BOARD MEETING DATE: December 5, 2025 AGENDA NO. 29

PROPOSAL: Determine That Proposed Amended Rule 1107 – Coating of Metal Parts and Products, Is Exempt from CEQA; and Amend Rule 1107

SYNOPSIS: Rule 1107 establishes VOC limits for metal parts and products coatings. The California Office of Environmental Health Hazard Assessment determined that two compounds, tert-Butyl Acetate (t-BAc) and para-Chlorobenzotrifluoride (pCBtF), have carcinogenic health effects. Both pCBtF and t-BAc are used in some metal parts and products coatings. Proposed Amended Rule 1107 includes a future effective prohibition for metal parts and products coatings formulated with pCBtF and t-BAc, includes a limited sell through provision, and includes additional requirements for enhanced enforceability.

COMMITTEE: Stationary Source, September 19, 2025, Reviewed

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

Wayne Nastri
Executive Officer

SR:MK:MM:IS:JE

Background
Rule 1107 – Coating of Metal Parts and Products was adopted on June 1, 1979, and has since been amended 20 times. Rule 1107 was developed to reduce VOC emissions from coatings applied to metal parts and products. Rule 1107 applies to most metal parts and product coating operations but does not apply to coatings used on aerospace assemblies, magnet wire, marine craft, motor vehicles, metal containers, coil coating operations, or to architectural components coated at the structure site or at temporary unimproved locations.

To achieve VOC emission reductions, many coating manufacturers rely on solvents that are exempt from the definition of a VOC. These exempt solvents have low photochemical reactivity and therefore do not significantly contribute to the formation of ground-level ozone. In April 2017, the Stationary Source Committee recommended a precautionary approach when evaluating exempt compounds with potential toxic endpoints and removing the exempt status for any compound with an established toxic endpoint. In 2018 and 2020, respectively, the California Office of Environmental Health Hazard Assessment determined that the exempt compounds t-BAc and pCBtF have carcinogenic toxic endpoints.

Proposed Amended Rule 1107 (PAR 1107) partially implements Control Measure CTS-01 – Further Emission Reductions from Coatings, Solvents, Adhesives, and Lubricants (CTS-01) of the 2022 Air Quality Management Plan (AQMP). Control Measure CTS-01 seeks to reduce VOC emissions where feasible, address the use of pCBtF and t-BAc, and enhance enforceability by closing compliance loopholes.

Proposed Amendments

PAR 1107 will phase out the use of pCBtF and t-BAc in metal parts and products coatings while maintaining existing VOC limits. The proposed amendments establish staggered phase-out timelines for each coating category based on demonstrated need and anticipated reformulation timeframe. The proposed phase-out approach includes a one-year sell-through and two-year use-through period following each respective final manufacture date to ensure manufacturers, distributors, and end users have adequate time to transition to compliant products.

For most coating categories, manufacturers must eliminate pCBtF and t-BAc in coatings, for coatings containing more than 0.01 percent by weight of pCBtF or t-BAc before December 6, 2026. General multi-component, metallic, etching filler, extreme high-gloss, and extreme performance coatings are afforded additional time for reformulation, with a final manufacture date of December 5, 2030. Military specification and camouflage coatings are provided the longest transition period, with a final manufacture date of December 5, 2031. Colorants containing pCBtF and/or t-BAc are also subject to a separate phase-out schedule with final manufacture date of December 5, 2030.

PAR 1107 also includes administrative updates to improve clarity and enforceability. The amendments reference existing Rule 443.1 – Labeling of Materials Containing Organic Solvents requirements without expanding applicability, restricts manufacturers and their supply chains from facilitating the use of non-complaint coatings, and establishes a lowest-applicable VOC limit for multi-use coatings to remove a potential compliance loophole.

Public Process
PAR 1107 was developed through a public process. Four Working Group meetings were held on July 9, 2024, August 21, 2024, December 10, 2024, and May 7, 2025. The Working Group Meetings included a variety of stakeholders such as coating manufacturers, affected businesses, public agencies, environmental and community groups, and consultants. A Public Workshop was held on August 27, 2025. In addition, staff conducted multiple site visits, held individual meetings with stakeholders, and distributed a manufacturer survey to collect metal coating data for coating categories subject to Rule 1107.

Emission Reductions
PAR 1107 will phase out the use of two toxic solvents, pCBtF and t-BAc, with no changes to existing VOC content limits for metal parts and products coatings. As a result, there are no increases or additional VOC emission reductions expected from the proposed amendments.

Key Issues
Throughout the rulemaking process, staff worked with stakeholders to resolve key issues. Staff is not aware of any remaining key issues.

California Environmental Quality Act (CEQA)
Pursuant to CEQA Guidelines Sections 15002(k) and 15061, the proposed project (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 H to this Board Letter. If the proposed project is approved, the Notice of Exemption will be filed with the county clerks of Los Angeles, Orange, Riverside, and San Bernardino counties, and with the State Clearinghouse of the Governor's Office of Land Use and Climate Innovation.

Socioeconomic Impact Assessment
PAR 1107 would affect 560 facilities within the South Coast AQMD jurisdiction, the majority of which operate within the Fabricated Metal Product Manufacturing sector. Up to 398 facilities may qualify as small businesses, based on various small-business definitions. Implementation of PAR 1107 is not expected to lead to an increased price of metal coating solvents in South Coast AQMD jurisdiction because upfront reformulation costs are expected to be offset by recurring material cost savings over time. In addition, since the potential replacement solvents generally cost less than pCBtF and/or t-BAc, the transition to using other reformulated coatings is not expected to result in a substantial price increase. Therefore, implementation of PAR 1107 is anticipated to result in minimal to no compliance costs as well as minimal adverse socioeconomic impacts in the region, if any. The details of the Final Socioeconomic Impact Assessment can be found within the Final Staff Report (Attachment G of this Board Letter).

AQMP and Legal Mandate
Pursuant to Health and Safety Code Section 40460(a), South Coast AQMD is required to adopt an AQMP demonstrating compliance with all federal regulations and standards. South Coast AQMD must also adopt rules and regulations that carry out the objectives of the AQMP. PAR 1107 partially implements 2022 AQMP Control Measure CTS-01 by phasing out pCBtF and t-BAc without increasing VOC emissions.

Implementation and Resource Impacts
Existing staff resources are adequate to implement the proposed amendments.

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

ATTACHMENT A

SUMMARY OF PROPOSAL

Proposed Amended Rule 1107 ─ Coating of Metal Parts and Products

Phase out of para-Chlorobenzotrifluoride (pCBtF) and tert-Butyl Acetate (t-BAc)

- Two exempt compounds have been determined to have toxic endpoints
- PAR 1107 proposes to phase out those solvents as soon as practicable to reduce toxic exposure

pCBtF and t-BAc Prohibition Schedule

- Prohibits greater than 0.01 percent by weight of pCBtF and t-BAc after the following dates:

Coating Category or Coating Component	Final Manufacture Date	Final Sell-Through Date	Final Use-Through Date
Military Specification and Camouflage	**December 5, 2031**	**December 5, 2032**	**December 5, 2034**
Metallic, General Multi-Component, Etching Filler, Extreme Performance, Extreme High-Gloss, and Colorants	**December 5, 2030**	**December 5, 2031**	**December 5, 2033**
All Other Categories	**December 5, 2026**	**December 5, 2027**	**December 5, 2029**

Other Requirements

- Prohibits coatings that exceed applicable concentration limits of the following: cadmium (1.0 ppm), hexavalent chromium (5.0 ppm), and Group II exempt compounds (0.01 percent by weight, except volatile methylated siloxanes)
- Requires coatings marketed for multiple uses to comply with the most stringent VOC limit
- Incorporates existing Rule 443.1 labeling requirements without expanding applicability

ATTACHMENT B

KEY ISSUES AND RESPONSES

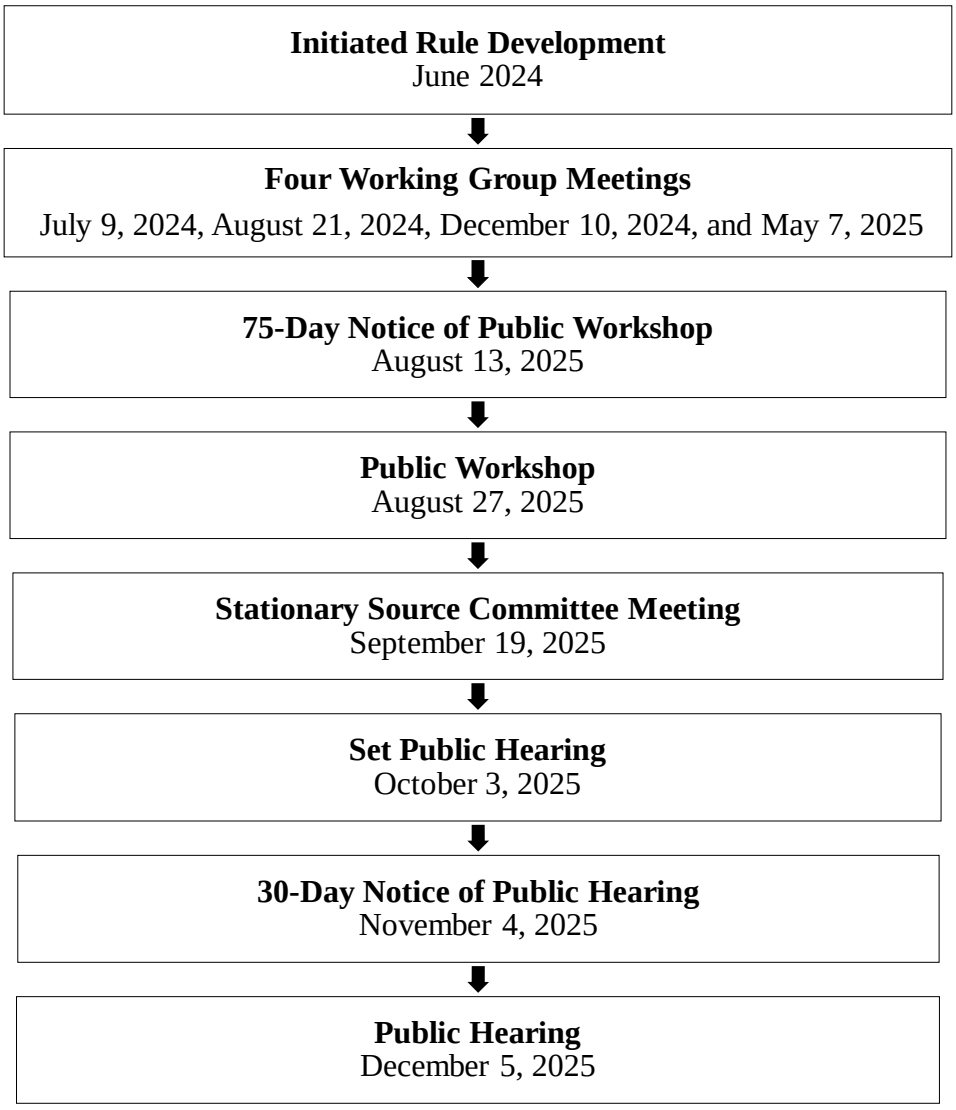
Proposed Amended Rule 1107 – Coating of Metal Parts and Products

Throughout the rulemaking process, staff worked with stakeholders to resolve key issues. Staff is not aware of any key remaining issues.

ATTACHMENT C

RULE DEVELOPMENT PROCESS

Proposed Amended Rule 1107 – Coating of Metal Parts and Products



Eighteen (18) months spent in rule development
Four (4) Working Group Meetings
One (1) Public Workshop
One (1) Stationary Source Committee Meeting

ATTACHMENT D

KEY CONTACTS LIST

Proposed Amended Rule 1107 – Coating of Metal Parts and Products

American Coatings Association (ACA)
California Council for Environmental and Economic Balance (CCEEB)
Disney Entertainment Products Inc.
Gibraltar Inc.
Metropolitan Water District (MWD)
PPG Industries
RadTech International
Santana Cycles, Inc.
Seymour of Sycamore
Sony Pictures Entertainment
Tnemec

ATTACHMENT E

RESOLUTION NO. 25-____

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

A Resolution of the South Coast AQMD Governing Board amending Rule 1107 ─ Coating of Metal Parts and Products.

