacer	340
Marine Deck Sealant Primer	760
Pretreatment Wash Primer	780
Teak Primer	775
Topcoats:	
Extreme High Gloss Coating	490
High Gloss Coating	420
Any Other Coating Type	420

(3) VOC Content of Low-Solids Coatings

Except as otherwise provided in this rule, a person shall not apply a marine coating or a pleasure craft coating within the South Coast AQMD jurisdiction with a VOC content in excess of the following limit shown in the Table of Standards III that is expressed as grams of VOC per material of coating, as applied:

TABLE OF STANDARDS III

VOC LIMIT – MARINE & PLEASURE CRAFT COATINGS Grams per liter of material VOC	
COATING CATEGORY	CURRENT LIMIT
Low-Solids Coating	120

(4) Most Restrictive VOC Limit

If any representation or information on the container of any coating subject to this rule, or any label or sticker affixed to the container, or in any sales, advertising, or technical literature that indicates that the coating meets the definition of, is recommended for use or is suitable for use for more than one of the marine coating categories listed in paragraph (d)(1) or the pleasure craft coating categories listed in paragraph (d)(2), or the low-solids coating category listed in paragraph (d)(3), then the lowest VOC content limit shall apply.

(5) Alternative Emission Control Plan

A person may comply with the provisions of paragraphs (d)(1), (d)(2) and (d)(3) by means of an Alternative Emission Control Plan, pursuant to Rule 108 - Alternative Emissions Control Plans.

(6) Exempt Compounds

A person shall not manufacture, sell, offer for sale, distribute for use in the South Coast AQMD jurisdiction, or apply any marine or pleasure craft coating which contains any Group II Exempt Compounds listed in Rule 102 **-** Definition of Terms, in quantities greater than 0.1 percent by weight. Cyclic, branched, or linear, completely methylated siloxanes (VMS) are not subject to this provision.

(7) Carcinogenic Materials

A person shall not manufacture, sell, offer for sale, distribute for use in the South Coast AQMD jurisdiction, or apply any marine or pleasure craft coating which contains cadmium, nickel, lead or hexavalent chromium that was introduced as a pigment or as an agent to impart any property or characteristic to the marine or pleasure craft coatings during manufacturing, distribution, or use of applicable marine or pleasure craft coatings.

(8) Application Equipment Transfer Efficiency

(A) A person shall not apply any marine coating or pleasure craft coating unless one of the following methods of coating transfer is used:

(i) Electrostatic application; or

(ii) High-volume, low-pressure (HVLP) spray; or

(iii) Brush, dip, or roller; or

(iv) Spray gun application, provided the owner or operator demonstrates that the spray gun meets the HVLP definition in paragraph (c)(~~19~~17) in design and use. A satisfactory demonstration must be based on the manufacturer's published technical material on the design of the spray gun and by a demonstration of the operation of the spray gun using an air pressure tip gauge from the manufacturer of the spray gun; or

(v) Any such other marine coating or pleasure craft coating application methods as demonstrated, in accordance with the provisions of paragraph (g)(6), to be capable of achieving equivalent or better transfer efficiency than the marine coating or pleasure craft coating application method listed in clause (d)(8)(A)(ii), provided written approval is obtained from the Executive Officer prior to use.

(B) A person shall not apply any marine coating or pleasure craft coating by any of the methods listed in subparagraph (d)(8)(A) unless such coating is applied with properly operating equipment, operated according to procedures recommended by the manufacturer and in compliance with applicable permit conditions, if any.

(9) Solvent Cleaning, Storage and Disposal of VOC-containing Materials

Solvent cleaning of application equipment, parts, products, tools, machinery, equipment, general work areas, and the storage and disposal of VOC-containing materials used in solvent cleaning activities shall be carried out pursuant to South Coast AQMD Rule 1171 - Solvent Cleaning Operations.

(e) Prohibition of Possession, Specification and Sale

(1) For the purpose of this rule, no person shall store at a worksite any marine coating or pleasure craft coating subject to this rule within the South Coast AQMD jurisdiction that is not in compliance with the requirements shown in the Tables of Standards of paragraphs (d)(1), (d)(2), and (d)(3) unless the following condition applies:

(A) The marine or pleasure craft coating is for use at a facility that operates in compliance with an approved Alternative Emissions Control Plan pursuant

to paragraph (d)(5), and the marine or pleasure craft coating is specified in the plan.

(2) For the purpose of this rule, no person shall solicit from, specify, or require any other person to use in the South Coast AQMD jurisdiction any marine or pleasure craft coating that does not meet the following:

(A) Applicable VOC limits required by paragraph (d)(1), (d)(2) or (d)(3) for the specific application unless:

(i) The marine or pleasure craft coating is located at a facility that operates in compliance with an approved Alternative Emissions Control Plan pursuant to paragraph (d)(5), and the marine or pleasure craft coating is specified in the plan.

(B) The requirements of paragraphs (d)(6) and (d)(7).

(3) For the purpose of this rule, no person shall supply, sell, offer for sale, market, blend, package, repackage or distribute any marine or pleasure craft coating for use within the South Coast AQMD jurisdiction subject to the provisions in this rule that does not meet the:

(A) Applicable VOC limits required by paragraphs (d)(1), (d)(2) and (d)(3) for the specific application, unless:

(i) The marine or pleasure craft coating is for use at a facility that operates in accordance with an approved Alternative Emissions Control Plan pursuant to paragraph (d)(6), and the marine or pleasure craft coating is specified in the plan; and,

(B) The requirements of paragraphs (d)(6) and (d)(7).

(4) For the purpose of this rule, no person shall solicit from, specify, require, offer for sale, sell, or distribute to any other person for use in the South Coast AQMD jurisdiction any marine or pleasure craft coating application equipment that does not meet the requirements of subparagraph (d)(8)(A).

(5) For the purpose of this rule, no person shall offer for sale, sell, supply, market, offer for sale or distribute an HVLP spray gun for use within the South Coast AQMD unless said person provides accurate information to the spray gun recipient. Such accurate information shall include the maximum inlet air pressure to the spray gun that would result in a maximum air pressure of 10 pounds per square inch gauge (psig) air pressure, measured dynamically at the center of the air cap and at the air horns, based on the manufacturer's published technical material on the design of the spray application equipment, and by a demonstration

of the operation of the spray application equipment using an air pressure tip gauge from the manufacturer of the gun. The information shall either be permanently marked on the gun, or provided on the company's letterhead or in the form of technical literature that clearly identifies the spray gun manufacturer, the seller, or the distributor.

(6) Paragraphs (d)(1), (d)(2) and (d)(3) shall not apply to marine coatings or pleasure craft coatings that are sold, offered for sale, or solicited, for shipment or use outside of the South Coast AQMD jurisdiction, or for shipment to other manufacturers for repackaging provided such coatings are sold, offered for sale, or solicited, for shipment or use outside the South Coast AQMD jurisdiction.

(f) Recordkeeping Requirements

(1) Recordkeeping for VOC Emissions

Notwithstanding the provisions of subdivision (i), records of marine coating usage and pleasure craft coating usage, as applicable, shall be maintained pursuant to South Coast AQMD Rule 109 - Recordkeeping for Volatile Organic Compound Emissions, and shall be made available to the Executive Officer upon request.

(g) Test Methods

(1) Determination of VOC Content:

The VOC content of coatings, subject to the provisions of this rule shall be determined by the following methods:

(A) U.S. EPA Reference Test Method 24 (Determination of Volatile Matter Content, Water Content, Volume Solids and Weight Solids of Surface Coatings, Code of Federal Regulations, Title 40, Part 60, Appendix A). The exempt compounds' content shall be determined by South Coast AQMD Laboratory Test Method 303 (Determination of Exempt Compounds) contained in the South Coast AQMD "Laboratory Methods of Analysis for Enforcement Samples" manual; or,

(B) South Coast AQMD Method 304 [Determination of Volatile Organic Compounds (VOCs) in Various Materials] contained in the South Coast AQMD "Laboratory Methods of Analysis for Enforcement Samples" manual; or,

(C) South Coast AQMD Method 313 [Determination of Volatile Organic Compounds VOC by Gas Chromatography-Mass Spectrometry] in the South Coast AQMD's "Laboratory Methods of Analysis for Enforcement Samples" manual.

(2) VOC content determined to exceed the limits established by this rule through the use of any of the above-referenced test methods shall constitute a violation of this rule.

(3) Exempt Perfluorocarbon Compounds

The following classes of compounds:

Cyclic, branched, or linear, completely fluorinated alkanes;

Cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;

Cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and

Sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine,

shall be analyzed as exempt compounds for compliance with subdivision (d), only at such time as manufacturers specify which individual compounds are used in the formulation of the coatings subject to this rule. In addition, prior to any such analysis, the manufacturers shall also identify the test methods approved by the U.S. EPA, California Air Resources Board (CARB), and the South Coast AQMD that will be used to quantify the amount of each exempt compound.

(4) Determination of Iridescent Particles in Metallic/Iridescent Coatings

The metal and silicon content in metallic/iridescent coatings subject to the provisions of this rule shall be determined by the South Coast AQMD Method 311 (Determination of Percent Metal in Metallic Coatings by Spectrographic Method) contained in the South Coast AQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

(5) Determination of Acid Content in Marine and Pleasure Craft Coatings

The acid content of any coating subject to the provisions of this rule shall be determined by ASTM D-1613-06 (2012) (Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products).

(6) Determination of Transfer Efficiency of Application Equipment

The transfer efficiency of alternative marine coating and pleasure craft coating application methods, as defined by clause (d)(8)(A)(v), shall be determined in accordance with the South Coast AQMD method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989," and South Coast

AQMD "Guidelines for Demonstrating Equivalency With South Coast AQMD Approved Transfer Efficiency Spray Gun September 26, 2002."

(7) Multiple Test Methods

When more than one test method or set of test methods are 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 the rule.

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

(h) Rule 442 Applicability

Any Marine Coating or Pleasure Craft Coating or any facility that is exempt pursuant to subdivision (i) from all or a portion of the VOC limits of subdivision (d) shall comply with the provisions of Rule 442 - Usage of Solvents.

(i) Exemptions

With the exception of paragraphs (d)(6) and (d)(7), the provisions of this rule shall not apply to:

(1) Marine or pleasure craft coatings that have a VOC content of 50 g/L or less, or its equivalent, less water and exempt compounds, as applied~~, provided that for energy curable coatings, product formulation data and test results, determined by ASTM D7767-11, shall first be submitted to the Executive Officer by the manufacturer~~.

(2) Marine coatings applied to interior surfaces of potable water containers.

(3) Touch-up coatings, as defined by paragraph (c)(~~41~~38) of this rule.

(4) Any aerosol coating product.

(5) The provisions of paragraph (d)(8) shall not apply to marine or pleasure craft coatings with a viscosity of 650 centipoise or greater, as applied.

