Proposed Amended Rule 1106: Marine and Pleasure Craft Coatings &

Proposed Amended Rule 1107: Coating of Metal Parts and Products

Public Consultation

November 9, 2022, 1:00 PM (PDT)

Join zoom meeting:

https://scaqmd.zoom.us/j/99908122699

Meeting ID: 999 0812 2699

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Agenda

- Background
- U.S. EPA Proposed Disapproval
- Rule Approach
- Public Process
- Proposed Amendments
- Key Concerns
- Next Steps

Background on Rule 1106

- Purpose is to reduce volatile organic compound (VOC) emissions from marine and pleasure craft coatings
- Adopted in November 1988; amended 8 times
- Last amendment in May 2019 included test method for energy curable coatings: **ASTM D7767–11 (2018)**
  - *"Standard Test Method to Measure Volatiles from Radiation Curable Acrylate Monomers, Oligomers and Blends and Thin Coatings Made from Them"*
  - Allowed test results in conjunction with formulation data to determine VOC content for purposes of qualifying exemption for coatings with VOC content of 50 g/L or less

Background on Rule 1107

- Purpose is to reduce VOC emissions from metal coating operations
- Adopted in June 1979; amended 18 times
- Last amendment in February 2020
  - Added definition for energy curable coatings
  - Added ASTM D7767-11 test method to Methods of Analysis subdivision
    - Subdivision includes test methods that can be used to determine VOC content of regulated coatings

Background on State Implementation Plan (SIP)

South Coast AQMD exceeds National Ambient Air Quality Standards (NAAQS) and is therefore 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)
- SIPs are used to demonstrate how the region will meet standards

If the U.S. EPA issues a final SIP disapproval, the District faces the possibility of sanctions by the federal government and other consequences under CAA

- CAA would require U.S. EPA to promulgate a federal implementation plan within 24 months unless U.S. EPA approves subsequent SIP revisions that correct the deficiencies identified in the final U.S. EPA approval
- Offset sanctions triggered 18 months after the effective date of a final disapproval
- Highway funding sanction six months after the offset sanction is imposed

A sanction will not be imposed if the U.S. EPA determines that a subsequent SIP submission corrects the deficiencies before the applicable deadline

U.S. EPA Proposed Disapproval of 1106 & 1107

On August 22, 2022, U.S. EPA proposed a partial SIP disapproval for Rules 1106 & 1107, citing the deficiency of referencing ASTM D7767-11

- ASTM D7767-11 is not an U.S. EPA approved test method; and
- Cannot be used to enforce a SIP approved rule

U.S. EPA also recommended removing the following two product categories from Rule 1106 for improvement, as those are not listed in the 1996 Marine Coatings Control Technology Guidelines (CTG)

- Elastomeric Adhesives
- Metallic Heat Resistant Coating

Rule Approach

Staff proposes to simultaneously amend both rules:

- Proposed Amended Rule 1106 (PAR 1106)
- Proposed Amended Rule 1107 (PAR 1107)