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

WHEREAS, the South Coast AQMD Governing Board finds and determines that it can be seen with certainty that there is no possibility that Proposed Amended Rule 1107 may cause a significant adverse effect on the environment because: 1) no change in VOC emissions is expected relative to baseline conditions; 2) some alternative compliant formulations that do not contain pCBtF and/or t-BAc are commercially available; 3) additional time is provided for reformulating metal coatings if needed; 4) manufacturer's reformulation efforts are expected to occur using existing equipment and processes without the need for physical modifications to existing equipment; and 5) the sell-through and use-through provisions will prevent stranded assets and the generation of waste by ensuring that manufacturers, distributors, and end users have sufficient time to find suitable replacements. Therefore, the proposed project is 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 1107 and supporting documentation, including but not limited to, the Notice of Exemption and Final Staff Report which includes the Final Socioeconomic Impact Assessment, 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 (codified as Section 30.5(4)(D)(i) of the Administrative Code), that the modifications to Proposed Amended Rule 1107 since the Notice of Public Hearing was published are not so substantial as to significantly affect the meaning of the proposed amended rule within the meaning of Health and Safety Code Section 40726 because the change to paragraph (g)(4) expands the exemption for aerosols pursuant to Health and Safety Code § 41712 (i)(1) and: (a) the changes do not impact emission reductions, (b) the changes do not affect the number or type of sources regulated by the rule, (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, Proposed Amended Rule 1107 will not be submitted for inclusion into the State Implementation Plan; 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, in the rulemaking record, and in the Final Staff Report; and

WHEREAS, the South Coast AQMD Governing Board has determined that a need exists to amend Rule 1107 to prohibit the use of two solvents from metal parts and products coatings, pCBtF and t-BAc, that are determined to have carcinogenic health effects, by the Office of Environmental Health Hazard Assessment (OEHHA) and to partially implement the 2022 AQMP Control Measure CTS-01; and

WHEREAS, the South Coast AQMD Governing Board obtains its authority to adopt, amend or repeal rules and regulations from Health and Safety Code Sections 39002, 39650 *et. seq*., 40000, 40001, 40440, 40702, 40725 through 40728, 41508; and

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

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

WHEREAS, the South Coast AQMD Governing Board has determined that Proposed Amended Rule 1107 does not impose the same requirements as any existing state or federal regulations, and the proposed amended rule is 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 1107, references the following statute which the South Coast AQMD hereby implements, interprets, or makes specific: Health and Safety Code Sections 39002, 40001, 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 has determined that the Final Socioeconomic Impact Assessment, which is included in the Final Staff Report for Proposed Amended Rule 1107, is consistent with the March 17, 1989, Governing Board Socioeconomic Resolution for rule amendment; and

WHEREAS, the South Coast AQMD Governing Board has determined that the Final Socioeconomic Impact Assessment, which is included in the Final Staff Report for Proposed Amended Rule 1107, is consistent with the provisions of Health and Safety Code Sections 40440.8 and 40728.5; and

WHEREAS, the South Coast AQMD Governing Board has determined that Proposed Amended Rule 1107 includes neither new Best Available Retrofit Control Technology (BARCT) requirements nor new feasible measures pursuant to Health and Safety Code Section 40914; therefore, the requirements to conduct the analysis of cost-effectiveness and incremental cost-effectiveness as set forth in the Health and Safety Code Section 40920.6 are not applicable; and

WHEREAS, the South Coast AQMD Governing Board has determined Proposed Amended Rule 1107 will result in minimal to no compliance costs and socioeconomic impacts within the South Coast AQMD jurisdiction, as specified in the Final Socioeconomic Impact Assessment, which is included in the Final Staff Report for Proposed Amended Rule 1107; and

WHEREAS, the South Coast AQMD Governing Board has actively considered the Final Socioeconomic Impact Assessment, which is included in the Final Staff Report for Proposed Amended Rule 1107, and has made a good faith effort to minimize any adverse socioeconomic impacts; and

WHEREAS, Health and Safety Code Section 40727.2 requires the South Coast AQMD to prepare a written analysis of existing federal air pollution control

requirements applicable to the same source type being regulated whenever it adopts, or amends a rule, and the South Coast AQMD's comparative analysis of Proposed Amended Rule 1107 is included in the Final Staff Report; and

WHEREAS, the South Coast AQMD staff conducted a Public Workshop regarding Proposed Amended Rule 1107 on August 27, 2025; and

WHEREAS, the Public Hearing has been properly noticed in accordance with all 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 state and federal law; and

WHEREAS, the South Coast AQMD Governing Board specifies the Planning, Rule Development, and Implementation Manager overseeing the development of 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

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 directs staff to report back to the Stationary Source Committee by January 1, 2030, to provide an update on the progress of the pCBtF and t-BAc phase-out, including an update on reformulation progress for the coating categories subject to extended phase-out timelines; 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 1107 as set forth in the attached, and incorporated herein by reference.

DATE: _____ _____

CLERK OF THE BOARDS

ATTACHMENT F

(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 January 6, 2023)(Amended TBD)

PROPOSED AMENDED RULE 1107. COATING OF METAL PARTS AND PRODUCTS

[RULE INDEX TO BE ADDED AFTER RULE ADOPTION]

(a) Purpose ~~and Applicability~~

The purpose of Rule 1107 is to reduce ~~volatile organic compound~~Volatile Organic Compound (VOC) emissions from the coating of ~~metal parts and products~~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) Applicability

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~~c) Definitions

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

(1) AEROSOL COATING PRODUCT is a pressurized ~~coating~~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~~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~~Coating that is cured at a temperature at or above 90°C (194°F).

(5) CAMOUFLAGE COATING is a ~~coating~~Coating used, principally by the military, to conceal equipment from detection, and for purposes of this rule is considered a distinct category from Military Specification Coatings.

(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.

(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) COLORANTS are solutions of dyes or suspensions of pigments.

(~~9~~10) CONTRACT PAINTER is a non-manufacturer of ~~metal parts and products~~Metal Parts and Products who applies ~~coatings~~Coatings to such products at his facility exclusively under contract with one or more parties that operate under separate ownership and control.

(~~10~~11) DIP COATING is a method of applying ~~coatings~~Coatings to a substrate by submersion into and removal from a ~~coating~~Coating bath.

(~~11~~12) ELECTRIC-INSULATING VARNISH is a non-convertible-type ~~coating~~Coating applied to electric motors, components of electric motors, or power transformers, to provide electrical, mechanical, and environmental protection or resistance.

(~~12~~13) ELECTRIC-INSULATING AND THERMAL-CONDUCTING COATING is a ~~coating~~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~~14) ELECTROCOATING is a process that uses ~~coating~~Coating concentrates or pastes added to a water bath. The ~~coating~~Coating is applied by using an electrical current in either an anodic or cathodic process.

(~~14~~15) ELECTROSTATIC APPLICATION is a method of applying ~~coating~~Coating particles or ~~coating~~Coating droplets to a grounded substrate by electrically charging them.

(~~15~~16) ENERGY CURABLE COATINGS are single-component reactive products that

cure upon exposure to visible-light, ultra-violet light, or an electron beam.

(~~16~~17) ESSENTIAL PUBLIC SERVICE COATING is a protective (functional) ~~coating~~Coating applied to components of power, water, and natural gas production, transmission, or distribution systems during repair and maintenance procedures.

(~~17~~18) ETCHING FILLER is a ~~coating~~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~~Pretreatment Coating followed by a primer.

(~~18~~19) EXEMPT COMPOUNDS (see Rule 102 – Definition of Terms).

(~~19~~20) EXTREME HIGH-GLOSS COATING is a ~~coating~~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.

(~~20~~21) EXTREME-PERFORMANCE COATING is a ~~coating~~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

~~(b)~~ ~~(20)~~ (C) Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleansers, or scouring agents.

(~~21~~22) FLOW COATING is a non-atomized technique of applying ~~coatings~~Coatings to a substrate with a fluid nozzle in a fan pattern with no air supplied to the nozzle.

(23) GENERAL MULTI-COMPONENT COATING is a Coating that does not otherwise meet the definition of a specific category in Table 1 and requires the addition of a separate reactive resin, commonly known as a Catalyst or Hardener, before application to form an acceptable dry film.

(24) GENERAL ONE-COMPONENT COATING is a Coating that does not otherwise meet the definition of a specific category in Table 1 and 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.

(~~22~~25) 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~~Coating solids and can be calculated by the following equation:

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

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

Where: $W_{~~sv~~}$ = weight of volatile compounds in grams
W_w = weight of water in grams
$W_{~~es~~ex}$ = weight of ~~exempt compounds~~ Exempt Compounds in grams
V_m = volume of material in liters
V_w = volume of water in liters
$V_{~~es~~ex}$ = volume of ~~exempt compounds~~ Exempt Compounds in liters

(~~23~~26) GRAMS OF VOC PER LITER OF MATERIAL is the weight of VOC per volume of material and can be calculated by the following equation:

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

Where: $W_{~~sv~~}$ = weight of volatile compounds in grams
W_w = weight of water in grams
$W_{~~es~~ex}$ = weight of ~~exempt compounds~~ Exempt Compounds in grams
V_m = volume of material in liters

(~~24~~27) HAND APPLICATION METHODS is the application of ~~coatings~~Coatings by manually held non-mechanically operated equipment. Such equipment includes paintbrushes, hand rollers, caulking guns, trowels, spatulas, syringe daubers, rags, and sponges.

(~~25~~28) 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~~29) HEAT-RESISTANT COATING is a ~~coating~~Coating that must withstand a temperature of at least 400°F during normal use.

~~(b)~~ (~~27~~30) HIGH-PERFORMANCE ARCHITECTURAL COATING is a ~~coating~~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~~31) HIGH-TEMPERATURE COATING is a ~~coating~~Coating that is certified to withstand a temperature of 1000°F for 24 hours.

(~~29~~32) HIGH-VOLUME, LOW-PRESSURE (HVLP) SPRAY is a ~~coating~~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~~33) INK is a fluid that contains dyes and/or ~~colorants~~Colorants and is used to make markings but not to protect surfaces.

(~~31~~34) MAGNETIC DATA STORAGE DISK COATING is a ~~coating~~Coating used on a metal disk which stores data magnetically.

(~~32~~35) METAL PARTICLES are pieces of an elemental pure metal or a combination of elemental metals.

(~~33~~36) METAL PARTS AND PRODUCTS are any components or complete units fabricated from metal, except those subject to the ~~coating~~Coating provisions of other source specific rules of Regulation XI – Source Specific Standards.

(~~34~~37) METALLIC COATING is a ~~coating~~Coating which contains more than 5 grams of ~~metal particles~~Metal Particles per liter of ~~coating~~Coating, as applied.

(~~35~~38) MIL is 0.001 inch.

(~~36~~39) MILITARY SPECIFICATION COATING is a ~~coating~~Coating applied to ~~metal parts and products~~Metal Parts and Products and which has a paint formulation approved by a United States Military Agency for use on military equipment, excluding Camouflage Coatings.

(~~37~~40) MOLD-SEAL COATING is the initial ~~coating~~Coating applied to a new mold or repaired mold to provide a smooth surface which, when coated with a mold release ~~coating~~Coating, prevents products from sticking to the mold.

(~~38~~41) 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.

~~(b) (39) 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) 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~~42) OPTICAL ANTI-REFLECTION COATING is a ~~coating~~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~~43) PAN-BACKING COATING is a ~~coating~~Coating applied to the surface of pots, pans, or other cooking implements that are exposed directly to a flame or other heating elements.

(~~43~~44) PHOTORESIST COATING is a ~~coating~~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~~45) PHOTORESIST OPERATION is a process for the application and development of ~~photoresist coating~~Photoresist Coatings 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~~46) PREFABRICATED ARCHITECTURAL COMPONENT COATINGS are ~~coatings~~Coatings applied to ~~metal parts and products~~Metal Parts and Products which are to be used as an architectural structure.

(~~46~~47) PRETREATMENT COATING is a ~~coating~~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.

(~~47~~48) 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~~Coating.

(49) REDUCER OR THINNER means any solvent specifically labeled and formulated to reduce the viscosity of Coatings.

~~(b)~~ (~~48~~50) REPAIR COATING is a ~~coating~~Coating used to recoat portions of a product which has sustained mechanical damage to the ~~coating~~Coating following normal painting operations.

(~~49~~51) ROLL COATING is a coating method using a machine that applies ~~coating~~Coating to a substrate by continuously transferring ~~coating~~Coating through a pair or set of oppositely rotating rollers.

(~~50~~52) SAFETY-INDICATING COATING is a ~~coating~~Coating which changes physical characteristics, such as color, to indicate unsafe conditions.

(~~51~~53) SILICONE-RELEASE COATING is any ~~coating~~Coating which contains silicone resin and is intended to prevent food from sticking to metal surfaces such as baking pans.

(~~52~~54) SOLAR-ABSORBENT COATING is a ~~coating~~Coating which has as its prime purpose the absorption of solar radiation.

(~~53~~55) SOLID-FILM LUBRICANT is a very thin ~~coating~~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~~56) STENCIL COATING is an ~~ink~~Ink or a ~~coating~~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~~Metal Parts and Products.

(~~55~~57) TEXTURED FINISH is a rough surface produced by spraying and splattering large drops of ~~coating~~Coating onto a previously applied ~~coating~~Coating. The ~~coatings~~Coatings used to form the appearance of the ~~textured finish~~Textured Finish are referred to as textured ~~coatings~~Coatings.

(~~56~~58) TOUCH-UP COATING is a ~~coating~~Coating used to cover minor ~~coating~~Coating imperfections appearing after the main coating operation.

(~~57~~59) TRANSFER EFFICIENCY is the ratio of the weight or volume of ~~coating~~Coating solids adhering to an object to the total weight or volume, respectively, of ~~coating~~Coating solids used in the application process, expressed as a percentage.

(~~58~~60) 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~~61) VOLATILE ORGANIC COMPOUND (VOC) (see Rule 102 – Definition of Terms).