(6) The provisions of paragraphs (d)(1), (d)(2), and (d)(3) shall not apply to marine coatings that are used for vessels that are intended to submerge to at least 500 feet below the surface of the water provided that the total combined usage of such coatings does not exceed 12 gallons per calendar year and such coatings are in compliance with the VOC limits in the U.S. EPA National Emission Standards for Hazardous Air Pollutants (NESHAP) for Shipbuilding and Ship Repair (Surface Coatings).

ATTACHMENT G

(Adopted June 1, 1979)(Amended December 4, 1981)(Amended May 7, 1982)
(Amended December 2, 1983)(Amended March 2, 1984)(Amended January 9, 1987)
(Amended June 5, 1987)(Amended May 5, 1989)(Amended March 2, 1990)
(Amended November 2, 1990)(Amended August 2, 1991)(Amended May 12, 1995)
(Amended March 8, 1996)(Amended August 14, 1998)
(Amended November 17, 2000)(Amended November 9, 2001)
(Amended November 4, 2005)(Amended January 6, 2006)
(Amended February 7, 2020)*(Amended [Date of Adoption])*

[RULE INDEX TO BE ADDED AFTER RULE ADOPTION]

PROPOSED AMENDED RULE 1107. COATING OF METAL PARTS AND PRODUCTS

(a) Purpose and Applicability

The purpose of Rule 1107 is to reduce volatile organic compound (VOC) emissions from the coating of metal parts and products. This rule applies to all metal coatings operations except those performed on aerospace assembly, magnet wire, marine craft, motor vehicle, metal container, and coil coating operations. This rule does not apply to the coating of architectural components coated at the structure site or at a temporary unimproved location designated exclusively for the coating of structural components.

(b) Definitions

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

(1) AEROSOL COATING PRODUCT is a pressurized coating product containing pigments or resins that dispenses product ingredients by means of a propellant, and is packaged in a disposable can for hand-held application, or for use in specialized equipment for ground traffic/marking applications.

(2) AIR-DRIED COATING is a coating that is cured at a temperature below 90°C (194°F).

(3) ALTERNATIVE EMISSION CONTROL PLAN is a plan that allows a source to demonstrate an alternative method of rule compliance, pursuant to Rule 108 – Alternative Emission Control Plans.

(4) BAKED COATING is a coating that is cured at a temperature at or above 90°C (194°F).

(5) CAMOUFLAGE COATING is a coating used, principally by the military, to conceal equipment from detection.

(6) CAPTURE EFFICIENCY is the percentage of VOCs used, emitted, evolved, or generated by the operation, that are collected and directed to an air pollution control device.

(7) CATALYST is a substance that alters the rate of a chemical reaction without participating in that reaction or changing during the course of that reaction.

(b) (8) COATING is a material which is applied to a surface and which forms a continuous film in order to beautify and/or protect such surface.

(9) CONTRACT PAINTER is a non-manufacturer of metal parts and products who applies coatings to such products at his facility exclusively under contract with one or more parties that operate under separate ownership and control.

(10) DIP COATING is a method of applying coatings to a substrate by submersion into and removal from a coating bath.

(11) ELECTRIC-INSULATING VARNISH is a non-convertible-type coating applied to electric motors, components of electric motors, or power transformers, to provide electrical, mechanical, and environmental protection or resistance.

(12) ELECTRIC-INSULATING AND THERMAL-CONDUCTING COATING is a coating that displays an electrical insulation of at least 1000 volts DC per mil on a flat test plate and an average thermal conductivity of at least 0.27 BTU per hour-foot-degree-Fahrenheit.

(13) ELECTROCOATING is a process that uses coating concentrates or pastes added to a water bath. The coating is applied by using an electrical current in either an anodic or cathodic process.

(14) ELECTROSTATIC APPLICATION is a method of applying coating particles or coating droplets to a grounded substrate by electrically charging them.

~~(15) ENERGY CURABLE COATINGS are single-component reactive products that cure upon exposure to visible light, ultra-violet light, or an electron beam. The VOC content of thin film energy curable coatings may be measured by manufacturers using ASTM D7767-11 (2018) Standard Test Method to Measure Volatiles from Radiation Curable Acrylate Monomers, Oligomers, and Blends and Thin Coatings Made from Them.~~

(~~16~~15) ESSENTIAL PUBLIC SERVICE COATING is a protective (functional) coating applied to components of power, water, and natural gas production, transmission, or distribution systems during repair and maintenance procedures.

(~~17~~16) ETCHING FILLER is a coating that contains less than 23 percent solids by weight and at least 1/2-percent acid by weight, and is used instead of applying a pretreatment coating followed by a primer.

(~~18~~17) EXEMPT COMPOUNDS (see Rule 102 – Definition of Terms).

(~~19~~18) EXTREME HIGH-GLOSS COATING is a coating which, when tested by ASTM D523-14 (2018) – Standard Test Method for Specular Gloss, shows a reflectance of 75 or more on a 60° meter.

(b) (~~20~~19) EXTREME-PERFORMANCE COATING is a coating used on a metal surface where the coated surface is, in its intended use, subject to the following:

(A) Chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes, chemical mixtures, or solution;

(B) Repeated exposure to temperatures in excess of 250°F; or

(C) Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleansers, or scouring agents.

(~~21~~20) FLOW COAT is a non-atomized technique of applying coatings to a substrate with a fluid nozzle in a fan pattern with no air supplied to the nozzle.

(~~22~~21) GRAMS OF VOC PER LITER OF COATING LESS WATER AND LESS EXEMPT COMPOUNDS is the weight of VOC per combined volume of VOC and coating solids and can be calculated by the following equation:

Grams of VOC per Liter of Coating Less Water and Less Exempt Compounds

$$= \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Where: W_s = weight of volatile compounds in grams
W_w = weight of water in grams
W_{es} = weight of exempt compounds in grams
V_m = volume of material in liters
V_w = volume of water in liters
V_{es} = volume of exempt compounds in liters

(~~23~~22) GRAMS OF VOC PER LITER OF MATERIAL is the weight of VOC per volume of material and can be calculated by the following equation:

$$\text{Grams of VOC per Liter of Material} = \frac{W_s - W_w - W_{es}}{V_m}$$

Where: W_s = weight of volatile compounds in grams
W_w = weight of water in grams
W_{es} = weight of exempt compounds in grams
V_m = volume of material in liters

(~~24~~23) HAND APPLICATION METHODS is the application of coatings by manually held non-mechanically operated equipment. Such equipment includes paintbrushes, hand rollers, caulking guns, trowels, spatulas, syringe daubers, rags, and sponges.

(b) (~~25~~24) HARDENER is a substance or mixture of substances that controls the viscosity of the reactants and products of a chemical reaction; while participating in chemical reaction and becoming part of the product or products of chemical reaction.

(~~26~~25) HEAT-RESISTANT COATING is a coating that must withstand a temperature of at least 400°F during normal use.

(~~27~~26) HIGH-PERFORMANCE ARCHITECTURAL COATING is a coating used to protect architectural subsections and which meets the requirements of the Architectural Aluminum Manufacturer Association's publication numbers AAMA 2604-05 – Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels or AAMA 2605-05 – Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.

(~~28~~27) HIGH-TEMPERATURE COATING is a coating that is certified to withstand a temperature of 1000°F for 24 hours.

(~~29~~28) HIGH-VOLUME, LOW-PRESSURE (HVLP) SPRAY is a coating application system which is designed to be operated and which is operated between 0.1 and 10 pounds per square inch gauge (psig) air pressure, measured dynamically at the center of the air cap and the air horns.

(~~30~~29) INK is a fluid that contains dyes and/or colorants and is used to make markings but not to protect surfaces.

(~~31~~30) MAGNETIC DATA STORAGE DISK COATING is a coating used on a metal disk which stores data magnetically.

(~~32~~31) METAL PARTICLES are pieces of an elemental pure metal or a combination of elemental metals.

(~~33~~32) METAL PARTS AND PRODUCTS are any components or complete units fabricated from metal, except those subject to the coating provisions of other source specific rules of Regulation XI – Source Specific Standards.

(~~34~~33) METALLIC COATING is a coating which contains more than 5 grams of metal particles per liter of coating, as applied.

(~~35~~34) MIL is 0.001 inch.

(~~36~~35) MILITARY SPECIFICATION COATING is a coating applied to metal parts and products and which has a paint formulation approved by a United States Military Agency for use on military equipment.

(b) (~~37~~36) MOLD-SEAL COATING is the initial coating applied to a new mold or repaired mold to provide a smooth surface which, when coated with a mold release coating, prevents products from sticking to the mold.

(~~38~~37) MOTOR VEHICLE is a passenger car, light-duty truck, medium-duty vehicle, or heavy-duty vehicle as defined in Title 13, California Administrative Code, Section 1902.

(~~39~~38) MULTI-COMPONENT COATING is a coating requiring the addition of a separate reactive resin, commonly known as a catalyst or hardener, before application to form an acceptable dry film.

(~~40~~39) ONE-COMPONENT COATING is a coating that is ready for application as it comes out of its container to form an acceptable dry film. A thinner, necessary to reduce the viscosity, is not considered a component.

(~~41~~40) OPTICAL ANTI-REFLECTION COATING is a coating with a low reflectance in the infrared and visible wavelength range and is used for anti-reflection on or near optical and laser hardware.

(~~42~~41) PAN-BACKING COATING is a coating applied to the surface of pots, pans, or other cooking implements that are exposed directly to a flame or other heating elements.

(~~43~~42) PHOTORESIST COATING is a coating applied directly to a metal substrate to protect surface areas when chemical milling, etching, or other chemical surface operations are performed on the substrate.

(~~44~~43) PHOTORESIST OPERATION is a process for the application and development of photoresist coating on a metal substrate, including preparation (except primary cleaning), soft bake, development, hard bake, and stripping, and can be generally subdivided as follows:

(A) NEGATIVE PHOTORESIST OPERATION is a process where the photoresist hardens when exposed to light and the unhardened photoresist is stripped, exposing the metal surface for etching.

(B) POSITIVE PHOTORESIST OPERATION is a process where the photoresist softens when exposed to light and the softened photoresist is stripped, exposing the metal surface for etching.

(~~45~~44) PREFABRICATED ARCHITECTURAL COMPONENT COATINGS are coatings applied to metal parts and products which are to be used as an architectural structure.

(~~46~~45) PRETREATMENT COATING is a coating which contains no more than 12 percent solids by weight, and at least 1/2-percent acid by weight, is used to provide surface etching, and is applied directly to metal surfaces to provide corrosion resistance, adhesion, and ease of stripping.

(b) (~~47~~46) REACTIVE DILUENT is a liquid which is a VOC during application and one in which, through chemical reaction such as polymerization, 20 percent or more of the VOC becomes an integral part of a finished coating.

(~~48~~47) REPAIR COATING is a coating used to recoat portions of a product which has sustained mechanical damage to the coating following normal painting operations.