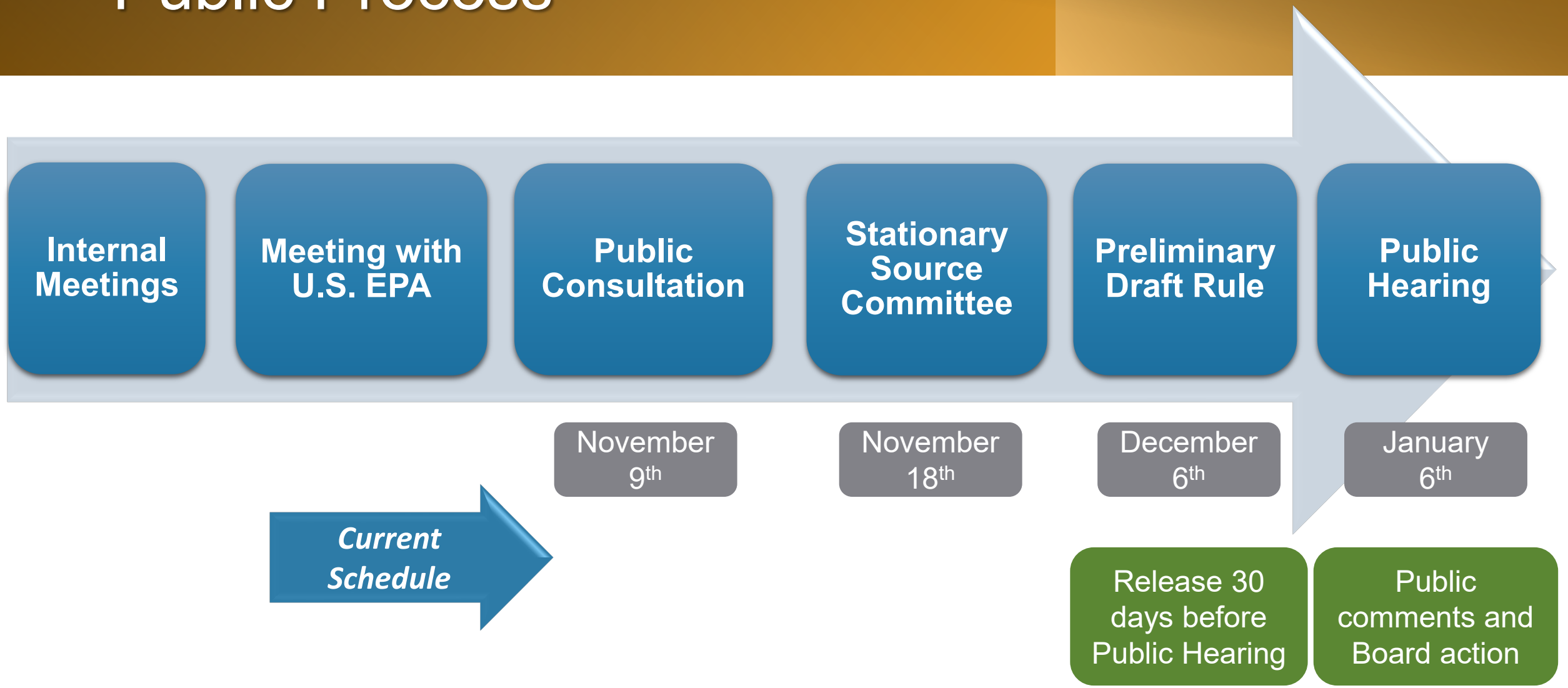
Objective of rule amendments:

- Address the deficiency for the disapproval and incorporate U.S. EPA comments

U.S. EPA is in the process of finalizing the disapproval

- Public comment period for the draft disapproval ended on September 21, 2022

Public Process



Proposed Amendments

PAR 1106 – Remove Test Method ASTM D7767–11

- **Energy Curable Coatings Definition (c)(9):** Remove definition as it refers to the ASTM D7767–11 test method
  - Removing full definition as it is only used in Exemption (i)(1), part of which is also being removed
- **Energy Curable Coatings Exemption (i)(1):** Remove part of exemption referring to ASTM D7767–11 test method

~~(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".~~

(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~~.

PAR 1106 – Remove Two Product Categories

- U.S. EPA recommends removal of the definitions and standards for the following product categories to align with U.S. EPA 1996 Marine Coatings CTG:
  - “Elastomeric Adhesives”
  - “Metallic Heat Resistant Coating”

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

~~(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).~~

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

PAR 1106 – Remove Two Product Categories – Cont.

Regulated products that were subject to the categories being proposed for deletions will be subject to the following:

"Elastomeric Adhesives" should be subject to:

- Rule 1168 – Adhesive and Sealant Applications, category "All Other Adhesives," VOC limit of 250 g/L

"Metallic Heat Resistant Coating" will be subject to:

- Rule 1106, category "Heat Resistant Coating," VOC limit of 420 g/L, aligning with the U.S. EPA 1996 CTG

Internet search demonstrates that there are products in these categories that can comply with these limits

PAR 1107 – Remove Test Method ASTM D7767–11

- **Energy Curing Coatings Definition (b)(15):** Remove definition as it refers to the ASTM D7767–11 test method
  - Removing full definition as it is only used in Methods of Analysis (e)(1)(c), which is also being removed

~~(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.~~

- **Methods of Analysis: Determination of VOC Content: Thin Film Energy Curable (e)(1)(C):** Remove section as it refers to the ASTM D7767–11 test method

~~(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.~~

Key Concerns

Concern:

- Impact to UV/EB/LED industry by removing ASTM D7767-11 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 cheaper approach for manufacturers to determine if their products will comply with rule limits

Next Steps in the Rulemaking Process

- Stationary Source Committee – November 18, 2022
- Close of Comments – November 23, 2022
- Set Hearing – December 2, 2022
- Release Draft Rule Language – December 6, 2022
- Public Hearing – January 6, 2023

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