(~~e~~d) Requirements

(1) Operating Equipment

A person shall not apply VOC-containing ~~coatings~~Coatings to ~~metal parts and products~~Metal Parts and Products subject to the provisions of this rule unless the ~~coating~~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~~Application;

(B) Flow ~~coat~~Coating;

(C) Dip ~~coat~~Coating;

(D) Roll ~~coat~~Coating;

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

(F) Hand Application Methods; or

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

(2) VOC Content of Coatings

~~A~~No person shall manufacture, supply, sell, offer for sale, market, blend, distribute, package, or repackage any Coating for use within South Coast AQMD, ~~not~~nor shall any person apply ~~to metal parts and products~~ to Metal Parts and Products subject to the provisions of this rule any ~~coatings~~Coatings, including any VOC-containing materials added to the original ~~coating~~Coating supplied by the manufacturer, which contain VOCs in excess of the limits specified in Table 1: VOC Limits Less Water and Less Exempt Compounds below:

Table 1: VOC ~~LIMITS~~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~~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~~Coatings, ~~thinners~~Thinners, and ~~coating~~Coating-related waste materials applied to any ~~metal parts and products~~Metal Parts and Products subject to the provisions of this rule;

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

(C) VOC-laden application tools, such as a brush, pad, rag, cloth, or paper, used in the application of ~~coatings~~Coatings applied to any ~~metal parts and products~~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~~Coatings that contain ~~reactive diluents~~Reactive Dilutants, 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

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

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} ex weight of ~~exempt compounds~~ 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} ex = volume of ~~exempt compounds~~ Exempt Compounds not consumed during curing, in liters

(7) Owners or operators of control equipment may comply with provisions of paragraph (~~e~~d)(1) and/or (~~e~~d)(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.

(8) If anywhere on the container of any Metal Parts and Products Coating listed in Table 1, on any sticker or label affixed thereto, in any sales or advertising literature, or if there is any representation or information that indicates the Coating may be used, or is suitable for use, in more than one Metal Parts and Products Coating category listed in Table 1, then the lowest applicable VOC standard shall apply.

(~~d~~e) Prohibitions ~~of Specifications~~

(1) A person shall not specify ~~the use in the South Coast AQMD of~~that any ~~coating~~Coating subject to this rule be applied in a way that does not comply with the requirements of this rule within the South Coast AQMD. ~~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 information, directions, and contracts.

(2) Excluding Colorants subject to paragraphs (e)(3) and (e)(4), no person shall manufacture, supply, sell, offer for sale, market, blend, distribute, package, or repackage a Coating for use within South Coast AQMD, nor shall any person apply to any 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, that contain any of the following chemicals in concentrations greater than the limits indicated below:

(A) 1.0 ppm of cadmium effective [*Date of Adoption*];

(B) 5.0 ppm of hexavalent chromium effective [*Date of Adoption*];

(C) 0.01 percent by weight of Group II Exempt Compounds, excluding volatile methylated siloxanes effective [*Date of Adoption*]; or

(D) 0.01 percent by weight of para-Chlorobenzotrifluride (pCBtF, Chemical Abstracts Service Registration Number 98-56-6) and/or *tert*-Butyl Acetate (t-BAc, Chemical Abstracts Service Registration Number 540-88-5) for Coatings manufactured after the applicable Final Manufacture Date in Table 2: Prohibition Dates for Coatings Containing pCBtF and/or t-BAc (Table 2). Any Coating that is manufactured on or prior to the applicable Final Manufacture Date in Table 2 may be sold, supplied, offered for sale,

marketed, blended, distributed, packaged, repackaged and used/applied until the applicable dates in Table 2.

(3) No person shall manufacture any Colorant containing more than 0.01 percent by weight of pCBtF and/or t-BAc for use within South Coast AQMD after December 5, 2030. Such Colorants manufactured for use within South Coast AQMD on or prior to December 5, 2030, may continue to be supplied, sold, offered for sale, marketed, blended, distributed, packaged, or repackaged until December 5, 2031, after which all such actions shall be prohibited.

(4) No person shall apply any Colorant containing more than 0.01 percent by weight of pCBtF and/or t-BAc after December 5, 2033, to any Metal Parts and Products subject to the provisions of this rule.

Table 2: Prohibition Dates for Coatings Containing pCBtF and/or t-BAc			
Coating Category	**Final Manufacture Date**	**Final Sale, Supply, Market, Blending, Distribute, Package, and Repackage Date**	**Final Application Date**
General One-Component	December 5, 2026	December 5, 2027	December 5, 2029
Solar-Absorbent			
Heat-Resistant			
Prefabricated Architectural One-Component			
Prefabricated Architectural Multi-Component			
Touch Up			
Repair			
Silicone Release			
High-Performance Architectural			
Vacuum-Metalizing			
Mold-Seal			
High-Temperature			
Electric-Insulating Varnish			
Pan Backing			
Pretreatment Coatings			
Metallic	December 5, 2030	December 5, 2031	December 5, 2033
General Multi-Component			
Etching Filler			
Extreme High-Gloss			
Extreme Performance			
Military Specification	December 5, 2031	December 5, 2032	December 5, 2034
Camouflage			

(e~~f~~) Methods of Analysis

All applicable methods of analysis shall be as cited in paragraphs (e~~f~~)(1) through (e~~f~~)(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~~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 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 Coating and identify the test methods, which have been approved by U.S. EPA, California Air Resources Board (CARB) and South Coast AQMD prior to such analysis, that can be used to quantify the amounts of each exempt compound:

(i) ~~cyclic~~Cyclic, branched, or linear, completely fluorinated alkanes;

(ii) ~~cyclic~~Cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;

(iii) ~~cyclic~~Cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and

(iv) ~~sulfur~~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.~~

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

The acid content of ~~pretreatment coatings~~Pretreatment Coatings and ~~etching fillers~~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~~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~~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~~ Capture Efficiency specified in paragraph (~~e~~d)(7), shall be determined by verifying the use of a Permanent Total Enclosure (PTE) and 100% ~~capture efficiency~~ 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~~ 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~~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

(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.

~~(e)~~ ~~(4)~~ (B) The efficiency of the control device of the emission control system as specified in paragraph (~~e~~d)(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.~~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~~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~~g) Exemptions

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

(A) Stencil ~~coatings~~Coatings;

(B) Safety-~~indicating coatings~~Indicating Coatings;

(C) Magnetic ~~data storage disk coatings~~Data Storage Disk Coatings;

(D) Solid-~~film lubricants~~Film Lubricants; and

(E) ~~Electric-insulating and thermal-conducting coatings~~ Electric-Insulating and Thermal-Conducting Coatings.

~~(f)~~ (2) The provisions of paragraph (~~e~~d)(1) of this rule shall not apply to the application of ~~touch-up coatings~~Touch-Up Coatings, ~~repair coatings~~Repair Coatings, and ~~textured finishes~~Textured Finishes.

(3) The provisions of paragraphs (~~e~~d)(1), (~~e~~d)(2), and (~~e~~d)(3) of this rule do not apply to the application of ~~coatings~~Coatings and use of cleaning solvents while

conducting performance tests on the ~~coatings~~Coatings at paint manufacturing facilities.

(4) The provisions ~~*of paragraph (c)(2)*~~ of this rule shall not apply to ~~aerosol coating products~~ Aerosol Coating Products.

(5) The provisions of paragraph (~~e~~d)(2) of this rule shall not apply to the use of ~~essential public service coatings~~ 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 (~~e~~d)(2) of this rule shall not apply to the use of optical anti-reflective ~~coatings~~Coatings provided such aggregate use does not exceed 10 gallons in any one calendar year, per facility.

(7) The provisions of paragraph (~~e~~d)(2) shall not apply to ~~photoresist operations~~Photoresist Operations applying liquid ~~photoresist coating~~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 (~~e~~d)(1) shall not apply to metal ~~coatings~~Coatings with a viscosity of 650 centipoise or greater, as applied.

(~~g~~h) Rule 442 Applicability

Any ~~coating~~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~~i) Alternative Emission Control Plan

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

(~~i~~j) Qualification for Classification as Extreme-Performance Coating

A ~~coating~~Coating may be classified as an ~~extreme-performance coating~~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~~Coating, and shows that the intended use of each coated object would require coating with an ~~extreme-performance coating~~Extreme-Performance Coating.

(~~j~~k) Recordkeeping

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

(~~k~~l) Emission Reduction Credits

Facilities that use ~~high-performance architectural, pretreatment, or vacuum metalizing coatings~~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~~Coatings having a VOC content of no more than 420 grams per liter, less water and less ~~exempt compounds~~ Exempt Compounds.

(m) Administrative Requirements

(1) A person shall not sell or offer for sale for use in South Coast AQMD any Metal Parts and Products Coatings or Coating components unless all such products are labeled in accordance with South Coast AQMD Rule 443.1 – Labeling of Materials Containing Organic Solvents.

(2) A manufacturer, distributor, or seller of a Coating meeting the applicability of this rule, who supplies a Coating to a person who applies it in a non-compliant manner, shall not be liable for that non-compliant use, unless the manufacturer, distributor, or seller knows or had reason to suspect that the supplied Coating would be used in a non-compliant manner.

ATTACHMENT G

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Final Staff Report

Proposed Amended Rule 1107 – Coating of Metal Parts and Products

December 2025

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EXECUTIVE SUMMARY

Rule 1107 – Coating of Metal Parts and Products (Rule 1107) was adopted in June 1979 to reduce volatile organic compound (VOC) emissions from metal coating operations. Proposed Amended Rule 1107 (PAR 1107) balances the objective of regulating VOC emissions with addressing the toxicity of certain compounds used in coating formulations.

The Office of Environmental Health Hazard Assessment (OEHHA) determined that *tert*-Butyl Acetate (t-BAc) and para-Chlorobenzotrifluoride (pCBtF) have toxic endpoints, including carcinogenicity. These two compounds are commonly utilized by coating manufacturers to formulate coatings that comply with VOC content limits in South Coast AQMD rules due to their VOC exemption status. Under South Coast AQMD regulations, t-BAc is exempt from the definition of a VOC for certain product categories in a few source-specific rules, not including Rule 1107. In contrast, pCBtF is exempt from the definition of VOC for all uses, including products regulated under Rule 1107. PAR 1107 partially implements 2022 Air Quality Management Plan (AQMP) control measure CTS-01 to phase out pCBtF and t-BAc and assess opportunities for VOC emission reductions.

To allow time for coating manufacturers to develop new products without pCBtF and t-BAc, PAR 1107 establishes a five-year reformulation period for coating categories that currently lack viable alternatives, with one additional year provided for military specification and camouflage coatings due to their unique performance requirements. Colorants are also provided a five-year reformulation period to address unique reformulation challenges. During this time, manufacturers can develop products that meet Rule 1107 VOC content limits without relying on pCBtF and/or t-BAc. Following the reformulation period, there is a one-year sell-through period and a two-year use-through period. These additional phases ensure that manufacturers, distributors, and end users are provided with adequate time to transition to products without pCBtF and/or t-BAc. After the phase-out period provided, Rule 1107 coatings would be prohibited from containing pCBtF and/or t-BAc in excess of 0.01 percent by weight. For coating categories in which there are already alternatives without pCBtF and/or t-BAc, PAR 1107 establishes a shorter transition period to phase out coatings containing pCBtF and/or t-BAc. In addition, PAR 1107 establishes prohibitions of other toxic compounds in coatings, includes new provisions to enhance enforceability, and incorporates revisions for clarity. PAR 1107 will be fully implemented by December 5, 2034. The estimated cost of PAR 1107 is approximately $3,000,000 over a nine-year period. Since PAR 1107 provides time for manufacturers to reformulate products that already comply with existing VOC limits and does not alter VOC limits, PAR 1107 is not expected to result in VOC emission reductions or increases.

PAR 1107 was developed through a robust public process. Four Working Group meetings were held on July 9, 2024, August 21, 2024, December 10, 2024, and May 7, 2025. A Public Workshop for PAR 1107 was held on August 27, 2025.

CHAPTER 1: BACKGROUND

INTRODUCTION

Rule 1107 is a source-specific rule that was adopted to reduce VOC emissions from metal coating operations. Rule 1107 establishes VOC content limits for 22 categories of coatings, classified as either air-dried or baked, including several specialty and niche-use coatings. Rule 1107 is being amended to address health concerns related to pCBtF and t-BAc, which were identified by OEHHA as having toxic health endpoints, and evaluate potential VOC emission reductions.

BACKGROUND

Metal coatings protect, and in some cases, beautify the substrate. These coatings provide some level of protection from impact, abrasion, and corrosion. They may also need to retain a consistent color and gloss level over an extended period of time. In addition to the desired properties of a coating after curing, coatings must also have other acceptable characteristics, especially during application. This can include shelf life, sprayability, rheology, flow, pot life (for multi-component coatings), time-to-tack free, time-to-dry to recoat, and time until full cure. Quick drying times are not always the most desired feature. Acceptable drying times usually fall within a range that varies per the coating process and operation.

The industry sectors that make extensive use of coatings applied to metal parts and products include:

- Steel Product Manufacturing from Purchased Steel (NAICS 3312)
- Cutlery and Handtool Manufacturing (NAICS 3322)
- Architectural and Structural Metals Manufacturing (NAICS 3323)
- Boiler, Tank, and Shipping Container Manufacturing (NAICS 3324)
- Hardware Manufacturing (NAICS 3325)
- Coating, Engraving, Heat Treating, and Allied Activities (NAICS 3328)
- Other Fabricated Metal Product Manufacturing (NAICS 3329)
- Machinery Manufacturing (NAICS 333)
- Computer and Electronic Product Manufacturing (NAICS 334)
- Electrical Equipment, Appliance, and Component Manufacturing (NAICS 335)
- Motor Vehicle Parts Manufacturing (NAICS 3363)
- Other Transportation Equipment Manufacturing (NAICS 3369)
- Metal Household Furniture Manufacturing (NAICS 337124)
- Institutional Furniture Manufacturing (NAICS 337127)
- Office Furniture (except Wood) Manufacturing (NAICS 337214)
- Showcase, Partition, Shelving, and Locker Manufacturing (NAICS 337215)
- Other Miscellaneous Manufacturing (NAICS 3399)

The industries that supply coatings to facilities are covered by the Paint and Coating Manufacturing sector (NAICS 325510).