(~~49~~48) ROLL COAT is a coating method using a machine that applies coating to a substrate by continuously transferring coating through a pair or set of oppositely rotating rollers.

(~~50~~49) SAFETY-INDICATING COATING is a coating which changes physical characteristics, such as color, to indicate unsafe conditions.

(~~51~~50) SILICONE-RELEASE COATING is any coating which contains silicone resin and is intended to prevent food from sticking to metal surfaces such as baking pans.

(~~52~~51) SOLAR-ABSORBENT COATING is a coating which has as its prime purpose the absorption of solar radiation.

(~~53~~52) SOLID-FILM LUBRICANT is a very thin coating consisting of a binder system containing as its chief pigment material one or more of molybdenum disulfide, graphite, polytetrafluoroethylene (PTFE), or other solids that act as a dry lubricant between faying surfaces.

(~~54~~53) STENCIL COATING is an ink or a coating which is rolled or brushed onto a template or stamp in order to add identifying letters and/or numbers to metal parts and products.

(~~55~~54) TEXTURED FINISH is a rough surface produced by spraying and splattering large drops of coating onto a previously applied coating. The coatings used to form the appearance of the textured finish are referred to as textured coatings.

(~~56~~55) TOUCH-UP COATING is a coating used to cover minor coating imperfections appearing after the main coating operation.

(~~57~~56) TRANSFER EFFICIENCY is the ratio of the weight or volume of coating solids adhering to an object to the total weight or volume, respectively, of coating solids used in the application process, expressed as a percentage.

(~~58~~57) VACUUM-METALIZING COATING is the undercoat applied to the substrate on which the metal is deposited or the overcoat applied directly to the metal film.

(~~59~~58) VOLATILE ORGANIC COMPOUND (VOC) (see Rule 102 – Definition of Terms).

(c) Requirements

(1) Operating Equipment

A person shall not apply VOC-containing coatings to metal parts and products subject to the provisions of this rule unless the coating is applied with equipment operated according to the equipment manufacturer specifications, and by the use of one of the following methods:

(A) Electrostatic application;

(B) Flow coat;

(C) Dip coat;

(D) Roll coat;

(E) High-Volume, Low-Pressure (HVLP) Spray;

(F) Hand Application Methods; or

(G) Such other coating application methods as are demonstrated to the Executive Officer to be capable of achieving a transfer efficiency equivalent or better to the method listed in subparagraph (c)(1)(E) and for which written approval of the Executive Officer has been obtained.

(2) VOC Content of Coatings

A person shall not apply to metal parts and products subject to the provisions of this rule any coatings, including any VOC-containing materials added to the original coating supplied by the manufacturer, which contain VOCs in excess of the limits specified below:

VOC LIMITS Less Water and Less Exempt Compounds				
Coating	**Air-Dried**		**Baked**	
	g/L	**lb/gal**	**g/L**	**lb/gal**
General One-Component	275	2.3	275	2.3
General Multi-Component	340	2.8	275	2.3
Military Specification	340	2.8	275	2.3
Etching Filler	420	3.5	420	3.5
Solar-Absorbent	420	3.5	360	3.0
Heat-Resistant	420	3.5	360	3.0
Extreme High-Gloss	340	2.8	360	3.0
Metallic	420	3.5	360	3.0
Extreme Performance	420	3.5	360	3.0
Prefabricated Architectural One-Component	275	2.3	275	2.3
Prefabricated Architectural Multi-Component	340	2.8	275	2.3
Touch Up	420	3.5	360	3.0
Repair	420	3.5	360	3.0
Silicone Release	420	3.5	420	3.5
High-Performance Architectural	420	3.5	420	3.5
Camouflage	420	3.5	360	3.0
Vacuum-Metalizing	420	3.5	420	3.5
Mold-Seal	420	3.5	420	3.5
High-Temperature	420	3.5	420	3.5
Electric-Insulating Varnish	420	3.5	420	3.5
Pan Backing	420	3.5	420	3.5
Pretreatment Coatings	420	3.5	420	3.5

(c) (3) A person shall not use VOC-containing materials which have a VOC content of more than 200 grams per liter of material for stripping any coating governed by this rule.

(4) A person shall store and dispose of the following in closed containers, except when depositing or removing material from the container:

(A) VOC-containing coatings, thinners, and coating-related waste materials applied to any metal parts and products subject to the provisions of this rule;

(B) Cloth or paper used in stripping cured coating; and

(C) VOC-laden application tools, such as a brush, pad, rag, cloth, or paper, used in the application of coatings applied to any metal parts and products subject to the provisions of this rule.

(c) (5) Solvent cleaning of application equipment, parts, products, tools, machinery, equipment, general work areas, and the storage and disposal of VOC-containing materials used in cleaning operations shall be carried out pursuant to Rule 1171 – Solvent Cleaning Operations.

(6) For coatings that contain reactive diluents, the Grams of VOC per Liter of Coating Less Water and Less Exempt Compounds shall be calculated by the following equation:

Grams of VOC per Liter of Coating Less Water and Less Exempt Compounds

$$= \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Where: W_s = weight of volatile compounds not consumed during curing, in grams

W_w = weight of water not consumed during curing, in grams

W_{es} weight of exempt compounds not consumed during curing, in grams

V_m = volume of the material prior to reaction, in liters

V_w = volume of water not consumed during curing, in liters

V_{es} = volume of exempt compounds not consumed during curing, in liters

(7) Owners or operators of control equipment may comply with provisions of paragraph (c)(1) and/or (c)(2) by using approved air pollution control equipment provided:

(A) The control device reduces VOC emissions from an emission collection system by at least 95 percent by weight or the output of the air pollution control device is no more than 5 parts per million (ppm) VOC by volume calculated as carbon with no dilution; and

(B) The owner or operator demonstrates that the emission collection system collects at least 90 percent by weight of the VOC emissions generated by the sources of VOC emissions.

(d) Prohibition of Specifications

A person shall not specify the use in the South Coast AQMD of any coating to be applied to any metal parts and products subject to the provisions of this rule that does not meet the

limits and requirements of this rule. The requirements of this paragraph shall apply to all written and oral contracts.

(e) Methods of Analysis

All applicable methods of analysis shall be as cited in paragraphs (e)(1) through (e)(6), or any other applicable method approved in writing by the Executive Officer, United States Environmental Protection Agency (U.S. EPA), and the California Air Resources Board (CARB).

(1) Determination of VOC Content

(A) The VOC content of coatings subject to the provisions of this rule shall be determined by the following methods:

(i) U.S. EPA Reference Method 24 (Title 40, Code of Federal Regulations, Part 60, Appendix A) – Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings. The exempt solvent content shall be determined by South Coast AQMD Method 303 – Determination of Exempt Compounds contained in the South Coast AQMD "Laboratory Methods of Analysis for Enforcement Samples" manual; or

(ii) South Coast AQMD Method 304 – Determination of Volatile Organic Compounds (VOC) in Various Materials contained in the South Coast AQMD "Laboratory Methods of Analysis for Enforcement Samples" manual.

(B) Exempt Perfluorocarbon Compounds

The following classes of compounds:

cyclic, branched, or linear, completely fluorinated alkanes;

cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;

cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and

sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine;

will be analyzed as exempt compounds for compliance with subdivision (c) only when manufacturers specify which individual compounds are used in the coating formulation. In addition, the manufacturers must identify the

U.S. EPA, CARB, and the South Coast AQMD approved test methods used to quantify the amount of each exempt compound.

(e) ~~(1) (C) Thin Film Energy Curable Coatings~~

~~The VOC content of thin film energy curable coatings may be measured by manufacturers using ASTM D7767-11 (2018) Standard Test Method to Measure Volatiles from Radiation Curable Acrylate Monomers, Oligomers, and Blends and Thin Coatings Made from Them.~~

(2) Determination of the Acid Content of Pretreatment Coatings and Etching Fillers

The acid content of pretreatment coatings and etching fillers shall be determined by ASTM D1613-17 – Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products.

(3) Determination of the Metal Particle Content of Metallic Coatings

The metal particle content of metallic coatings subject to the provisions of this rule shall be determined by the following methods:

(A) South Coast AQMD Method 318 – Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction contained in the South Coast AQMD "Laboratory Methods of Analysis for Enforcement Samples" manual for coatings containing elemental aluminum metal; or

(B) South Coast AQMD Method 311 – Analysis of Percent Metal in Metallic Coatings by Spectrographic Method contained in the South Coast AQMD "Laboratory Methods of Analysis for Enforcement Samples" manual for all other non-aluminum particle content analyses.

(4) Determination of Efficiency of Emission Control System

(A) Capture efficiency specified in paragraph (c)(7), shall be determined by verifying the use of a Permanent Total Enclosure (PTE) and 100% capture efficiency as defined by U.S. EPA Method 204 – Permanent (PTE) or Temporary Total Enclosure (TTE) for Determining Capture Efficiency. Alternatively, if a U.S. EPA Method 204 defined PTE is not employed, capture efficiency shall be determined using a minimum of three sampling runs subject to data quality criteria presented in the U.S. EPA technical guidance document, "Guidelines for Determining Capture Efficiency", January 9, 1995. Individual capture efficiency test runs subject to the U.S. EPA technical guidance document shall be determined by:

(i) The Temporary Total Enclosure (TTE) approach of U.S. EPA Methods 204 through 204F; or

(e) (4) (A) (ii) The South Coast AQMD "Protocol for Determination of Volatile Organic Compounds (VOC) Capture Efficiency."

Notwithstanding the test methods specified by the technical guidance document, any other method approved in writing by the U.S. EPA, CARB, and the South Coast AQMD Executive Officer may be substituted.

(B) The efficiency of the control device of the emission control system as specified in paragraph (c)(7) and the VOC content in the control device exhaust gases, measured and calculated as carbon, shall be determined by the U.S. EPA Test Method 25 – Determination of Total Gaseous Nonmethane Organic Emissions as Carbon, U.S. EPA Test Method 25A – Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer, South Coast AQMD Method 25.1 – Determination of Total Gaseous Non-Methane Organic Emissions as Carbon, or South Coast AQMD Method 25.3 – Determination of Low Concentration Non-Methane Non-Ethane Organic Compound Emissions from Clean Fueled Combustion Sources, as applicable. U.S. EPA Test Method 18 – Measurement of Gaseous Organic Compound Emissions by Gas Chromatography, or CARB Method 422 – Determination of Volatile Organic Compounds in Emissions from Stationary Sources shall be used to determine emissions of exempt compounds.

(5) Multiple Test Methods

When more than one test method or set of methods are 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 the rule.

(6) Demonstrations of transfer efficiency shall be conducted in accordance with South Coast AQMD method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User", May 24, 1989 and South Coast AQMD "Guidelines for Demonstrating Equivalency with District Approved Transfer Efficiency Spray Guns", September 26, 2002.