Development of Health Risk Understanding for pCBtF and t-BAc

In 1994, U.S. EPA granted pCBtF an exemption from the definition of a VOC (59 FR 50693)[1]. Similarly, in 2004, U.S. EPA added t-BAc to its list of VOC-exempt solvents (69 FR 69298)[2]. The initial exemptions were granted based on the chemicals' negligible photochemical reactivity. These exemptions were subsequently incorporated into South Coast AQMD rules. In 2005, a limited exemption for t-BAc was added to Rule 1151 – Motor Vehicle and Mobile Equipment Non-Assembly Line Coating Operations (Rule 1151), excluding its use in color and clear coat applications. In 2014, pCBtF was added to the list of VOC-exempt compounds under Rule 102 – Definition of Terms (Rule 102).

However, emerging toxicological data prompted a reevaluation of the pCBtF and t-BAc exemptions. In 2015, OEHHA released a draft HRA for t-BAc, indicating it may be more toxic than previously understood. In response, the resolution adopting the 2016 amendments to Rule 1113 – Architectural Coatings (Rule 1113) directed South Coast AQMD staff to reassess the exemption for t-BAc. Staff developed a white paper in 2017 and presented findings to Stationary Source Committee (SSC), which recommended that toxicity concerns should take precedence over VOC emission reductions if t-BAc was confirmed to be a carcinogen. The most recent Health Risk Assessments (HRA), which estimate lifetime health risks associated with exposure, were adopted for t-BAc in August 2018[3] and for pCBtF in August 2020[4]. As a result of these findings and determinations by OEHHA, removing the VOC exemption status of pCBtF and t-BAc is necessary to reduce toxic risk to the general public.

Regulatory Impacts of pCBtF and t-BAc Phase Out

Currently, pCBtF is universally VOC-exempt for all rules, including Rule 1113, while t-BAc retains its limited exemption in Rule 1113 for specific uses, such as industrial maintenance and non-sacrificial anti-graffiti coatings. The exemptions play a practical role in product formulation. Coating manufacturers often aim to produce coatings that comply with both Rule 1107 and Rule 1113 to ensure versatility. By doing so, a single coating can be used both in controlled shop environments (Rule 1107 applications) and in the field (Rule 1113 applications). This approach reduces complexity for distributors and end users while ensuring compliance with VOC limits across all applications. While this co-benefit simplifies logistics, avoids regulatory issues, and expands market usability, it also creates challenges when considering future VOC limits and phasing out exempt compounds.

Prohibiting pCBtF and t-BAc in Rule 1107 carries implications for compliance with Rule 1113. pCBtF or t-BAc are commonly used to meet low VOC limits, such as those in Rule 1113. Once pCBtF and t-BAc are prohibited in Rule 1107, coatings that depend on these chemicals to comply with VOC limits in Rule 1113 would no longer be permissible for use under Rule 1107. This could require manufacturers to develop separate coatings to meet requirements in Rule 1107 and Rule

[1] Federal Register :: Revision to Definition of Volatile Organic Compounds-Exclusion of para-Chlorobenzotrifluoride
[2] Federal Register :: Revision to Definition of Volatile Organic Compounds-Exclusion of t-Butyl Acetate
[3] Notice of Adoption of Cancer Inhalation Unit Risk and Slope Factors and Cancer Oral Slope Factor for Tert-Butyl Acetate - OEHHA
[4] Notice of Adoption of Cancer Inhalation Unit Risk Factor for p-Chloro-α,α,α-Trifluorotoluene - OEHHA

1113. While phasing out pCBtF and t-BAc is necessary to address emerging health concerns, coordination is also important to ensure that coatings remain compliant across all applicable regulations. Staff initiated rule development for Rule 1113 and will continue to collaborate with the metal coating manufacturers.

2022 Air Quality Management Plan (AQMP)

The 2022 AQMP adopted on December 2, 2022, set forth a path for improving air quality and meeting federal air pollution standards by striving for zero-NOx emission technologies across all sectors and lower VOC emissions where feasible. The 2022 AQMP included Control Measure CTS-01 Further Emission Reductions from Coatings, Solvents, Adhesives, and Lubricants (CTS-01), which seeks to address the toxicity concerns of pCBtF and t-BAc and assess opportunities for VOC emission reductions [5]. PAR 1107 partially implements CTS-01 from the 2022 AQMP.

REGULATORY HISTORY

Rule 1107 was adopted on June 1, 1979, and it has been subsequently amended 20 times. The most recent amendment on January 6, 2023, addressed U.S. EPA's proposed limited disapproval of Rule 1107 by removing a reference of ASTM D7767-11, "Standard Test Method to Measure Volatiles from Radiation Curable Acrylate Monomers, Oligomers and Blends and Thin Coatings Made from Them" (ASTM D7767). ASTM D7767 is not a U.S. EPA-approved test method and therefore cannot be used to enforce a State Implementation Plan (SIP) approved rule.

AFFECTED FACILITIES AND EQUIPMENT

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. Rule 1107 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 1,000 permits across 560 facilities are subject to Rule 1107.

PUBLIC PROCESS

The current rule amendment process began in June 2024. Staff conducted four Working Group Meetings on July 9, 2024, August 21, 2024, December 10, 2024, and May 7, 2025. The Working Group is composed of representatives from businesses, environmental groups, public agencies, and consultants. The purpose of Working Group meetings (WGM) is to discuss proposed concepts and work through the details of South Coast AQMD's proposal. Additionally, a Public Workshop was held on August 27, 2025. The purpose of the Public Workshop was to present the proposed amended rule language to the general public and stakeholders and to solicit comments. Staff also conducted multiple site visits, held individual meetings with industry stakeholders, and distributed a survey to coating manufacturers requesting product data for each metal parts and products coating category as part of this rulemaking process. Table 1-1 summarizes the key topics discussed at each of the public meetings for PAR 1107.

[5] appendix-iv-a.pdf

Table 1-1 – Public Meeting Dates and Topics

Meeting Title	Date	Topics
Working Group Meeting #1	July 9, 2024	• Rule Background and Objectives • VOC and Exempt Compounds • Manufacturer Survey
Working Group Meeting #2	August 21, 2024	• Summary of WGM #1 • Site Visits • Manufacturer survey instructions
Working Group Meeting #3	December 10, 2024	• Summary of WGM #2 • Initial coating manufacturer survey results
Working Group Meeting #4	May 7, 2025	• Initial Preliminary Draft Rule Language • Updated coating manufacturer survey results
Public Workshop	August 27, 2025	• Preliminary Draft Rule Language • Preliminary impact assessments

CHAPTER 2: PCBTF/T-BAC TOXICITY AND VOC EMISSION REDUCTION POTENTIAL

INTRODUCTION

BACKGROUND OF PCBTF AND T-BAC

COMPARING PCBTF AND T-BAC TOXICITY TO OTHER COMPOUNDS

STAFF RECOMMENDATIONS ON PCBTF AND T-BAC

METAL PARTS AND PRODUCTS COATING MANUFACTURER SURVEY

COMPARISON OF RULE 1107 AND NATIONAL VOC LIMITS

OPPORTUNITIES FOR VOC REDUCTIONS

INTRODUCTION

Two solvents that are exempt from the federal definition of a VOC due to their low photochemical reactivity, pCBtF and t-BAc, recently become a focus of public health concern. Health risk assessments for pCBtF and t-BAc identified elevated cancer potency factors, inhalation unit risks, and acute reference exposure levels (acute REL) compared to other regulated compounds. In response, South Coast AQMD evaluated the use of pCBtF and t-BAc in coatings regulated under Rule 1107 and developed PAR 1107 rule proposals to address toxicity without increasing VOC emissions.

BACKGROUND ON PCBTF AND T-BAC

In 1994, U.S. EPA exempted pCBtF from the federal definition of a VOC due to its negligible photochemical reactivity. In 2014, South Coast AQMD incorporated this exemption by adding pCBtF to Rule 102, which designates VOC-exempt compounds. As a result, pCBtF is currently not considered a VOC unless otherwise specified under any South Coast AQMD rule.

In 2004, U.S. EPA added t-BAc to its list of VOC-exempt compounds. However, South Coast AQMD did not provide a full exemption for t-BAc under Rule 102 due to concerns regarding potential toxicity. Instead, limited exemptions were granted for t-BAc through source-specific rules, such as Rule 1113.

The 2013 amendments to Rule 1113 included a resolution that directed staff to review the exemption for t-BAc due to renewed toxicity concerns. In 2017, South Coast AQMD staff presented preliminary findings to the Stationary Source Committee (SSC) on t-BAc, including concerns regarding pCBtF, which OEHHA had not yet assessed at that time.

Based on staff recommendations, SSC directed staff to remove the existing t-BAc exemption in Rules 1113 and 1151 once OEHHA finalized their assessment. SSC also requested that OEHHA review the potential toxicity of pCBtF and South Coast AQMD staff remove the pCBtF exemption, as resources allow, if pCBtF is deemed a potential carcinogen. OEHHA finalized the health risk assessment for t-BAc in 2018 concluding that it had a higher cancer potential than previously estimated. In 2020, the pCBtF health risk assessment was finalized by OEHHA, which indicated pCBtF is a potential carcinogen. Staff's actions to date to prohibit pCBtF and t-BAc include amending: 1) Rule 1168 – Adhesive and Sealant Applications (Rule 1168) on November 4, 2022; 2) Rule 1151 on November 1, 2024, and 3) Rule 1171 – Solvent Cleaning Operations (Rule 1171) on June 6, 2025.

COMPARING PCBTF AND T-BAC TOXICITY TO OTHER COMPOUNDS

Staff considered several approaches to address the toxicity concerns for pCBtF and t-BAc, ranging from removing the VOC-exempt status to a complete prohibition of use. To inform that decision, staff considered how other compounds with potential toxic endpoints have historically been addressed. Under Rule 102, VOC-exempt compounds are categorized as either Group I or Group II. Group II compounds, while still considered exempt VOCs, may be prohibited from use in specific source rules due to health or safety concerns.

Two key toxicological metrics were considered in this analysis: the cancer potency factor and the acute REL. Cancer potency factor is a measure used to estimate the risk of cancer associated with exposure to a carcinogenic substance and represents the increased cancer risk per unit of exposure over a lifetime measured in milligrams of a substance per kilogram of body weight per day. REL is the maximum concentration level of a substance in the air that is not expected to have adverse health effects in humans over a specified exposure duration measured in micrograms per cubic meter of air. RELs can be established for acute (short-term), 8-hour, or chronic (long-term). For context and comparison, the cancer potency factors and acute RELs for five compounds are summarized in Table 2-1 – Cancer Potency Factor Comparison and Table 2-2 – Acute REL Comparison, respectively.

Table 2-1 ─ Cancer Potency Factor Comparison

Compound	Cancer Potency Factor (mg/kg-day)
Perchloroethylene (perc)	0.021
Dimethyl Carbonate (DMC)	0.0035
t-BAc	0.0047
pCBtF	0.03
Ethylene Oxide (EtO)	0.31

For the five compounds shown in Table 2-1, pCBtF has the second highest cancer potency factor, with EtO being the only compound with a greater associated cancer risk due to exposure. The cancer potency factor of pCBtF is almost 50 percent higher than perchloroethylene's, a prohibited Group II Exempt Compound.

Table 2-2 shows the available acute RELs for the same five compounds. t-BAc has the lowest REL, meaning the highest risk among the compounds. The cancer potency factor for pCBtF is much higher than t-BAc, perc, and DMC, but it has no established acute REL.

Table 2-2 ─ Acute REL Comparison

Compound	Acute REL ($\mu g/m^3$)
perc	20,000
DMC	14,000
t-BAc	10,000
pCBtF	N/A
EtO	N/A

STAFF RECOMMENDATIONS ON PCBTF AND T-BAC

The preceding comparison of pCBtF and t-BAc to other toxic compounds that are prohibited from use in VOC rules, including Rule 1107, supports a prohibition of pCBtF and t-BAc. OEHHA's assessment of pCBtF and t-BAc shows these compounds to be as toxic as many chemicals currently prohibited; therefore, staff recommends prohibiting the use of pCBtF and t-BAc.

METAL PARTS AND PRODUCTS COATING MANUFACTURER SURVEY

In August 2024, staff conducted a manufacturer survey to understand the extent to which pCBtF and t-BAc are used to comply with the VOC limits in Rule 1107. The results of the survey were used to help evaluate VOC content, VOC emissions, and a potential prohibition timeline. Table 2-3 ─ Coating Manufacturer Survey Questions shows the requested information in the survey.

Table 2-3 ─ Coating Manufacturer Survey Questions

	Requested Information
1.	Company name, contact person, and an email address
2.	Product name
3.	Product category
4.	VOC content of product (regulatory and actual)
5.	Is the product water or solvent based
6.	Is the product air-dried or baked
7.	Percent content of pCBtF and/or t-BAc
8.	Annual volume sold and if that volume represents South Coast AQMD or California

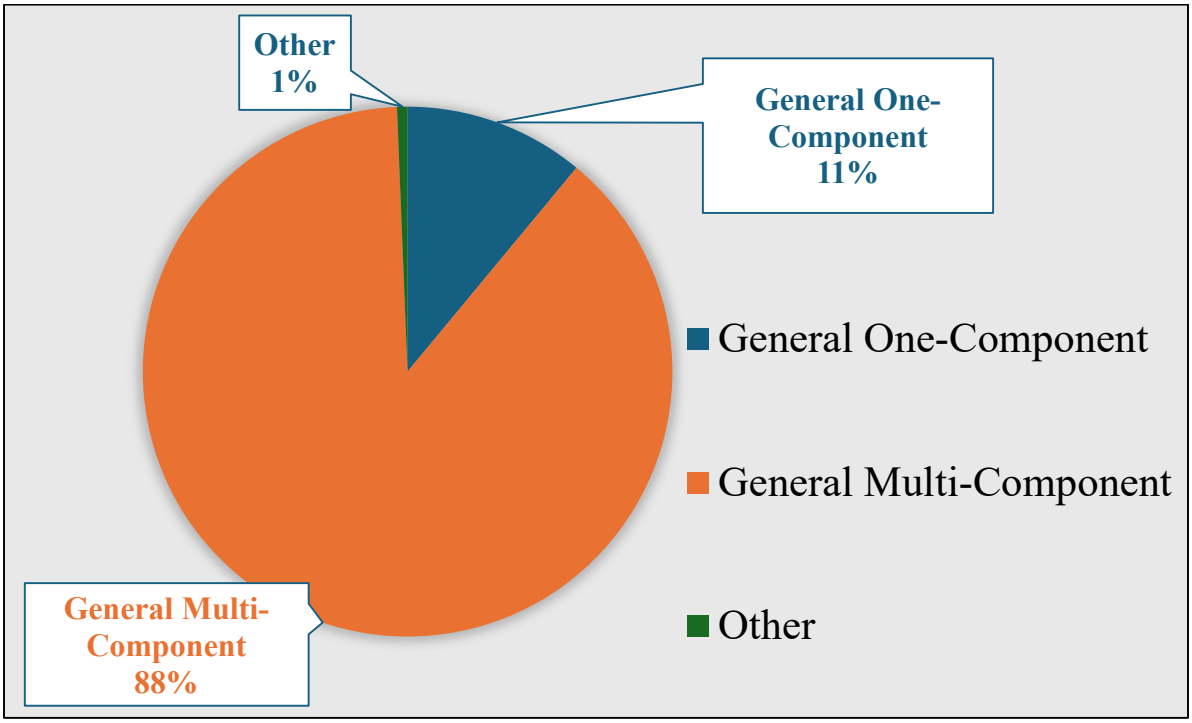
In total, four of the 27 major metal parts and products coating manufacturers responded to the survey. Most reported that a large portion of the metal coatings categories are meeting the Rule 1107 VOC limits without the use of pCBtF and t-BAc. The following summarizes the major findings of the survey:

- 16 of the 22 Rule 1107 coating categories were not reported to be sold within South Coast AQMD
- Approximately 20 percent of the total reported sales volume of metal parts and products coatings contain pCBtF and/or t-BAc; however, some coating manufacturer surveys reported coating components separately, meaning more than 20 percent of coatings offered for sale could contain pCBtF and/or t-BAc;
- Only three metal parts and products coating categories reported both pCBtF and t-BAc: general one-component, general multi-component, and metallic;
- Three metal parts and products coating categories reported only containing pCBtF in their formulation: high-temperature, etching filler, and heat-resistant.

According to survey responses, general multi-component coatings account for approximately 89 percent of metal parts and products coating sales in California. The second-largest category, general one-component coatings, represents about 11 percent of sales. The remaining four categories: heat-resistant, high-temperature, etching filler, and metallic together make up less than one percent of total sales. pCBtF use is most prevalent in the general multi-component, etching

filler, and metallic coating categories. Figure 2-1 ─ Coating Category Sales Percentages illustrates the percentage breakdown of Rule 1107 coating category sales in California.

Figure 2-1 ─ Coating Category Sales Percentages



Based on survey data submitted by manufacturers, the use of pCBtF is prevalent in only three metal parts and products coating categories, while t-BAc is used to a much lesser extent (see Table 2-4 ─ Coating Category pCBtF Content). Survey responses indicate that viable alternatives without pCBtF and t-BAc are readily available for general one-component, heat-resistant, and high-temperature coatings.

Table 2-4 ─ Coating Category pCBtF Content

Coating Category	Percent pCBtF	Average Percent pCBtF
General One-Component	Up to 58%	4%
General Multi-Component	Up to 98%	15%
Etching Filler	Up to 64%	41%
Metallic	Up to 40%	39%
High-Temperature	0%	0%
Heat-Resistant	Up to 7%	1%

However, during meetings with industry stakeholders, manufacturers and end-users reported that pCBtF is still primarily relied upon to comply with Rule 1107 VOC limits for extreme performance, extreme high-gloss, military specification, camouflage, general multi-component, etching filler, and metallic coatings. Additionally, one end-user has indicated that they employ pCBtF in their colorants which are used over multiple coating categories. While replacements are being developed for these categories, they are not yet commercially available. This lack of suitable alternatives indicates that additional reformulation time will be necessary to phase out the use of pCBtF and t-BAc.

COMPARISON OF RULE 1107 AND NATIONAL VOC LIMTS

Staff evaluated whether coatings that meet the national rule VOC limits without relying on pCBtF or t-BAc could be used to support a quicker transition under Rule 1107. This approach was effective in the recent amendment to Rule 1151, where aligning VOC limits with the national rule allowed coatings without pCBtF and t-BAc to quickly replace the coatings being used in South Coast AQMD auto body shops.

However, for the coating categories reported in the manufacturer survey, Rule 1107 VOC limits are generally consistent with the national limits. Only general one component coatings have a higher VOC limit under the national rule, 340 g/L compared to 275 g/L under Rule 1107. Table 2-5 − Comparison of Rule 1107 and National VOC Limits provides a comparison between Rule 1107 air-dried VOC limits for the reported coating categories and the corresponding national rule limits for metal parts and products coatings. All coatings reported in the manufacturer survey are subject to the air-dried VOC limits specified in Rule 1107.

Staff considered whether a temporary increase in the VOC limit for general one-component coatings could expedite the phase out of pCBtF and t-BAc. However, staff determined that suitable alternatives for general one-component coatings are already available, making a temporary increase in VOC limits unnecessary for the phase-out of pCBtF and t-BAc.

Since South Coast AQMD is preempted from setting VOC limits above federal levels, the strategy used in Rule 1151 to temporarily raise VOC limits is not feasible for most Rule 1107 coating categories. Furthermore, even if such VOC emission increases were allowed in Rule 1107, they would not offer practical benefits to phase out pCBtF and t-BAc; manufacturers stated that metal parts and products coatings used nationally also contain pCBtF and t-BAc.

Table 2-5 – Comparison of Rule 1107 and National VOC Limits

Coating	Rule 1107 VOC Limits for Air-Dried Coatings (g/L)	National VOC Limits for Air-Dried Coatings (g/L)
General One-Component	275	340
General Multi-Component	340	340
Etching Filler	420	420
Heat Resistant	420	420
Metallic	420	420
High-Temperature	420	420
Military Specification	340	340
Camouflage	420	420
Extreme Performance	420	420
Extreme High-Gloss	340	420

OPPORTUNITIES FOR VOC REDUCTIONS

Staff analyzed the potential to reduce VOC limits in Rule 1107 to support the emission reduction objectives of CTS-01. Based on manufacturer survey data, the general one-component category appears to offer the greatest feasibility for VOC reductions. Approximately 85 percent of 2023 product sales in this category were at or below 227 g/L VOC (Rule 1107 limit of 275 g/L) and only about 15 percent of sales contained pCBtF and/or t-BAc. In addition, this category showed the highest prevalence of waterborne products, which accounted for between 55 and 92 percent of reported sales.

This shift toward waterborne formulations reflect industry's efforts to produce coatings that comply with both Rule 1107 and Rule 1113. Coatings that meet the requirements of both rules allow end users to use a single product for shop applications (covered under Rule 1107) and field touch-ups (covered under Rule 1113), simplifying maintenance and improving consistency in

coating performance. Because Rule 1113 generally imposes more stringent VOC limits than Rule 1107, it has driven broader adoption of waterborne technologies and encouraged manufacturers to develop lower-VOC products.

Manufacturers expressed strong interest in aligning VOC limits between Rule 1107 and Rule 1113 to streamline product development and compliance. Reformulating coatings, particularly without the use of pCBtF or t-BAc, requires significant time and investment. Aligning limits would reduce the need for duplicative reformulation, allowing manufacturers to focus on creating coatings that are both low in VOCs and free of toxic exempt compounds. This coordinated approach would support broader environmental and public health benefits.

The Rule 1113 amendment to phase out the use of pCBtF and t-BAc is underway. Once the rule development process to amend Rule 1113 is complete, manufacturers will have clearer direction to develop compliant coatings across both rules. Deferring changes to VOC limits in Rule 1107 until after Rule 1113 is amended will allow staff to reassess the most stringent and technically feasible VOC limit.

CHAPTER 3: PROPOSED AMENDED RULE 1107

INTRODUCTION

The main objective of PAR 1107 is to phase out the use of pCBtF and t-BAc as solvents in metal parts and products coatings due to toxicity and public health concerns.

The following information describes the structure of PAR 1107 and explains the provisions incorporated from other source-specific rules. New provisions and any modifications to provisions that have been incorporated are also explained. PAR 1107 also includes grammatical and editorial changes for clarity.

PROPOSED AMENDED RULE STRUCTURE

PAR 1107 will contain the following subdivisions:

a) Purpose
b) Applicability
c) Definitions
d) Requirements
e) Prohibitions
f) Methods of Analysis
g) Exemptions
h) Rule 442 Applicability
i) Alternative Emission Control Plan
j) Qualification for Classification as Extreme-Performance Coating
k) Recordkeeping
l) Emission Reduction Credits
m) Administrative Requirements

PROPOSED AMENDED RULE 1107

Subdivision (a) ─ Purpose and Subdivision (b) ─ Applicability

PAR 1107 separates the applicability from the purpose to be consistent with the current South Coast AQMD preferred rule structure.

Subdivision (c) ─ Definitions

To provide clarity, definitions used in PAR 1107 are capitalized as proper nouns to better distinguish defined terms from common terms. Refer to PAR 1107 for a complete list of definitions.

PAR 1107 includes the modification of existing definitions and the addition of one new definition. Key definition changes are referenced and discussed below.

- *CAMOUFLAGE COATING* is a Coating used, principally by the military, to conceal equipment from detection, and for purposes of this rule is considered a distinct category from Military Specification Coatings.

During rule development, a stakeholder raised concerns that the new requirement in paragraph (d)(8), which requires any coating represented as suitable for multiple categories to meet the lowest applicable VOC limit, could create ambiguity regarding applicable VOC limits for the military specification coating and camouflage coating categories. Camouflage coatings are often considered a subset of military specification coatings because many camouflage products are formulated to meet military approval requirements. This overlap risks subjecting camouflage coatings to the lower 340 g/L VOC limit for military specification coatings, instead of the 420 g/L VOC limit established to reflect their specialized function of concealing equipment.

To resolve this conflict, staff revised definitions to establish a clear separation between camouflage coatings and military specification coatings. Under the revised rule language, any coating advertised as a camouflage coating developed to meet a military specification is classified exclusively as a camouflage coating for the purposes of this rule and not as a military specification coating. Military specification coatings that are not used for camouflage would continue to be classified as military specification coatings and must meet the applicable VOC limit for that category (340 g/L). This clarification ensures that camouflage coatings remain subject to the 420 g/L VOC limit, while still allowing paragraph (d)(8) to apply in cases where camouflage coatings are marketed for multiple uses (e.g., camouflage and extreme high gloss). The updated definition ensures camouflage coatings retain their distinct functional role, and paragraph (d)(8) continues to operate as intended to prevent products from being marketed across multiple categories without complying with the most stringent applicable limit.

- *COLORANTS* are solutions of dyes or suspensions of pigments.

This definition is from Rule 1113 and was added to PAR 1107 to provide clarity regarding the treatment of colorants during the phase out of pCBtF and t-BAc. Including a definition ensures appropriate application of requirements for products that rely on colorants containing pCBtF, particularly in general one-component coatings. The addition also clarifies that colorants are subject to a separate five-year phase-out schedule similar to other coating categories, to accommodate reformulation challenges unique to coatings requiring the addition of colorants.

- *ETCHING FILLER* is a Coating that contains at least 1/2-percent acid, by weight, and is used instead of applying a Pretreatment Coating followed by a primer.

This definition is revised to remove the percent solids limitation. A coating manufacturer indicated that reformulating etching fillers to meet existing VOC limits without exempt solvents and without increasing solid content past the 23-percent limitation would be technically challenging. Removing the restriction on solid content provides flexibility to reformulate while maintaining compliance with VOC limits and supports the phase-out of pCBtF and t-BAc.

- *GENERAL MULTI-COMPONENT COATING* is a Coating that does not otherwise meet the definition of a specific category in Table 1 and requires the addition of a separate reactive resin, commonly known as a Catalyst or Hardener, before application to form an acceptable dry film.