(f) Exemptions

(1) The provisions of paragraphs (c)(1) and (c)(2) of this rule shall not apply to:

(A) Stencil coatings;

(B) Safety-indicating coatings;

(C) Magnetic data storage disk coatings;

(D) Solid-film lubricants; and

(f) (1) (E) Electric-insulating and thermal-conducting coatings.

(2) The provisions of paragraph (c)(1) of this rule shall not apply to the application of touch-up coatings, repair coatings, and textured finishes.

(3) The provisions of paragraphs (c)(1), (c)(2), and (c)(3) of this rule do not apply to the application of coatings and use of cleaning solvents while conducting performance tests on the coatings at paint manufacturing facilities.

(4) The provisions of paragraph (c)(2) of this rule shall not apply to aerosol coating products.

(5) The provisions of paragraph (c)(2) of this rule shall not apply to the use of essential public service coatings provided such aggregate use does not exceed 55 gallons in any one calendar year per facility.

(6) The provisions of paragraph (c)(2) of this rule shall not apply to the use of optical anti-reflective coatings provided such aggregate use does not exceed 10 gallons in any one calendar year, per facility.

(7) The provisions of paragraph (c)(2) shall not apply to photoresist operations applying liquid photoresist coating used for photofabrication of metal substrates with a thickness not exceeding 0.060 inches provided the annual usage per facility is 10 gallons or less.

(8) The provisions of paragraph (c)(1) shall not apply to metal coatings with a viscosity of 650 centipoise or greater, as applied.

(g) Rule 442 Applicability

Any coating, coating operation, or facility which is exempt from all or a portion of the VOC limits of this rule shall comply with the provisions of Rule 442 – Usage of Solvents.

(h) Alternative Emission Control Plan

An owner or operator may achieve compliance with paragraph (c)(2) by means of an Alternative Emission Control Plan pursuant to Rule 108 – Alternative Emission Control Plans.

(i) Qualification for Classification as Extreme-Performance Coating

A coating may be classified as an extreme-performance coating provided that the applicator requests and receives written approval of such classification from the Executive Officer, prior to application of such coating, and shows that the intended use of each coated object would require coating with an extreme-performance coating.

(j) Recordkeeping

Records of coating and solvent usage shall be maintained pursuant to Rule 109 – Recordkeeping for Volatile Organic Compound Emissions.

(k) Emission Reduction Credits

Facilities that use high-performance architectural, pretreatment, or vacuum-metalizing coatings shall not receive emission reduction credit(s) pursuant to Rule 1309 – Emission Reduction Credits and Short Term Credits above those emission reduction credit(s) that the facility would have received if it was operated with coatings having a VOC content of no more than 420 grams per liter, less water and less exempt compounds.

ATTACHMENT H

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Final Staff Report
Proposed Amended Rule 1106 – Marine and Pleasure Craft Coatings
Proposed Amended Rule 1107 – Coating of Metal Parts and Products

January 2023

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EXECUTIVE SUMMARY

Air districts, such as the South Coast Air Quality Management District (South Coast AQMD). which exceed the National Ambient Air Quality Standards (NAAQS) established by the United States Environmental Protection Agency (U.S. EPA) are required to develop and submit a State Implementation Plan (SIP) for U.S. EPA approval. SIPs consist of rules and documents that a state or local air district implements, maintains, and enforces to fulfill requirements of the Clean Air Act (CAA) and are used to demonstrate how the region will meet the NAAQS. If U.S. EPA issues a SIP disapproval or partial disapproval of a rule, South Coast AQMD will face the possibility of sanctions by the federal government and other consequences under CAA unless the identified rule deficiencies are not corrected and approved by U.S. EPA. Offset sanctions would be triggered 18 months after the effective date of a final disapproval and highway funding sanctions would be triggered six months after the offset sanctions are imposed. CAA would also require U.S. EPA to promulgate a Federal Implementation Plan within 24 months of the disapproval effective date. Sanctions will not be imposed if U.S. EPA determines that a subsequent SIP submission corrects the deficiencies before the applicable deadline.

On August 22, 2022, U.S. EPA proposed a limited SIP disapproval for Rule 1106 – Marine and Pleasure Craft Coatings (Rule 1106) and Rule 1107 – Coating of Metal Parts and Products (Rule 1107). This limited disapproval was subsequent to U.S. EPA's previous proposed approval of the rules. The basis of t~~T~~he limited disapproval is the reference to ~~cited the deficiency of referencing~~ ASTM[1] D7767-11, "Standard Test Method to Measure Volatiles from Radiation Curable Acrylate Monomers, Oligomers and Blends and Thin Coatings Made from Them" (ASTM D7767)~~.~~, U.S. EPA states that they recently became aware that ASTM D7767 ~~which~~ is not a U.S. EPA-approved test method and therefore cannot be used to enforce a SIP approved rule.[2] The U.S. EPA also recommended removing two product categories to improve Rule 1106, as those categories are not listed in the 1996 U.S. EPA Control Techniques Guidelines for Shipbuilding and Ship Repair Operations (Surface Coating), which will be referred to as the U.S. EPA Marine Coating CTG in this staff report.

Proposed Amended Rule 1106 (PAR 1106) and Proposed Amended Rule 1107 (PAR 1107) will address the deficiency and incorporate U.S. EPA comments.

BACKGROUND

Regulatory History for Rules 1106 and 1107

Rule 1106 is a source specific rule that was adopted to reduce volatile organic compound (VOC) emissions from marine and pleasure craft coatings formulated for use in the marine environment. Rule 1106 regulates marine coatings applied to boats, ships, and vessels, their appurtenances, and structures such as piers, docks, buoys and oil drillings rigs intended for the marine environment, and for pleasure craft. Rule 1106 was adopted on November 4, 1988, and it has been subsequently amended eight times, with the most recent amendment on May 3, 2019. The May 2019 amendment combined the requirements of Rule 1106 and Rule 1106.1 – Pleasure Craft Coating Operations (Rule 1106.1) into one rule, rescinded Rule 1106.1, aligned VOC content limits with U.S. EPA Marine Coatings CTG and the requirements of other California air districts, prohibited the possession and sale of non-compliant coatings, established requirements for transfer efficiency,

[1] ASTM International, formerly known as American Society for Testing and Materials
[2] 87 Fed. Reg. 51300, 51302 (August 22, 2022)

and provided rule clarifications. The May 2019 amendment also included a new definition for Energy Curable Coatings that referenced test method ASTM D7767 and a new exemption for coatings with VOC content of 50 g/L or less that referenced ASTM D7767. For Energy Curable Coatings, test results from the ASTM D7767 method were allowed, in conjunction with product formulation data, to be used to verify if these coatings qualified for this new exemption. Formulation data is the product recipe which includes all the components in a product, including the VOC content and amount of each component.

Rule 1107 is a source specific rule that was adopted to reduce VOC emissions from metal coating operations. Rule 1107 was adopted on June 1, 1979, and it has been subsequently amended eighteen times, with the most recent amendment on February 7, 2020. The February 2020 amendment addressed the Reasonably Available Control Technology (RACT) deficiencies raised by U.S. EPA and the changes to VOC limits requested by the California Air Resources Board (CARB). Additionally, the amendment included a definition for Energy Curable Coatings which referenced ASTM D7767 and added ASTM D7767 to the Methods of Analysis subdivision, which includes test methods that can be used to determine the VOC content of regulated coatings.

Background on ASTM D7767

Determining the VOC content of most ultraviolet, electron beam, and light-emitting diode (UV/EB/LED) materials can accurately be measured using U.S. EPA Reference Method 24 (Method 24), which includes a non-solids test method specifically for the analysis of UV/EB/LED materials. However, Method 24 is not an appropriate method for thin film materials, which are applied at such a thin film the weight of the materials cannot be accurately measured. Members of industry who represent the UV/EB/LED industry developed a test method to estimate the VOC of these thin film materials, that method was adopted in 2011 by the ASTM Committee as ASTM D7767.

In 2012, South Coast AQMD Laboratory staff traveled to 3M headquarters in Minneapolis, MN to meet with a developer of ASTM D7767 observed the following limitations of the method:

1) The method provides only an estimation of the VOC content, a distinction that was confirmed in-person by the creator of the method during the 3M visit;
2) The VOC estimate is based on the measurement of the reactive components (i.e., acrylate monomers, oligomers, and blends), not of the fully formulated product which also includes the pigments and additives that are excluded so that the product can be tested at a thick enough film in order to accurately measure the weight loss for VOC quantification;
3) Supplier-specified cure condition, end-use film thickness, and specific photo-initiator are required to accurately perform the method; and
4) It is not a direct method for measuring volatiles from thin coatings, as the method was developed to help formulators identify and select lower VOC constituents during coating production.

ASTM D7767 also cannot be used for enforcement purposes. South Coast AQMD relies on laboratory testing of the fully formulated product collected in the field to determine if a product complies with VOC limits. The South Coast AQMD Laboratory cannot independently perform ASTM D7767 and have the confidence that the results accurately reflect the composition of a sample collected in the field. If South Coast AQMD compliance staff collected a sample of a thin-film energy curable product, the manufacturer would need to supply the raw materials and a photo-

initiator for South Coast AQMD Laboratory staff to accurately perform the method. ASTM D7767 offers no ability to confirm that the components supplied by the manufacturer are the actual constituents of the product collected in the field. South Coast AQMD staff have expressed concerned over the years that Method D7767 does not measure VOC content with sufficient accuracy to be used for compliance purposes. Further, the method does not directly measure the VOC content of fully formulated materials as they are used, and only measures the VOC content of the reactive components, which is not suitable for enforcement purposes.

PUBLIC PROCESS

The development of PAR 1106 and PAR 1107 has been conducted through a public process. Staff had a discussion with U.S. EPA and held a Public Consultation meeting on November 9, 2022. Proposed rule language was included in the presentation for the Public Consultation Meeting, which was released November 4, 2022, and the Initial Draft PAR 1106 and PAR 1107 were released November 9, 2022.

AFFECTED FACILITIES

Rule 1106 is applicable to any person who supplies, sells, offers for sale, markets, manufactures, blends, packages, repackages, possesses or distributes any Marine or Pleasure Craft Coating and any associated solvent used with a Marine or Pleasure Craft Coating for use within the South Coast AQMD jurisdiction, as well as any person who applies, stores at a worksite, or solicits the application of any Marine or Pleasure Craft Coating and any associated solvent used with a Marine or Pleasure Craft Coating within the South Coast AQMD jurisdiction.

Rule 1107 is applicable to all metal coatings operations except those performed on aerospace assembly, magnet wire, marine craft, motor vehicle, metal container, and coil coating operations. This rule does not apply to the coating of architectural components coated at the structure site or at a temporary unimproved location designated exclusively for the coating of structural components. Approximately 1,100 facilities are subject to existing Rule 1107.

CONTROL TECHNOLOGY

The proposed amendments do not include requirements for control technologies.