Previously, general multi-component coatings were defined solely by the formulation, i.e., a coating requiring the addition of a reactive resin. Without further clarification, the definition would unintentionally apply to coatings that properly belong in more specific categories, which would be inconsistent with the intent of paragraph (d)(8) and risk nullifying VOC limits determined appropriate for specialty coating categories.

To address this issue, staff revised the definition of general multi-component coating to clarify that it is a distinct category, applying only to coatings that both require the addition of a reactive resin and do not meet the definition of any other specific category in Table 1. In addition, the name of the defined term is updated to be consistent with the references to the coating category in all PAR 1107 provisions.

- *GENERAL ONE-COMPONENT COATING* is a Coating that does not otherwise meet the definition of a specific category in Table 1 and 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.

Please refer to the discussion of the *General Multi-Component Coating* definition for additional context, as the modifications to the *General One-Component Coating* definition serve the same purpose and intent.

- *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

$$= \frac{W_v - W_w - W_{ex}}{V_m - V_w - V_{ex}}$$

Where: W_v = *weight of volatile compounds in grams*
  - W_w = *weight of water in grams*
  - W_{ex} = *weight of Exempt Compounds in grams*
  - V_m = *volume of material in liters*
  - V_w = *volume of water in liters*
  - V_{ex} = *volume of Exempt Compounds in liters*

The definition is modified with updated subscripts for volatile compounds and exempt compounds. The changes are to be consistent with other coating rules and have no impact on the method of calculation or the resulting values calculated using the equation.

- *GRAMS OF VOC PER LITER OF MATERIAL is the weight of VOC per volume of material and can be calculated by the following equation:*

  Grams of VOC per Liter of Material

$$= \frac{W_v - W_w - W_{ex}}{V_m}$$

Where: Wv = weight of volatile compounds in grams
- *Ww = weight of water in grams*
- *Wex = weight of Exempt Compounds in grams*
- *Vm = volume of material in liters*

The definition is modified with updated subscripts for volatile compounds and exempt compounds. The changes are to be consistent with the other coating rules and have no impact on the method of calculation or the resulting values calculated using the equation.

- *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, excluding Camouflage Coatings*.

Please refer to the discussion of the *Camouflage Coating* definition for additional context, as the modifications to the *Military Specification Coating* definition serve the same purpose and intent.

- *REDUCER OR THINNER means any solvent specifically labeled and formulated to reduce the viscosity of Coatings.*

This is a definition from Rule 1151 that was modified to remove the specific reference to automotive coatings. The definition is added to provide clarity on general one-component coatings as well as which products are included in the storage and disposal provision in subparagraph (d)(4)(A).

Subdivision (d) ─ Requirements

VOC Content of Coatings – Paragraph (d)(2)

PAR 1107 prohibits the manufacture, supply, sale, offer for sale, marketing, blending, distribution, packaging, or repackaging any metal parts and products coating for use within South Coast AQMD jurisdiction that does not comply with the applicable VOC limits specified in Table 1. In addition, PAR 1107 prohibits the application of non-compliant coatings.

While the use of non-compliant products is restricted within South Coast AQMD, the rule does not prohibit the transport or storage of such products through or within South Coast AQMD, provided they are not applied or intended for use locally. For example, a coating regulated by Rule 1107 that contains VOCs in excess of the limits specified for the respective coating category in Table 1 may be stored or transported through South Coast AQMD as long as that product is not applied or intended for use with the bounds of South Coast AQMD jurisdiction. The amendment is intended to close potential regulatory loopholes, which is specified as an emission reduction strategy in the 2022 AQMD Control Measure CTS-01 and is consistent with existing provisions in Rule 1113 and Rule 1130 – Graphic Arts.

PAR 1107 also includes a minor revision to paragraph (d)(2) to reference a new title for the table listing the Rule 1107 coating categories and their respective VOC limits. PAR 1107 does not include any changes to air-dried or baked VOC limits for any coating category.

Lowest Applicable VOC Limit – Paragraph (d)(8)
Paragraph (d)(8) is a new provision requiring any coating advertised to be suitable for use in multiple coating categories meet the lowest VOC limit listed in Table 1. For example, a coating that is advertised to be used as metallic (VOC limit of 420 g/L) and extreme high-gloss (VOC limit of 340 g/L) must comply with the lower of the two established limits in Table 1 of PAR 1107. In this scenario, the multi-use coating is required to have a VOC content of no more than 340 g/L. Paragraph (d)(8) is based on a provision in Rule 1113 and modified to reference the coating categories in PAR 1107.

Subdivision (e) ─ Prohibitions

Coating Specifications – Paragraph (e)(1)
Paragraph (e)(1) is revised to clarify the requirement while maintaining the same intent. The provision prohibits any person, including manufacturers, suppliers, contractors, or end-users, from directing, instructing, or otherwise specifying the application of a coating in a manner that is non-compliant with Rule 1107 requirements.

The inclusion of the phrase "within the South Coast AQMD" clarifies that the prohibition applies only to activities conducted within South Coast AQMD's jurisdiction. The phrase "written and oral information, directions, and contracts" replaces "written and oral contracts" to more comprehensively describe the range of communications, such as specifications, product data sheets, or instructions, that may be used to direct the use of coatings.

The revised rule language improves clarity and enhances enforcement regarding communication of coating specifications.

Carcinogenic Materials and Exempt Compounds – Paragraph (e)(2)
PAR 1107 establishes upper concentration limits for cadmium, hexavalent chromium, Group II exempt compounds (except volatile methyl siloxanes), pCBtF, and t-BAc. The upper concentration limits for cadmium and hexavalent chromium aligns with the limits established by U.S. EPA under the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§ 6901 *et seq*. RCRA concentration limits are not incorporated by reference to allow staff to evaluate if any future changes are appropriate for air quality regulations. This provision is based on a provision in Rule 1151 but modified to exclude volatile methyl siloxanes.

The proposed amendments prohibit the manufacturing, supply, sale, offer for sale, marketing, blending, distributing, packaging, or repackaging of metal parts and products coatings containing any of the compounds listed in paragraph (e)(2) with concentrations exceeding the specified limits, when such coatings are intended for use within South Coast AQMD jurisdiction. Additional details on how this prohibition applies can be found in the discussion on the proposed changes to paragraph (d)(2) of PAR 1107.

The proposed prohibition language includes an upper concentration limit of 0.01 percent by weight to account for potential trace levels of Group II exempt compounds, pCBtF, and t-BAc. The upper concentration limit for Group II exempt compounds does not include volatile methyl siloxanes (VMS) due to the lack of conclusive toxicity data. Staff can reassess the use of VMS in Rule 1107 once U.S. EPA releases the Final Risk Evaluation.

To facilitate the prohibition of pCBtF and t-BAc, staff is proposing a phase out approach. Coatings that do not require additional time to reformulate to less than or equal to 0.01 percent by weight of pCBtF and/or t-BAc can continue to be manufactured until December 5, 2026. The compliance schedule accounts for time needed to work through existing inventory of coatings containing greater than 0.01 percent by weight of pCBtF and t-BAc as well as any inventory that has been ordered prior to rule amendment. Non-reformulation coatings manufactured on or prior to December 5, 2026, can continue to be sold until December 5, 2027. After December 5, 2027, the sale or redistribution for the purpose of sale for use within South Coast AQMD is strictly prohibited. The final step to phase out pCBtF and t-BAc is a two-year use-though timeline, which allows any owner or operator to use their existing inventory of coatings containing greater than 0.01 percent by weight of pCBtF and/or t-BAc, until December 5, 2029. After December 5, 2029, coatings containing greater than 0.01 percent by weight of pCBtF and/or t-BAc cannot be applied to any metal parts and products subject to the provisions of this rule, consistent with the prohibition in paragraph (d)(2). This prohibition does not restrict transport or storage of these coatings when they are not intended for use within the South Coast AQMD.

PAR 1107 provides approximately five years for manufacturers to reformulate extreme high-gloss, extreme performance, metallic, general multi-component, and etching filler coatings without pCBtF and t-BAc. These five coating categories can continue to be manufactured with greater than 0.01 percent by weight of pCBtF and/or t-BAc until December 5, 2030. Any metallic, general multi-component, and etching filler coatings containing more than 0.01 percent by weight of pCBtF and/or t-BAc manufactured on or prior to December 5, 2030 can continue to be sold until December 5, 2031, and continued to be used until December 5, 2033.

In response to stakeholder comments on the use of military specification and camouflage coatings within South Coast AQMD, staff evaluated the appropriate reformulation timelines. Both coating categories are subject to stringent Army Research Laboratory (ARL) performance standards that require multi-year product development, laboratory and field testing, and formal certification before reformulated products can be approved for military use. To address these additional challenges, PAR 1107 includes extended phase-out dates that balance the need to eliminate pCBtF and t-BAc with the practical realities of military coating development. Military specification and camouflage coatings may continue to be manufactured with more than 0.01 percent by weight of pCBtF and/or t-BAc until December 5, 2031. Military specification and camouflage coatings manufactured on or before that date may be sold until December 5, 2032, and used until December 5, 2034.

Colorants Containing pCBtF and t-BAc – Paragraph (e)(3)

PAR 1107 was revised to include a new provision addressing colorants containing pCBtF and/or t-BAc. Stakeholders indicated that many thousands of colors will need to be reformulated. To account for this, PAR 1107 establishes a phase-out schedule that provides additional time for the

manufacture, distribution, and use of colorants containing pCBtF and/or t-BAc before full prohibition.

Specifically, colorants containing more than 0.01 percent by weight of pCBtF and/or t-BAc may continue to be:

- Manufactured until December 5, 2030;
- Supplied, sold, offered for sale, marketed, blended, distributed, packaged, or repackaged until December 5, 2031; and
- Applied until December 5, 2033.

After the specified dates, all colorants used or intended for use within South Coast AQMD are prohibited from containing pCBtF and t-BAc greater than 0.01 percent by weight.

This approach provides additional flexibility for manufacturers to develop compliant colorants, while ensuring that the phase-out of toxic exempt solvents remains health protective and enforceable. By aligning the compliance schedule for colorants with the extended pCBtF and t-BAc phase-out timelines provided for other complex coating categories, PAR 1107 ensures that manufacturers have sufficient time for research, development, testing, and field validation of reformulated colorants. The following Table 3-1 − pCBtF and t-BAc Prohibition Timeline provides a summary of the proposal.

Table 3-1 – pCBtF and t-BAc Prohibition Timeline

Coating Category or Coating Component	Final Manufacture Date	Final Sell-Through Date	Final Use-Through Date
Military Specification	December 5, 2031	December 5, 2032	December 5, 2034
Camouflage			
Metallic	December 5, 2030	December 5, 2031	December 5, 2033
General Multi-Component			
Etching Filler			
Extreme High-Gloss			
Extreme Performance			
Colorant			
All Other Categories	December 5, 2026	December 5, 2027	December 5, 2029

The proposed phase-out timeline does not exempt any owner or operator from complying with South Coast AQMD Rule 1401 – New Source Review of Toxic Air Contaminants (Rule 1401). If a health risk assessment is required under Rule 1401 due to the use of coatings containing pCBtF and/or t-BAc, the owner or operator remains subject to that requirement regardless of the compliance schedule in PAR 1107.

Subdivision (f) – Methods of Analysis

Exempt Perfluorocarbon Compounds Subparagraph (f)(1)(B)
This provision specifies the approved test methods to quantify amounts of exempt perfluorocarbon compounds. The structure and numbering are amended and streamlined for clarification; however, the intent of subparagraph (f)(1)(B) remains unchanged. The updated rule language of this provision is consistent with Rule 1151.

Subdivision (g) – Exemptions

Aerosol Coating Products – Paragraph (g)(4)
Paragraph (g)(4) is revised to provide a full exemption for aerosol coating products from all provisions of PAR 1107. During rule development, staff received a comment letter requesting the exemption of aerosol coatings under Rule 1107 be expanded to be consistent with other South Coast AQMD rules, including Rules 1113 and 1151.

Aerosol paints are classified as consumer products under California law and are regulated primarily by California Air Resources Board (CARB). Health and Safety Code § 41712 establishes limitations on the authority of local air districts to regulate aerosol paints. Specifically:

- Health and Safety Code § 41712 (i)(1) prohibits districts from adopting or enforcing rules "…regarding the VOC content of, or emissions from, aerosol paints…" until CARB has adopted statewide standards, and in such event, any air district regulation addressing aerosol paints must not differ from CARB's corresponding regulation; and
- Health and Safety Code § 41712 (i)(2) requires CARB to adopt regulations achieving the maximum feasible reduction in VOC emissions from aerosol paints.

Because CARB has not adopted a statewide regulation for aerosol coatings used in metal parts and products coating operations, South Coast AQMD is precluded from establishing or enforcing regulations for such aerosol products. The revision to paragraph (g)(4) reflects these statutory limitations and is consistent with existing South Coast AQMD rules regarding aerosol coating products.

Subdivision (m) ─ Administrative Requirements

Manufacturer Labeling Requirements ─ Paragraph (m)(1)
Paragraph (m)(1) requires that all metal parts and products coatings, as well as coating components, be labeled in accordance with Rule 443.1 – Labeling of Materials Containing Organic Solvents before being sold or offered for sale. This new provision incorporates Rule 443.1 by reference and does not expand Rule 443.1 applicability. Paragraph (m)(1) takes effect upon PAR 1107 adoption, as coatings regulated under Rule 1107 are already subject to the requirements of Rule 443.1.