SUMMARY OF PROPOSAL

Proposed Amendments to Rule 1106

PAR1106 will remove the references to test method ASTM D7767 by deleting the definition for Energy Curable Coatings and the language in the paragraph (i)(1) exemption that refers to the test method. The revision does not change the exemption for coatings with a VOC content of 50 g/L or less under paragraph (i)(1).

In addition, PAR 1106 will remove two product categories, Elastomeric Adhesives and Metallic Heat Resistant Coating, as recommended by U.S. EPA as they are not listed in the 1996 U.S. EPA Marine Coatings CTG, and subject them to other appropriate categories as shown in Table 1. Elastomeric Adhesives should be subject to Rule 1168 – Adhesive and Sealant Applications under the category All Other Adhesives. Metallic Heat Resistant Coating will be subject to Heat Resistant Coating in PAR 1106.

Table 1. Comparison of VOC Limits for Current and Future Categories

Current Category	VOC Limit (g/L)	Rule	*New Category*	VOC Limit (g/L)
Elastomeric Adhesives	730	1168	*All Other Adhesives*	250
Metallic Heat Resistant Coating	530	1106	*Heat Resistant Coating*	420

Removing the category for an Elastomeric Adhesive from Rule 1106 helps clarify the rule as the applicability includes coatings and their associated solvents, but not adhesives. Rule 1168 includes several categories of sealants and adhesives for marine applications including Top and Trim Adhesives, Marine Deck Sealants and Marine Deck Sealant Primers. Products that formerly fell under the Elastomeric Adhesive category will have to comply with a lower VOC limit. Staff has identified Elastomeric Adhesives that comply with the Rule 1168 VOC limit. In addition, Rule 1168 includes a low-use exemption for facilities that use 55 gallons or less that could assist a facility using a Marine Elastomeric Adhesive that does not comply with the Rule 1168 VOC limit. Staff is not aware of any end user or Marine Elastomeric Adhesive manufacturer that will be impacted by this change and is not anticipating any VOC reduction.

The VOC limit for Metallic Heat Resistant Coatings will also be lower than the current limit. In this case, the VOC limit will be aligned with the U.S. EPA Marine Coatings CTG. The South Coast AQMD is in extreme non-attainment for ozone and VOC emissions are a precursor for ozone formation; therefore, VOC limits should never exceed the federal standards. Exception can be allowed for niche products that serve a very specific need provided there have very low sales volumes. In the case of Metallic Heat Resistant Coatings, staff identified coatings that comply with the 420 g/L VOC limit and has not identified a need for a higher VOC coating category. Staff is not aware of any end user or Metallic Heat Resistant Coating manufacturer that will be impacted by this VOC limit change and is not anticipating any VOC reductions.

Remove Definition for Energy Curable Coatings in paragraph (c)(9)

Paragraph (c)(9) defines Energy Curable Coatings and includes a reference to ASTM D7767. The term "Energy Curable Coatings" is only used in the portion of the paragraph (i)(1) exemption that staff is also proposing to delete. Staff is proposing to delete the definition as the term is not used anywhere else in the rule.

(c) Definitions

~~*(9) ENERGY CURABLE COATINGS are single-component reactive products that cure upon exposure to visible-light, ultra-violet light or to an electron beam. The VOC content of thin film Energy Curable Marine and Pleasure Craft Coatings may be determined by manufacturers using ASTM Test Method 7767-11 "Standard Test Method to Measure Volatiles from Radiation Curable Acrylate Monomers, Oligomers, and Blends and Thin Coatings Made from Them".*~~

Revise Exemption Provision Related to Energy Curable Coatings in paragraph (i)(1)

Paragraph (i)(1) provides an exemption for coatings containing 50 g/L VOC or less. Staff is proposing the following revision to remove the reference to ASTM D7767.

(i) Exemptions

With the exception of paragraphs (d)(6) and (d)(7), the provisions of this rule shall not apply to:

(1) Marine or pleasure craft coatings that have a VOC content of 50 g/L or less, or its equivalent, less water and exempt compounds, as applied~~, provided that for energy curable coatings, product formulation data and test results, determined by ASTM D7767-11, shall first be submitted to the Executive Officer by the manufacturer~~.

Remove Definition for Elastomeric Adhesive in paragraph (c)(8)

Paragraph (c)(8) defines Elastomeric Adhesives. Staff is proposing to delete the definition based on the U.S. EPA recommendation.

(c) Definitions

~~(8) ELASTOMERIC ADHESIVE is any adhesive containing natural or synthetic rubber.~~

Remove Definition for Metallic Heat Resistant Coating in paragraph (c)(25)

Paragraph (c)(25) defines Metallic Heat Resistant Coatings. Staff is proposing to delete the definition based on the U.S. EPA recommendation.

(c) Definitions

~~(25) METALLIC HEAT RESISTANT COATING is any coating that contains more than 5 grams of metal particles per liter of coating as applied and must withstand temperatures over 80 °C (176 °F).~~

Revise Table of Standards I in paragraph (d)(1)

Paragraph (d)(1) provides a table of standards for marine coating category VOC limits. Staff is proposing the following revisions based on the U.S. EPA recommendation.

(d) Requirements

(1) VOC Content of Marine Coatings

Except as otherwise provided in this rule, a person shall not apply a marine coating within the South Coast AQMD jurisdiction with a VOC content in excess of the following limits shown in the Table of Standards I that are expressed as grams of VOC per liter of coating, as applied, less water and exempt solvents:

TABLE OF STANDARDS I

MARINE COATING CATEGORY	VOC LIMITS Less water and exempt compounds Grams per Liter (g/L)	
	BAKED	AIR DRIED
	CURRENT LIMIT	CURRENT LIMIT
Antenna Coating		340
Antifoulant Coatings:		
Aluminum Substrates		560
Other Substrates		400
~~Elastomeric Adhesives (with 15%, by Weight, Natural or Synthetic Rubber)~~		~~730~~
Inorganic Zinc Coating		340
Low Activation Interior Coating		420
Mist Coating		610
Navigational Aids Coating		340
Nonskid Coating		340
Organic Zinc Coating		340
Pre-Treatment Wash Primer	420	420
Repair and Maintenance Thermoplastic Coating		340
Sealant for Wire-Sprayed Aluminum		610
Special Marking Coating		420
Specialty Coatings:		
Heat Resistant Coating	360	420
~~Metallic Heat Resistant Coating~~		~~530~~
High Temperature Coating		500
Tack Coating		610
Topcoats:		
Extreme High-Gloss Coating	420	490
High Gloss Coating	275	340
Undersea Weapons Systems Coating	275	340
Any Other Coating Type	275	340

Proposed Amendments to Rule 1107

PAR 1107 will remove the references to the ASTM test method D7767 by removing the definition for Energy Curable Coatings and subparagraph (e)(1)(C) for thin film energy curable coating VOC content determinization. The revisions will not impact other provisions of the rule.

Remove Definition for Energy Curable Coatings in paragraph (b)(15)

Paragraph (b)(15) defines Energy Curable Coatings and includes a reference to ASTM D7767. The term "Energy Curable Coatings" is only used in subparagraph (e)(1)(C), which staff is also proposing to delete. Staff is proposing to delete the definition as the term is not utilized anywhere else in the rule.

(b) Definitions

~~*(15) ENERGY CURABLE COATINGS are single-component reactive products that cure upon exposure to visible-light, ultra-violet light, or an electron beam. The VOC content of thin film energy curable coatings may be measured by manufacturers using ASTM D7767-11 (2018) – Standard Test Method to Measure Volatiles from Radiation Curable Acrylate Monomers, Oligomers, and Blends and Thin Coatings Made from Them.*~~

Remove subparagraph (e)(1)(C)

Staff is proposing to delete subparagraph (e)(1)(C) which references ASTM D7767 for thin film energy curable coating VOC content determinization.

(e) Methods of Analysis

All applicable methods of analysis shall be as cited in paragraphs (e)(1) through (e)(6), or any other applicable method approved in writing by the Executive Officer, United States Environmental Protection Agency (U.S. EPA), and the California Air Resources Board (CARB).

(1) Determination of VOC Content

~~*(C) Thin Film Energy Curable Coatings*~~

~~*The VOC content of thin film energy curable coatings may be measured by manufacturers using ASTM D7767-11 (2018) – Standard Test Method to Measure Volatiles from Radiation Curable Acrylate Monomers, Oligomers, and Blends and Thin Coatings Made from Them.*~~

EXPECTED EMISSIONS REDUCTIONS

Proposed Amended Rules 1106 and 1107 are not anticipated to result in emission reductions. Subjecting the Rule 1106 Elastomeric Adhesives and Metallic Heat Resistant Coating categories to other appropriate categories in Rule 1168 and Rule 1106, respectively, should not change the emission profile. There are products in the market that can meet the lower limits proposed and facilities can use higher-VOC adhesives pursuant to the Rule 1168 55-Gallon exemption in paragraph (e)(6).

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Pursuant to the California Environmental Quality Act (CEQA) Guidelines Sections 15002(k) and 15061, the proposed project (PAR 1106 and PAR 1107) is exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3). A Notice of Exemption has been prepared pursuant to CEQA Guidelines Section 15062 and if the proposed project is approved, the Notice of Exemption will be filed for posting with the county clerks of Los Angeles, Orange, Riverside, and San Bernardino counties, and with the State Clearinghouse of the Governor's Office of Planning and Research.

SOCIOECONOMIC ANALYSIS

The proposed amendments are administrative in nature and are not expected to have socioeconomic impacts. Staff is not aware of any end user, Marine Elastomeric Adhesive manufacturer, or Metallic Heat Resistant Coating manufacturer that will be impacted by this change and is not anticipating any VOC reduction.

DRAFT FINDINGS UNDER THE HEALTH AND SAFETY CODE 40727

Before adopting, amending, or repealing a rule, the Health and Safety Code requires South Coast AQMD to adopt written findings of necessity, authority, clarity, consistency, non-duplication, and reference, as defined in Health and Safety Code Section 40727. The draft findings are as follows:

Necessity – PAR 1106 and PAR 1107 are necessary to: 1) satisfy the requirements of CAA, and 2) address U.S. EPA proposed SIP disapproval in a timely manner to avoid possible sanctions by the federal government and other consequences under CAA.

Authority – The South Coast AQMD Governing Board obtains its authority to adopt, amend, or repeal rules and regulations from Health and Safety Code Sections 39002, 40000, 40001, 40440, 40702, 40725 through 40728, 41508, and 41700.

Clarity – The South Coast AQMD Governing Board has determined that PAR 1106 and PAR 1107 are written and displayed so that the meaning can be easily understood by persons directly affected by them.

Consistency – The South Coast AQMD Governing Board has determined that PAR 1106 and PAR 1107 are in harmony with, and not in conflict with or contradictory to, existing statutes, court decisions, federal or state regulations.

Non-Duplication – The South Coast AQMD Governing Board has determined that PAR 1106 and PAR 1107 do not impose the same requirement as any existing state or federal regulation, and the proposed amendments are necessary and proper to execute the powers and duties granted to, and imposed upon, the South Coast AQMD.

Reference – In adopting this regulation, the South Coast AQMD Governing Board references the following statutes, which the South Coast AQMD hereby implements, interprets, enforces, or makes specific: Health and Safety Code Section 40440.

COMPARATIVE ANALYSIS

Health and Safety Code Section 40727.2(g) is not applicable to PAR 1107 because the proposed amended rule does not impose a new emission limit or standard, make an existing emission limit or standard more stringent, or impose new or more stringent monitoring, reporting, or recordkeeping requirements and therefore, a comparative analysis is not required. PAR 1106 will impose more stringent emission standards for Metallic Heat Resistant Coating and Elastomeric Adhesives; therefore, staff conducted the following comparative analysis pursuant to California Health and Safety Code Section 40727.2 (g).

PAR1106 is not in conflict with the current National Emission Standards for Hazardous Air Pollutants (NESHAP) for Shipbuilding and Ship Repair Operations (Surface Coating), 40 CFR Part 63, dated June 18, 1996, or the current U.S. EPA Marine Coating CTG, dated August 27, 1996. PAR 1106 will remove the category for Metallic Heat Resistant Coatings, which has a VOC

limit of 530 g/L, and subject those coatings to the Heat Resistant Coating VOC limit of 420 g/L to be consistent with U.S. EPA Marine Coatings CTG. PAR 1106 will remove the category for Elastomeric Adhesives, which has a VOC limit of 730 g/L, and those adhesives will be subject to the Rule 1168 category for All Other Adhesives with a VOC limit of 250 g/L because the U.S. EPA Marine Coatings CTG does not include a category for Elastomeric Adhesives.

The NESHAP for Shipbuilding and Ship Repair Operations (Surface Coating) sets forth Hazardous Air Pollutants ("HAP") emission limits for major source facilities that apply coatings used in volumes of 200 liters (52.8 gallons) or more. Affected sources under this NESHAP are Shipbuilding and Ship Repair Operations (Surface Coating) that are major sources under federal law or are coating operations located within the confines of a federal major source.

U.S. EPA Marine Coating CTG is intended to provide state and local air pollution authorities' information to assist them in determining RACT for VOCs for Shipbuilding and Ship Repair Operations (Surface Coating).

The proposed amendments to Rule 1106 are not expected to reduce or increase VOC emissions. Current Rule 1106 and Proposed Amended Rule 1106 do not regulate Hazardous Air Pollutants (HAP) emissions directly; therefore, the existing as well as the proposed VOC limits of Rule 1106 are not in conflict with federal regulations.

Table 2 has been prepared to show comparisons between South Coast AQMD Proposed Amended Rule 1106, the U.S. EPA CTG, and the NESHAP regulation.

Table 2. Comparative Analysis

Category	South Coast AQMD PAR 1106 – Marine and Pleasure Craft Coatings	1996 U.S. EPA Marine Coating CTG	U.S. EPA NESHAP 40 CFR Part 63 – NESHAP for HAP for Shipbuilding and Ship Repair Operations (Surface Coating)
Purpose	Reduces emissions of VOCs from Marine & Pleasure Craft Coatings.	Provides state and local air pollution authorities' information to assist them in determining RACT, to control VOCs from surface coating operations in the shipbuilding and ship repair industry.	Establishes National Emission Standards for Hazardous Air Pollutants for shipbuilding and ship repair (surface coating) facilities.
Applicability	Applies to local Marine and Pleasure Craft Coatings.	Applies to facilities that perform surface coating operations in the shipbuilding and ship repair industry. Does not include pleasure craft coating operations.	Applies to shipbuilding and ship repair (surface coating) operations at any facility that is a major source. Does not include pleasure craft coating operations.
Averaging Provisions	None.	None.	None.
Units	Mass/Volume: Grams/Liter (less water and exempt compounds).	Mass/Volume: Grams/Liter (minus water and exempt compounds).	Mass/Volume: Grams/Liter (minus water and exempt compounds).
Requirements	VOC Limits for Marine Coatings: Antenna Coating: 340 Antifoulant Coatings: Aluminum Substrates: 560 Other Substrates: 400 Inorganic Zinc Coating: 340 Low Activation Interior Coating: 420 Mist Coating: 610 Navigational Aids Coating: 340 Nonskid Coating: 340 Organic Zinc Coating: 340 Pre-Treatment Wash Primer: 420	VOC Limits for Marine Coatings: General use: 340 Specialty Air flask: 340 Antenna: 530 Antifoulant: 400 Heat resistant: 420 High-gloss: 420 High-temperature: 500 Inorganic zinc high-build: 340 Military exterior: 340 Mist: 610 Navigational aids: 550	VOC Limits for Marine Coatings: General use: 340 Specialty Air flask: 340 Antenna: 530 Antifoulant: 400 Heat resistant: 420 High-gloss: 420 High-temperature: 500 Inorganic zinc high-build: 340 Military exterior: 340 Mist: 610

Category	South Coast AQMD PAR 1106 – Marine and Pleasure Craft Coatings	1996 U.S. EPA Marine Coating CTG	U.S. EPA NESHAP 40 CFR Part 63 – NESHAP for HAP for Shipbuilding and Ship Repair Operations (Surface Coating)
	Repair and Maint. Thermoplastic Coating: 340 Sealant for Wire-Sprayed Aluminum: 610 Special Marking Coating: 420 Specialty Coatings: Heat Resistant Coating: 360 (baked), 420 (air dried) High Temperature Coating: 500 Tack Coating: 610 Topcoats: Extreme High-Gloss Coating: 420 (baked), 490 (air dried) High Gloss Coating: 275 (baked), 340 (air dried) Undersea Weapons Systems Coating: 275 (baked), 340 (air dried) Any Other Coating Type: 275 (baked), 340 (air dried)	Nonskid: 340 Nuclear: 420 Organic zinc: 360 Pretreatment wash primer: 780 Repair and maint. of thermoplastics: 550 Rubber camouflage: 340 Sealant for thermal spray aluminum: 610 Special marking: 490 Specialty interior: 340 Tack coat: 610 Undersea weapons systems: 340 Weld-through precon. primer: 650	Navigational aids: 550 Nonskid: 340 Nuclear: 420 Organic zinc: 360 Pretreatment wash primer: 780 Repair and maint. of thermoplastics: 550 Rubber camouflage: 340 Sealant for thermal spray aluminum: 610 Special marking: 490 Specialty interior: 340 Tack coat: 610 Undersea weapons systems: 340 Weld-through precon. primer: 650
Operating Parameters	Has HVLP type transfer efficiency requirements for coating application equipment.	No HVLP type transfer efficiency requirements for application equipment.	Does not include the use of HVLP type transfer efficiency for application equipment.
Method to Determine VOC	U.S. EPA Method 24, or South Coast AQMD Method 304, or South Coast AQMD Method 313.	Does not mention U.S. EPA Methods for determining VOC.	U.S. EPA Method 24 of 40 CFR part 60, appendix A.
Capture Efficiency	None.	Does not mention U.S. EPA Methods for capture efficiency.	Does not mention U.S. EPA Methods for capture efficiency.

Category	South Coast AQMD PAR 1106 – Marine and Pleasure Craft Coatings	1996 U.S. EPA Marine Coating CTG	U.S. EPA NESHAP 40 CFR Part 63 – NESHAP for HAP for Shipbuilding and Ship Repair Operations (Surface Coating)
Control Device Efficiency	None.	Does not mention U.S. EPA Methods for control device efficiency.	Does not mention U.S. EPA Methods for control device efficiency.
Work Practices	Defers to Rule 1171 for storage and disposal of VOC containing materials.	Does not contain any work practices recommendations.	VOC containing containers to be kept closed when not in use.
			Minimize spills of VOC containing materials.
Monitoring	None.	None.	None.
Reporting	None.	No mention for reporting.	No mention for reporting.
Recordkeeping	Defers recordkeeping to Rule 109.	No mention for recordkeeping.	Comprehensive records required annually to support compliance.
Other Elements	Prohibition of possession, specification and sale for non-compliant marine and pleasure craft coatings.	No mention of a prohibition of sale requirement.	No mention of a prohibition of sale requirement.
	Offers five exemptions: Marine or pleasure craft coatings with 50 g/L VOC or less, marine coatings applied to interior surfaces of potable water containers, touch-up coatings, aerosol coating products, marine coatings used on vessels intended to be submerged at least 500 feet below the water surface.	No transfer efficiency requirements in the CTG.	Offers two exemptions: annual usage of less than 200 liters for an individual coating and aerosol containers.

COST-EFFECTIVENESS ANALYSIS

Health and Safety Code Section 40920.6 requires a cost-effectiveness analysis when establishing BARCT requirements. PAR 1106 and 1107 do not establish or impose any BARCT requirements; therefore, a cost effectiveness analysis was not conducted. The proposed amendments are administrative in nature and are not expected to have socioeconomic impacts.

INCREMENTAL COST-EFFECTIVENESS ANALYSIS

Health and Safety Code Section 40920.6(a)(3) states that an incremental cost-effectiveness assessment should be performed on identified potential control options that meet air quality objectives. PAR 1106 and PAR 1107 are not establishing or imposing any BARCT requirements that require control options; therefore, an incremental cost effectiveness analysis was not conducted.

APPENDIX A: RESPONSE TO PUBLIC COMMENTS

South Coast AQMD held a Public Consultation on November 9, 2022, via Zoom video conference. Comments were received during the Public Consultation Meeting. One comment letter was received after the comment period that ended on November 23, 2022.

The following responses summarize the key comments received during the Public Consultation:

Comment 1: Clarification for the timeline for U.S. EPA to finalize the disapproval.

Response 1: U.S. EPA has not indicated a timeline for finalizing the disapproval; however, once the disapproval is finalized, South Coast AQMD will face the possibility of sanctions by the federal government and other consequences under the CAA if the identified rule deficiencies are not corrected and approved by U.S. EPA. Offset sanctions would be triggered 18 months after the effective date of a final disapproval and highway funding sanctions would be triggered six months after the offset sanctions are imposed. CAA would also require U.S. EPA to promulgate a Federal Implementation Plan within 24 months of the disapproval effective date. Sanctions will not be imposed if U.S. EPA determines that a subsequent SIP submission corrects the deficiencies before the applicable deadline.

Comment 2: Clarification for the implication of removing Elastomeric Adhesives from Rule 1106 per U.S. EPA recommendation.

Response 2: Elastomeric Adhesives should be subject to Rule 1168 – Adhesive and Sealant Applications under the category All Other Adhesives. Rule 1168 includes several categories of sealants and adhesives for marine applications including Top and Trim Adhesives, Marine Deck Sealants and Marine Deck Sealant Primers. Products that formerly fell under the Elastomeric Adhesive category will have to comply with a lower VOC limit; however, Rule 1168 includes a low-use exemption for facilities that use 55 gallons or less that could assist a facility using a Marine Elastomeric Adhesive that does not comply with the Rule 1168 VOC limit.