Statement of Manufacturer Liability ─ Paragraph (m)(2)
Paragraph (m)(2) includes a provision of non-liability for manufacturers, distributors, or sellers of coatings regulated by PAR 1107. These parties shall not be held liable for non-compliant use of metal parts and products coatings, unless the manufacturer, distributor, or seller is aware or should have suspected that the coating would be used in a non-compliant manner. This is a provision from Rule 1113 that was modified slightly to clarify applicability and enhance enforceability. The addition of the phrase "or had reason to suspect" broadens the types of evidence that may be used to determine a violation, allowing for consideration of circumstances that reasonably indicate a manufacturer, distributor, or seller was aware of potential non-compliant use.

CHAPTER 4: IMPACT ASSESSMENTS

INTRODUCTION

Impact assessments were conducted as part of PAR 1107 rule development to assess the environmental and socioeconomic implications. These impact assessments include a socioeconomic impact assessment and a California Environmental Quality Act (CEQA) analysis. Draft findings and comparative analyses were prepared pursuant to Health and Safety Code Sections 40727 and 40727.2, respectively.

EMISSION REDUCTIONS

PAR 1107 establishes a compliance schedule to phase out metal parts and products coatings containing greater than 0.01 percent by weight pCBtF and t-BAc, without changing the established VOC emission limits. Therefore, no increase or decrease in VOC emissions is expected as a result of the adoption of PAR 1107. However, there is potential for VOC emission reductions in PAR 1107 once pCBtF and t-BAc are phased out of Rule 1113. See Chapter 2 for details on the potential for future VOC emission reductions in Rule 1107.

COSTS

Reformulating metal parts and product coatings to phase out toxic exempt solvents, such as pCBtF or t-BAc, requires significant resources. These costs typically include both capital costs, which are one-time investments, such as research and development as well as recurring costs tied to raw materials, including solvents, resins, and additives.

While solvent cost represents only one component of the total raw material cost, they play a notable role in determining the price and competitiveness of compliant coatings. In particular, pCBtF is more expensive than traditional solvents like toluene or xylene due to its specialized production processes, limited supplier base, and VOC-exempt status. The higher raw material cost of pCBtF contributes directly to the overall higher price of compliant coatings[6].

Coatings formulated with pCBtF are often more expensive, meaning that reformulated coatings using lower-cost solvents may offer net cost savings once capital investments are recovered. However, upfront capital cost manufacturers incur to reformulate existing products must also be considered.

To estimate capital reformulation costs for PAR 1107, staff relied on assumptions developed during the 2022 amendment to Rule 1168. In the 2022 amendment to Rule 1168, staff used a cost estimate of approximately $515,000 per reformulation, which includes expenses related to research and development. Based on the manufacturer survey data provided, PAR 1107 is estimated to require six total reformulations (four for general multi-component, one for etching filler, and one for metallic coatings), resulting in a total capital cost estimate of approximately $3,000,000.

To evaluate the potential for cost recovery, staff analyzed the impact of replacing pCBtF with a lower-cost solvent, ethyl acetate. Ethyl acetate is approximately 56 percent less expensive than pCBtF, based on current market prices ($30.66 vs. $69.77 per gallon). Using production volume

[6] Draft Staff Report for Proposed Amended Rule 1168

data from the 2024 manufacturer survey, approximately 82,000 gallons annually, staff developed two cost recovery scenarios based on the range of solvent content reported in coatings:

- Low Solvent Content Scenario: Assumes solvents comprise 29 percent of the total coating volume, consistent with the lower end of pCBtF use reported across surveyed products. (See Table 4-1 – Scenario 1: Low Solvent Content)

- High Solvent Content Scenario: Assumes solvents comprise 75 percent of the total coating volume, reflecting the upper end of reported pCBtF content. (See Table 4-2 – Scenario 2: High Solvent Content)

Table 4-1 – Scenario 1: Low Solvent Content

Cost Element	Baseline Coating Cost Estimate	Reformulated Coating Cost Estimate
Solvent Cost per Gallon	$69.77	$30.66
29 Percent of Production Volume (gal)	23,700	23,700
Total Material Cost	$1,654,400	$727,100
Total Cost Reduction	N/A	$927,300
Reformulation Cost	N/A	$3,000,000
Years to Recover Cost	$3,000,000 / $927,300 = 3.3	

Table 4-2 – Scenario 2: High Solvent Content

Cost Element	Baseline Coating Cost Estimate	Reformulated Coating Cost Estimate
Solvent Cost per Gallon	$69.77	$30.66
75 Percent of Production volume (gal)	61,300	61,300
Total Material Cost	$4,278,600	$1,880,400
Total Cost Reduction	N/A	$2,398,300
Reformulation Cost	N/A	$3,000,000
Years to Recover Cost	$3,000,000 / $2,398,300 = 1.3	

These scenarios demonstrate that capital reformulation costs can be offset within approximately one to three years, depending on the solvent content of the coating formulation. The cost analysis also highlights that transitioning to lower-cost solvents can yield long-term raw material cost savings, particularly in high-solvent formulations. In addition, manufacturers may further reduce capital reformulation costs through economies of scale and knowledge transfer. Reformulation strategies developed for one coating category may be applied to others, reducing overall reformulation burdens.

It is important to note that the capital cost estimates described above are based on product categories and production volumes reported by manufacturers who participated in the 2024 manufacturer survey. While this dataset encapsulates reported sales volumes, it likely does not capture the entire scope of the Rule 1107 coating universe. As a result, the actual number of reformulation efforts conducted in response to PAR 1107 may be higher, due to limited manufacturer survey responses. However, while the total capital cost associated with reformulation would increase with additional manufacturers, there would also be a larger volume of coatings sold within South Coast AQMD. This increased sales volume would, in turn, result in greater raw material cost savings and could shorten the time needed to recover reformulation costs, even with a larger number of reformulation efforts.

Military specification, camouflage, extreme high-gloss, and extreme performance coatings, as well as colorants, were not included in the cost analysis due to the absence of sales volume data. For these specialized coating categories and colorants, the lack of data reflects their limited reported sales volumes and reliance on highly specialized formulations. Nonetheless, staff anticipates upfront capital costs for reformulating these coating categories and colorants. For military specification and camouflage coatings in particular, costs are expected to be higher due to the extensive testing, product development, and certification processes required by the U.S. Army Research Laboratory and other defense agencies. These additional certification requirements are expected to influence both the scale and timing of reformulation costs, differentiating them from other coating categories.

SOCIOECONOMIC IMPACT ASSESSMENT

Introduction

On March 17, 1989, the South Coast Air Quality Management District (South Coast AQMD) Governing Board adopted a resolution which requires an analysis of the socioeconomic impacts associated with adopting and amending rules and regulations. In addition, Health and Safety Code Sections 40440.8 and 40728.5 require a socioeconomic impact assessment for proposed and amended rules resulting in significant impacts to air quality or emission limitations. Thus, this Socioeconomic Impact Assessment has been prepared in accordance with Health and Safety Code and South Coast AQMD Governing Board requirements. Lastly, Health and Safety Code Section 40920.6 requires an incremental cost-effectiveness analysis for a proposed rule or amendment which imposes Best Available Retrofit Control Technology (BARCT) or "all feasible measures" requirements relating to emissions of ozone, carbon monoxide (CO), sulfur oxides (SOx), nitrogen oxides (NOx), volatile organic compounds (VOC), and their precursors. PAR 1107 is designed to partially implement the 2022 AQMP control measure CTS-01 to phase out pCBtF and t-BAc from metal coatings. Since PAR 1107 is not focused on reducing emissions of criteria pollutants or their precursors, a cost-effectiveness analysis is not required and has not been prepared.

The phase out timeline varies by coating type, as some coatings will require reformulation. Following the reformulation period, along with designated sell-through and use-through periods, PAR 1107 will prohibit metal coatings from containing more than 0.01 percent by weight of pCBtF and/or t-BAc by December 5, 2034. Additionally, PAR 1107 establishes prohibitions of other toxic compounds in coatings, includes new provisions to enhance enforceability, and incorporates revisions for clarity.

Legislative Mandates

The legal mandates directly related to the Socioeconomic Impact Assessment of PAR 1107 include South Coast AQMD Governing Board resolutions and various sections of the Health and Safety Code.

South Coast AQMD Governing Board Resolution

On March 17, 1989, the South Coast AQMD Governing Board adopted a resolution that requires an analysis of the economic impacts associated with adopting and amending rules and regulations which consider all of the following elements:

- Affected industries;
- Range of probable costs;
- Cost-effectiveness of control alternatives; and
- Public health benefits.

Health and Safety Code Requirements

The state legislature adopted legislation which reinforces and expands the South Coast AQMD Governing Board resolution requiring socioeconomic impact assessments for rule development projects. Health and Safety Code Section 40440.8 requires a socioeconomic impact assessment for any proposed rule, rule amendment, or rule repeal which "will significantly affect air quality or emissions limitations."

To satisfy the requirements in Health and Safety Code Section 40440.8, the scope of the analysis should include all of the following information:

- Type of affected industries;
- Impact on employment and the regional economy;
- Range of probable costs, including those to industry;
- Availability and cost-effectiveness of alternatives to the rule;
- Emission reduction potential; and
- Necessity of adopting, amending, or repealing the rule in order to attain state and federal ambient air quality standards.

The estimated annual cost of PAR 1107 is anticipated to be minimal to none (less than one million U.S. dollars) which is less than the threshold at which the macroeconomic modeling tool provides reliable employment impact estimates. Therefore, a job impact analysis was not conducted.

Health and Safety Code Section 40728.5 requires the South Coast AQMD Governing Board to: 1) actively consider the socioeconomic impacts of regulations; 2) make a good faith effort to minimize adverse socioeconomic impacts; and 3) include small business impacts. To satisfy the requirements in Health and Safety Code Section 40728.5, the socioeconomic impact assessment should include the following information:

- Type of industries or business affected, including small businesses; and
- Range of probable costs, including costs to industry or business, including small business.

In addition, to satisfy the requirements in Health and Safety Code Section 40920.6, the scope of the analysis should include an incremental cost-effectiveness analysis for a proposed rule or amendment which imposes BARCT or "all feasible measures" requirements relating to emissions of ozone, CO, SOx, NOx, VOC, and their precursors. However, since PAR 1107 is not focused on reducing emissions of criteria pollutants or their precursors and instead will reduce toxics from metal coatings, a cost-effectiveness analysis and an incremental cost-effectiveness analysis pursuant to Health and Safety Code Section 40920.6 are not required and have not been prepared.

Affected Facilities and Industries

Implementation of PAR 1107 would potentially affect approximately 560 facilities in the South Coast AQMD jurisdiction with 290 facilities in Los Angeles County, 130 facilities in Orange County, 73 facilities in San Bernardino County, and 67 in Riverside County. Table 4-3 presents the distribution of the affected facilities across various industrial sectors under the North American Industrial Classification System (NAICS). As summarized in the table, the largest share (25 percent) of affected facilities belongs to the Fabricated Metal Product Manufacturing industry (NAICS 332), followed by 8.6 percent of the affected facilities in the Wholesale Trade industry (NAICS 42) and 8 percent in the Construction industry (NAICS 23).

Table 4-3 - Distribution of Affected Facilities Across Industries

NAICS	Industry Name	Number of Facilities	Percentage of Facilities
332	Fabricated metal product manufacturing	140	25.0%
42	Wholesale trade	48	8.6%
23	Construction	45	8.0%
339	Miscellaneous manufacturing	41	7.3%
811	Repair and maintenance	31	5.5%
335	Electrical equipment and appliance manufacturing	29	5.2%
333	Machinery manufacturing	29	5.2%
54	Professional, scientific, and technical services	26	4.6%
44-45	Retail trade	18	3.2%
512	Motion picture and sound recording industries	15	2.7%
337	Furniture and related product manufacturing	15	2.7%
532-533	Rental and leasing services; Lessors of nonfinancial intangible assets	14	2.5%
3361-3363	Motor vehicles, bodies and trailers, and parts manufacturing	13	2.3%
331	Primary metal manufacturing	13	2.3%
334	Computer and electronic product manufacturing	11	2.0%
562	Waste management and remediation services	8	1.4%
61	Educational services	7	1.3%
325	Chemical manufacturing	6	1.1%
327	Nonmetallic mineral product manufacturing	6	1.1%
92	State and Local Government	5	0.9%
487-488	Scenic and sightseeing transportation; Support activities for transportation	4	0.7%
713	Amusement, gambling, and recreation	4	0.7%
326	Plastics and rubber product manufacturing	4	0.7%
323	Printing and related support activities	4	0.7%
3364-3369	Other transportation equipment manufacturing	4	0.7%
813	Membership associations and organizations	4	0.7%
321	Wood product manufacturing	3	0.5%

Table 4-3 - Distribution of Affected Facilities Across Industries (concluded)

NAICS	Industry Name	Number of Facilities	Percentage of Facilities
213	Support activities for mining	2	0.4%
22	Utilities	2	0.4%
622	Hospitals	1	0.2%
313-314	Textile mills; Textile product mills	1	0.2%
324	Petroleum and coal products manufacturing	1	0.2%
481	Air transportation	1	0.2%
513	Publishing industries	1	0.2%
517	Telecommunications	1	0.2%
483	Water transportation	1	0.2%
624	Social assistance	1	0.2%
518-519	Internet publishing and broadcasting; ISPs, search portals, and data processing; Other information services	1	0.2%
Total		**560**	**100%**

Small Business Analysis

The South Coast AQMD defines a "small business" in Rule 102 for purposes of fees as one which employs 10 or fewer persons and which earns less than $500,000 in gross annual receipts. The South Coast AQMD also defines "small business" for the purpose of qualifying for access to services from the South Coast AQMD's Small Business Assistance Office as a business with an annual receipt of $5 million or less, or with 100 or fewer employees. In addition to the South Coast AQMD's definition of a small business, the United States (U.S.) Small Business Administration and the federal 1990 Clean Air Act Amendments (1990 CAAA) each have their own definition of a small business.