Comment Letter #1:

November 29th, 2022

Ms. Heather Farr
South Coast Air Quality Management District
hfarr@aqmd.gov

Re: Public Comments Marine Coatings (Rule 1106) and Metal Coatings (Rule 1107)--OPPOSE

Dear Ms. Farr:

RadTech International is the premier trade association in North America for Ultraviolet/Electron Beam/Light Emitting Diode (UV/EB/LED) technology. We speak on behalf of our over 800 members who are involved in a myriad of industry sectors ranging from printing and packaging to nail polish. UV/EB processes are all electric, eliminating the need for add-on control devices thereby preventing emissions of criteria pollutants (Nitrogen Oxides) and Greenhouse Gases. The materials are not formulated with conventional solvents and therefore the emissions of Volatile Organic Contaminants (VOCs) are negligible. The very low VOC content of these materials has rendered the traditional VOC test method (EPA Method 24) unsuitable as the VOC content is within the error margin of the test (plus or minus 20 grams/liter). Unfortunately, we cannot support the staff proposal for Rules 1106 and 1107.

Rule 1106 (c)(9) & Rule 1107 (b)(15)—Deletion of Definition of Energy Curable Materials

The staff contends that the definition of energy curable materials is being removed to avoid disapproval by the EPA. This decision is premature because the EPA has not issued a disapproval but rather has asked for public comments on a proposed disapproval. Our association and member companies submitted formal comments to EPA on this matter and we are hopeful that we can reach a mutually acceptable solution. Thus, the staff proposal is throwing the cart before the horse by assuming that the EPA will not heed our public comments. Deleting a definition of energy curable materials will be detrimental to the industry. It will bring uncertainty because the rule is silent on including these products as potential compliance options. In contrast, competing technologies enjoy detailed definitions. This approach is inequitable and puts energy curable technology at a competitive disadvantage.

Staff has acknowledged (Rule 1168 Test Method Guidance document; Page 4) that:

"…at this time, there is no method that can be used for enforcement purposes."

The Guidance document also refers to ASTM D7767-11 "as a tool for manufacturers to determine the VOC content of thin film energy curable products" Our industry developed ASTM D7767-11 because both the EPA and the district told us they had no way of measuring the VOC content from our materials as it was too low to measure. Neither the EPA or the district have provided any other alternatives to the test method and thus, eliminating it as an option puts our members at risk of penalties and fines by regulators, including by the district. The EPA has long recognized our industry as pollution prevention dating back to 1997 when the EPA Administrator testified to a Congressional committee. Our materials meet EPA's Lowest Achievable Emission Rate and the district's Best Available Control Technology. Our industry is strongly opposed to the proposal because it is unfair to take away the agreed upon test method and leave us in regulatory limbo.

The EPA approved the method in 2015 as part of the Graphic Arts rule so we do not understand the draconian proposal to reverse course without proposing an alternative or articulating any reason why the method is not suitable. We would hope that the district joins arms with our industry to gain EPA approval of the method rather than prematurely concluding that the EPA will not heed the public comments submitted objecting to the proposed disapproval. UV/EB/LED processes can provide additional emission reductions but putting a hurdle in our path will be detrimental to our Southern California businesses and impede voluntary emission reductions above and beyond those mandates by district rules.

The District should retain the definition of Energy Curable materials. The EPA has never questioned the definition of energy curable materials itself and limited the issue to the test method. By eliminating the definition altogether, the district is going far beyond what EPA is suggesting.

We request that:

1) The rule adoption be delayed to allow EPA review of our comments
2) Staff join our efforts to obtain EPA approval of ASTM D7767-11 from EPA

Sincerely,

Rita M. Loof

Director, Environmental Affairs

Response to Comment Letter #1:

Staff appreciates the participation of RadTech International in the rule development process.

South Coast AQMD staff agrees that EPA Method 24 is not an appropriate method for thin film UV/EB/LED materials, which are applied at such a thin film the weight of the materials cannot be accurately measured.

Staff proposes to remove the definition for Energy Curable Coatings in PAR 1106 and PAR 1107 to remove the reference to test method ASTM D7767. Removing the definition does not impose an impact to the rule compliance of this coating type under PAR 1106 and PAR 1107. Energy Curable Coatings are not listed as a coating category in the Table of Standards in either rule. The VOC limits are dependent on the type of coating or the type of substrate to which they are applied, e.g., topcoats, primer, wood coatings, and sometimes on the curing mechanism of the coatings, e.g., air-dried coatings, or baked coatings in Rule 1107. Neither rule contains VOC limits that are specific to Energy Curable Coatings. Once the reference to Energy Curable Coatings is removed from the Exemption subdivision of Rule 1106 and the Methods of Analysis subdivision in Rule 1107, the term "Energy Curable Coatings" will not appear in either rule. To avoid confusion, staff has a policy not to include defined terms that are not used anywhere in the rule language. Staff believes removing the definition will provide clarity.

Staff is proposing to remove the reference to the test method because U.S. EPA proposed a limited SIP disapproval for Rule 1106 and Rule 1107 on August 22, 2022. U.S. EPA had originally proposed approving the rules, but issued the proposed limited disapproval on the basis that it had recently been brought to their attention that the rules referenced ~~The limited disapproval cited the deficiency of referencing~~ ASTM D7767.~~,~~ That method~~which~~ is not a U.S. EPA-approved test method and cannot be used to enforce a SIP approved rule. ~~The main concern was the inclusion of ASTM D7767 in Rules 1106 and 1107.~~

South Coast AQMD Laboratory staff met with ASTM D7767 developer (3M, Minneapolis, MN) and confirmed that this method is not applicable for compliance verification purposes. Nevertheless, staff had included a reference to this test method in Rule 1106 based on a request to do so by the commenter. Staff further officially requested that U.S. EPA provide guidance regarding appropriate test methods for UV/EB/LED products. While U.S. EPA originally proposed to approve Rule 1106, they have subsequently proposed a limited disapproval of the rule as it has now been brought to their attention that ASTM D7767 is not a U.S. EPA-approved test method. Staff discussed this issue with U.S. EPA regarding the proposed disapproval and shares U.S. EPA's concerns about the enforceability of this test method. While the commenter notes that U.S. EPA previously issued a final approval for a rule containing a reference to ASTM D7767 in 2015 (Graphic Arts rule), this is not equivalent to U.S. EPA approval of the method, and instead appears to be the case that U.S. EPA failed to realize that the rule contained a reference to method that was not EPA-approved. Given this context it is likely that U.S. EPA will proceed with finalizing the limited disapproval unless the reference to ASTM D7767 is removed.

South Coast AQMD relies on laboratory testing of the fully formulated product collected in the field to determine if a product complies with VOC limits. The South Coast AQMD Laboratory cannot independently perform ASTM D7767 and have the confidence that the results accurately reflect the composition of a sample collected in the field. If South Coast AQMD compliance staff

collected a sample of a thin-film energy curable product, the manufacturer would need to supply the raw materials and a photo-initiator for South Coast AQMD Laboratory staff to perform the method. ASTM D7767 offers no ability to confirm that the components supplied by the manufacturer are the actual constituents of the product collected in the field.

South Coast AQMD staff have expressed concerned over the years that Method D7767 does not measure VOC content with sufficient accuracy to be used for compliance purposes. Further, the method does not directly measure the VOC content of fully formulated materials as they are used, and only measures the VOC content of the reactive components, which is not suitable for enforcement purposes.

When there is no appropriate test method, South Coast AQMD relies on the manufacturer's formulation data to confirm the VOC content of Regulated Products. For UV/EB/LED products such as Energy Curable Thin Film products, formulation data can be used to determine VOC content for the purposes of demonstrating compliance with a VOC limit or demonstrating the material qualifies for the low-VOC exemption. Manufacturers can, and often do, rely on the formulation data to calculate the VOC of their products. Using formulation data to calculate the VOC content of products is an easier and less expensive approach for manufacturers to determine if their products will comply with rule limits. Staff does not anticipate any adverse impact to the UV/EB/LED industry based on this proposed change to Rules 1106 and 1107.

Staff is proposing these amendments now, even though U.S. EPA partial disapproval has not been finalized, due to the severity of the potential sanctions if the deficiency is not corrected and approved, and the likelihood that U.S. EPA will proceed with a final disapproval. If U.S. EPA issues a final SIP disapproval, South Coast AQMD faces the possibility of sanctions by the federal government and other consequences under the federal CAA. Offset sanctions would be triggered 18 months after the effective date of a final disapproval, and the highway funding sanction would be triggered six months after the offset sanction is imposed. Staff proposes to simultaneously amend both rules to address the deficiency for the disapproval and incorporate U.S. EPA comments. In the case that U.S. EPA does approve the test method at some point in the future, the rules can be revisited.

ATTACHMENT I

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SUBJECT: **NOTICE OF EXEMPTION FROM THE CALIFORNIA ENVIRONMENTAL QUALITY ACT**

PROJECT TITLE: **PROPOSED AMENDED RULE 1106 – MARINE AND PLEASURE CRAFT COATINGS, AND PROPOSED AMENDED RULE 1107 – COATING OF METAL PARTS AND PRODUCTS**

Pursuant to the California Environmental Quality Act (CEQA) Guidelines, the South Coast Air Quality Management District (South Coast AQMD), as Lead Agency, has prepared a Notice of Exemption pursuant to CEQA Guidelines Section 15062 – Notice of Exemption for the project identified above.

If the proposed project is approved, the Notice of Exemption will be filed for posting with the county clerks of Los Angeles, Orange, Riverside, and San Bernardino Counties. The Notice of Exemption will also be electronically filed with the State Clearinghouse of the Governor's Office of Planning and Research for posting on their CEQAnet Web Portal which may be accessed via the following weblink: https://ceqanet.opr.ca.gov/search/recent. In addition, the Notice of Exemption will be electronically posted on the South Coast AQMD's webpage which can be accessed via the following weblink: http://www.aqmd.gov/nav/about/public-notices/ceqa-notices/notices-of-exemption/noe---year-2023.

NOTICE OF EXEMPTION FROM THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

To:	County Clerks for the Counties of Los Angeles, Orange, Riverside and San Bernardino; and Governor's Office of Planning and Research – State Clearinghouse	**From:**	South Coast Air Quality Management District 21865 Copley Drive Diamond Bar, CA 91765

Project Title: Proposed Amended Rule 1106 – Marine and Pleasure Craft Coatings, and Proposed Amended Rule 1107 – Coating of Metal Parts and Products

Project Location: The proposed project is located within the South Coast Air Quality Management District's (South Coast AQMD) jurisdiction, which includes the four-county South Coast Air Basin (all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties), and the Riverside County portion of the Salton Sea Air Basin and the non-Palo Verde, Riverside County portion of the Mojave Desert Air Basin.

Description of Nature, Purpose, and Beneficiaries of Project: Proposed Amended Rule 1106 (PAR 1106) and Proposed Amended Rule 1107 (PAR 1107) have been developed to address the United States Environmental Protection Agency (U.S. EPA) proposed limited disapproval of the State Implementation Plan (SIP) for Rules 1106 and 1107 citing a deficiency from referencing ASTM International D7767-11 "Standard Test Method to Measure Volatiles from Radiation Curable Acrylate Monomers, Oligomers and Blends and Thin Coatings Made from Them" (ASTM D7767). To remedy this issue, PAR 1106 will remove the references to ASTM D7767 by deleting the definition of Energy Curable Coatings and removing the reference to this test method in the low-VOC coating exemption in paragraph (i)(1). PAR 1106 will also delete two product categories and their corresponding VOC limits, Elastomeric Adhesives and Metallic Heat Resistant Coating, because they are not included in the U.S. EPA 1996 Control Techniques Guidelines. PAR 1107 will remove the references to ASTM D7767 by deleting the definition of Energy Curable Coatings and removing the reference to this test method in the Methods of Analysis: Determination of VOC Content: Thin Film Energy Curable Coatings subparagraph (e)(1)(C), which includes the test method used to determine the VOC content of regulated coatings. The benefits of the proposed project provide clarifications which will remedy the SIP deficiency and improve the enforceability of both rules. Implementation of the proposed project will not result in emission reductions.

Public Agency Approving Project:	**Agency Carrying Out Project:**
South Coast Air Quality Management District	South Coast Air Quality Management District

Exempt Status:
CEQA Guidelines Section 15061(b)(3) – Common Sense Exemption

Reasons why project is exempt: South Coast AQMD, as Lead Agency, has reviewed the proposed project (PAR 1106 and PAR 1107) pursuant to: 1) CEQA Guidelines Section 15002(k) – General Concepts, the three-step process for deciding which document to prepare for a project subject to CEQA; and 2) CEQA Guidelines Section 15061 – Review for Exemption, procedures for determining if a project is exempt from CEQA. Because the proposed project is comprised of administrative clarifications without requiring physical modifications, it can be seen with certainty that implementing the proposed project would not cause a significant adverse effect on the environment. Therefore, the proposed project is exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3) – Common Sense Exemption.

Date When Project Will Be Considered for Approval (subject to change):
South Coast AQMD Governing Board Public Hearing: January 6, 2023

CEQA Contact Person:	**Phone Number:**	**Email:**	**Fax:**
Sina Taghvaee, Ph.D.	(909) 396-2192	staghvaee@aqmd.gov	(909) 396-3982
Rules Contact Person:	**Phone Number:**	**Email:**	**Fax:**
Emily Yen	(909) 396-3206	EYen@aqmd.gov	(909) 396-3982

Date Received for Filing: _____ **Signature:** *(Signed and Dated Upon Board Approval)*

Barbara Radlein
Program Supervisor, CEQA
Planning, Rule Development, and Implementation

Proposed Amended Rule 1106 – Marine and Pleasure Craft Coatings

Proposed Amended Rule 1107 – Coating of Metal Parts and Products

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Board Meeting

January 6, 2023

Attachment J

Image Courtesy: Pexels

Background

Rule 1106 was adopted in 1988, last amended in 2019

- Applies to marine and pleasure craft coatings

Rule 1107 was adopted in 1979, last amended in 2020

- Applies to metal coating operations

Proposed Amended Rules 1106 and 1107

- Addresses U.S. EPA's proposed limited disapproval of rules

Public Process

- Internal meetings, meeting with U.S. EPA
- Public Consultation on November 9, 2022
- Stationary Source Committee on November 18, 2022

U.S. EPA Proposed Disapproval

On August 22, 2022, U.S. EPA proposed a limited SIP disapproval for Rules 1106 & 1107, citing the deficiency of referencing ASTM D7767

U.S. EPA also recommends removing two product categories from Rule 1106 as they are not listed in the 1996 Marine Coatings Control Technology Guidelines (CTG)

- Elastomeric Adhesives
- Metallic Heat Resistant Coating

Regulated products that were subject to those categories will be subject to other appropriate categories

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R09–OAR–2022–0373; FRL–9765–01–R9]

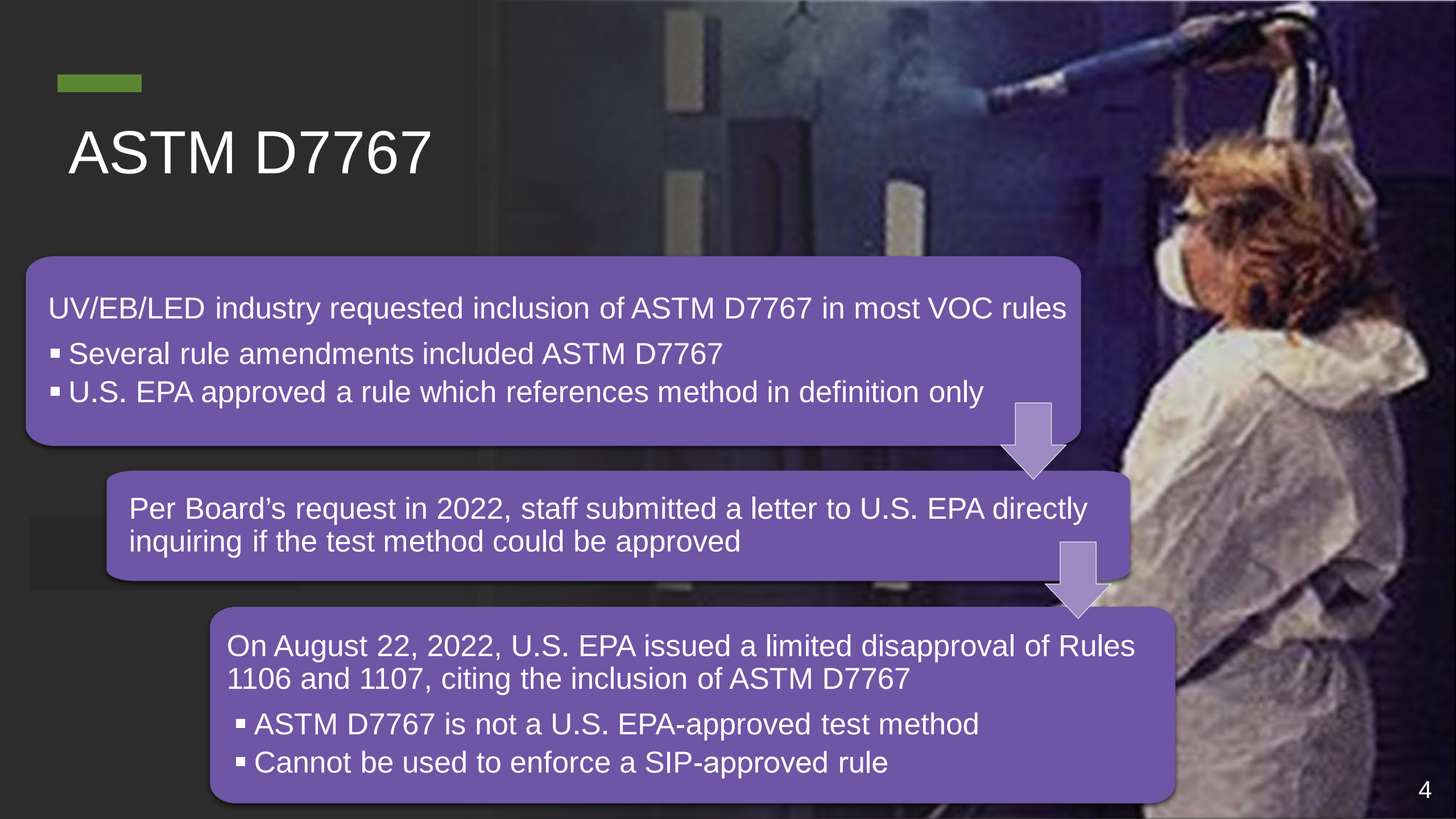
Air Plan Revisions; California; South Coast Air Quality Management District

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule; partial withdrawal of proposed rule; withdrawal of proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing a limited approval and limited disapproval of two revised rules and an approval of a rule recission to the South Coast Air Quality Management District (SCAQMD) portion of the California State Implementation Plan (SIP). These revisions concern emissions of volatile organic compounds (VOCs) from marine and pleasure craft coating operations and the coating of metals. The EPA previously proposed to fully approve these SIP revisions on the grounds that they satisfied the relevant requirements under the Clean Air Act (CAA or the Act). After the comment periods, the EPA identified a deficiency in the submittals that warrants a limited disapproval. Therefore, we are withdrawing our previously proposed approvals of these SIP revisions as they

ASTM D7767



UV/EB/LED industry requested inclusion of ASTM D7767 in most VOC rules

- Several rule amendments included ASTM D7767
- U.S. EPA approved a rule which references method in definition only

Per Board's request in 2022, staff submitted a letter to U.S. EPA directly inquiring if the test method could be approved

On August 22, 2022, U.S. EPA issued a limited disapproval of Rules 1106 and 1107, citing the inclusion of ASTM D7767

- ASTM D7767 is not a U.S. EPA-approved test method
- Cannot be used to enforce a SIP-approved rule

Proposed Amended Rules 1106 and 1107

Remove definition of Energy Curable Coatings which references ASTM D7767

Remove ASTM D7767 from:

- Low-VOC Exemption in Rule 1106
- Methods of Analysis in Rule 1107

PAR 1106 – Remove Two Product Categories

- Two product categories will be removed to align with U.S. EPA CTG and will be subject to the following:

“Elastomeric Adhesives”	Rule 1168 - Adhesive and Sealant Applications, "All Other Adhesives," VOC limit of 250 g/L
“Metallic Heat Resistant Coating”	Rule 1106, “Heat Resistant Coating," VOC limit of 420 g/L

- Internet search with manufacturer confirmation demonstrates there are Elastomeric Adhesive and Metallic Heat Resistant Coating products that comply with the lower limits
- Rule 1168 includes low-use exemption for facilities that use 55 gallons or less

Key Remaining Issue

Concern:

- Impact to UV/EB/LED industry by removing ASTM D7767 test method reference

Staff response:

- Manufacturers can, and often do, rely on formulation data to calculate the VOC of regulated products
- Using formulation data to calculate the VOC of products is an easier and less expensive approach for manufacturers to determine if their products will comply with rule limits
- Staff is not aware of any manufacturer using this method

Staff Recommendations

Adopt Resolution:

- Determining that PAR 1106 and 1107 are exempt from the requirements of the California Environmental Quality Act; and
- Amending Rule 1106 and Rule 1107