The 1990 CAAA classifies a business as a "small business stationary source" if it: 1) employs 100 or fewer employees; 2) does not emit more than 10 tons per year of either VOC or NOx; and 3) is a small business as defined by the U.S. Small Business Administration. Based on firm revenue and employee count, the U.S. Small Business Administration definition of a small business varies by six-digit NAICS codes.[7] The facilities affected by PAR 1107 are within the sectors of Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers (NAICS 332812). According to the small-business definition of the U.S. Small Business Administration, the facilities in these sectors that each have fewer than 600 employees will be classified as small businesses.

South Coast AQMD mostly relies on Dun and Bradstreet data to conduct small business analyses for private companies. In cases where the Dun and Bradstreet data are unavailable or unreliable,

[7] U.S. Small Business Administration, 2023 Small Business Size Standards, https://www.sba.gov/document/support-table-sizestandards, accessed September 2025.

other external data sources such as Manta, Hoover, LinkedIn, and company website data will be used. The determination of data reliability is based on data quality confidence codes in the Dun and Bradstreet data as well as staff's discretion. Revenue and employee data for publicly owned companies are gathered from Securities and Exchange Commission (SEC) filings. Since subsidiaries under the same parent company are interest-dependent, the revenue and employee data of a facility's parent company will be used for the determination of its small business status.

Employment and revenue estimates from 2024 Dun and Bradstreet data as well as other external sources are available for 465 of the 560 affected facilities. Note that although the employment and revenue data for some facilities are unknown or missing, the current data used for this small business analysis represents the most thorough and accurate information obtainable as of the date of publication. Table 4-4 presents the number of affected facilities that qualify as small businesses, based on each of the four small business definitions. For the 465 facilities with available employment and revenue data, up to 398 facilities may qualify as small businesses under various small-business definitions. Note that only 38 out of the 465 facilities have reported their annual VOC and/or NOx emissions to the South Coast AQMD in 2024, and 14 of the 38 facilities qualify as small businesses based on the 1990 CAAA definition.

Table 4-4 - Number of Small Businesses Based on Various Definitions

Small Business Definition	Number of Small Businesses
South Coast AQMD Rule 102	99
South Coast AQMD Small Business Assistance Office	358
U.S. Small Business Administration	398
1990 CAAA	14

Compliance Costs

PAR 1107 will phase out the use of coatings formulated with pCBtF and/or t-BAc in metal coating operations but most of the coating manufacturers are located outside of the South Coast AQMD jurisdiction. Thus, implementation of PAR 1107 would mainly affect metal coating operators through pricing changes associated with reformulating coatings. However, as shown in Tables 4-1 and 4-2 of this Staff Report, the number and type of reformulated coatings utilized by each affected facility is not anticipated to change relative to the metal coating operations that currently utilize coatings formulated with pCBtF and/or t-BAc. Specifically, the analysis shows that a hypothetical coating manufacturer could recover the upfront reformulation costs within 1.3 to 3.3 years for products formulated with different solvents. Since the cost-recovery period for producing reformulated products is shorter than a typical life cycle of a new product formulations, the prices of reformulated coatings are expected to remain constant or reduce over time. Moreover, because the potential replacement solvents, such as ethyl acetate, generally cost less than pCBtF and/or t-BAc the upfront research and development (R&D) and other reformulation production costs would be offset by a recurring cost savings over time. Thus, metal coating operators will be able to transition to other reformulated coatings without incurring a substantial price increase. For these

reasons, the compliance costs and related socioeconomic impacts are expected to be minimal to none within the South Coast AQMD jurisdiction for PAR 1107.

Macroeconomic Impacts on the Regional Economy

Regional Economic Models, Inc. (REMI) developed the Policy Insight Plus Model (PI+ v3) is a tool that South Coast AQMD typically uses to assess the impacts of rule development projects on the job market, prices, and other macroeconomic variables in the region when the average annual compliance cost is greater than one million current U.S. dollars ($1 MM).[8] However, when the average annual compliance cost of a project is less than $1 MM, the model cannot reliably determine the macroeconomic impacts, because resultant impacts from the project would be too small relative to the baseline economic forecast.

Since the average annual compliance cost of PAR 1107 is estimated to be minimal to none (e.g., less than $1 MM), a macroeconomic impact analysis has not been conducted for PAR 1107.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

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

DRAFT FINDINGS UNDER HEALTH AND SAFETY CODE 40727

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, as defined in that section, based on relevant information presented at the Public Hearing, this written analysis, and the rulemaking record. The draft findings are as follows:

Necessity – PAR 1107 is needed to phase out pCBtF and t-BAc to reduce toxicity in metal parts and products coatings as specified by the 2022 AQMP Control Measure CTS-01.

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, 39650 *et. seq.*, 40000, 40001, 40440, 40702, 40725 through 40728, and 41508.

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

[8] Regional Economic Modeling Inc. (REMI). Policy Insight® for the South Coast Area (70-sector model). Version 3. 2023.

Consistency – The South Coast AQMD Governing Board has determined that PAR 1107 is 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 1107 does 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 40001, and 40702.

COMPARATIVE ANALYSIS

Pursuant to California Health and Safety Code Section 40727.2, South Coast AQMD is required to prepare a comparative analysis when adopting, amending, or repealing a rule or regulation. This analysis evaluates the proposed amendments relative to existing federal requirements, South Coast AQMD rules, and other air pollution control requirements and guidelines applicable to metal coating operations. At the state level, ~~the California Air Resources Board (~~CARB~~)~~ has not adopted any Suggested Control Measures (SCMs), regulations, or guidance specific to VOC emissions from metal parts and products coatings. The closest parallel is the CARB SCM for Architectural Coatings, which establishes VOC limits for a range of coating categories but does not address the specialty formulations or operational contexts associated with Rule 1107 metal parts and products coatings. The comparative analysis for PAR 1107 can be found in Table 4-5

Table 4-5 – PAR 1107 Comparative Analysis

Rule Element	PAR 1107	40 CFR Subpart MMMM National Emission Standard for Hazardous Air Pollutants (NESHAP): Surface Coating of Miscellaneous Metal Parts and Products	40 CFR Subpart NNNN National Emission Standard for Hazardous Air Pollutants (NESHAP): Surface Coating of Large Appliances	Control Techniques Guidelines for Metal Furniture Coatings	Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts	Control Techniques Guidelines for Large Appliance Coatings
Applicability	Coating of metal parts and products, excluding aerospace, magnet wire, marine craft, motor vehicle, metal container, coil coating, and architectural components coated at the structure site	Metal coating operations excluding aerospace, large appliances, metal wire or cable, marine craft, coil coating, motor vehicles located at a major source of Hazardous Air Pollutant (HAP) emissions	Metal coating operations on large appliances located at a major source of HAP emissions	Coatings on metal furniture	Metal coatings excluding aerospace, large appliances, marine craft, coil coating, motor vehicles	Coatings on large metal appliances
VOC Limits	VOC limits by individual coating category (same as prior Rule 1107); no VOC limit changes in 2025 amendment. Prohibits pCBtF and t-BAc >0.01%	Organic HAP emissions limited to 0.31 kg organic HAP per liter of coating solids used during each 12- month compliance period	Organic HAP emissions limited to 0.23 kg organic HAP per liter of coating solids used during each 12- month compliance period	VOC limits by individual coating category or use of add-on controls	VOC limits by individual coating category or use of add-on controls; VOC limits are the	VOC limits by individual coating category or use of add-on controls; all VOC limits

	by weight; phase-out schedule by coating category; prohibits > 1.0 ppm cadmium, > 5.0 ppm hexavalent chromium, and > 0.01% by weight of group II compounds (excluding volatile methylated siloxanes) effective date of adoption				same or higher than PAR 1107	are the same as PAR 1107
Transfer Efficiency	HVLP or equivalent transfer efficiency required	None	None	HVLP or equivalent transfer efficiency	HVLP or equivalent transfer efficiency	HVLP or equivalent transfer efficiency
Work Practices	Storage, use, and disposal of coatings/waste in closed containers; solvent cleaning under Rule 1171	None	None	Storage, use, and disposal of coatings and waste; VOC limits and work practices for solvent cleaning	Storage, use, and disposal of coatings and waste; VOC limits and work practices for solvent cleaning	Storage, use, and disposal of coatings and waste; VOC limits and work practices for solvent cleaning
Reporting	None	Semiannual compliance, performance test reports,	Semiannual compliance,	None	None	None

		startup, shutdown, and malfunction reports	performance test reports, startup, shutdown, and malfunction reports			
Notification	None	Initial, performance test compliance status, and continuous emission monitor	Initial and compliance status	None	None	None
Recordkeeping	Compliance documentation maintained for two years usage under Rule 109	Compliance documentation maintained for five years	Compliance documentation maintained for five years	None	None	None

APPENDIX A: RESPONSE TO PUBLIC COMMENTS

PUBLIC WORKSHOP COMMENTS

COMMENT LETTERS

Public Workshop Comments

Public Workshop Commenter #1: Rita Loof – RadTech International

The commenter expressed the following:

1a) U.S. EPA Method 24 is not appropriate for UV/EB/LED coatings, resulting in uncertainty regarding VOC determination and subsequent VOC labeling requirements. The commenter stressed that ASTM D7767 is more appropriate for UV/EB/LED materials and that South Coast AQMD acted prematurely in removing ASTM D7767 from Rule 1107 after U.S. EPA's proposed limited disapproval[9]. The commenter also stated that there is inconsistency because ASTM D7767 remains in Rule 1130 − Graphic Arts (Rule 1130).

1b) Referencing Rule 443.1 labeling requirements creates challenges for UV/EB/LED coatings. The commenter noted that these coatings generally contain no VOCs or only trace amounts, but without a reliable test method there is no clear way to calculate VOC content for labeling. The commenter expressed concern about potential liability and requested an exemption from the Rule 443.1 labeling requirements for UV/EB/LED coatings.

Staff Response to Public Workshop Commenter #1

1a) Staff recognizes that U.S. EPA Method 24 is not compatible with thin film UV/EB/LED materials. While ASTM D7767 may be more suitable for these applications, it is not a federally approved method for coatings and cannot be enforced without demonstrated equivalency to U.S. EPA-approved methods. ASTM D7767 was approved for use in Rule 1130 during the 2014 amendment; however, the most recent U.S. EPA action was a proposed limited disapproval of its use in Rule 1107 in 2023 because the test method is not federally approved for coatings. To avoid triggering sanctions and ensure SIP approvability, South Coast AQMD proactively removed references to ASTM D7767 from Rule 1107. For any thin film UV/EB/LED coatings used within South Coast AQMD jurisdiction, staff would work directly with manufacturers to review data generated using ASTM D7767 or other appropriate methods, rather than relying solely on Method 24.

It is important to note that U.S. EPA Method 24 remains suitable for radiation curable materials when used in conjunction with ASTM D5403 Standard Test Methods for Volatile Content of Radiation Curable Materials. The only category of energy-curable materials without a reliable federally approved test method at this time is thin film UV/EB/LED coatings.

1b) The intent of paragraph (m)(1) is not to create new labeling requirements, but to remind affected industry of existing labeling requirements in Rule 443.1. Persons are required to comply with all applicable South Coast AQMD rules, regulations, and permit conditions. PAR 1107 does not expand or alter the scope of Rule 443.1. Therefore, PAR 1107 does not require the labeling of any coating that is not required to be labeled pursuant to Rule 443.1.

[9]https://www.federalregister.gov/documents/2022/08/22/2022-17935/air-plan-revisions-california-south-coast-air-quality-management-district

Public Workshop Commenter #2: Patrick Gieske – Seymour of Sycamore

The commenter requested that the compliance dates for reformulating products without pCBtF and t-BAc be adjusted to provide one year from PAR 1107 adoption date. They expressed concern that, under the current schedule, any delay in rule adoption would reduce the reformulation period.

Staff Response to Public Workshop Commenter #2

Staff revised the phase-out dates in PAR 1107 to address the comment. The updated compliance schedule now ties the reformulation deadlines to the date of amendment, ensuring that manufacturers are provided with the intended time to reformulate coatings before sell-through and use-through provisions take effect. For additional details, please see Chapter 3 of the Final Staff Report.

Public Workshop Commenter #3: Anna Yeutter – Metropolitan Water District

The commenter asked why ethyl acetate was used in the cost analysis as a replacement solvent for pCBtF and t-BAc. They questioned whether coatings manufacturers are currently considering ethyl acetate in reformulations and whether substituting it could affect VOC compliance or raise other formulation challenges.

Staff Response to Public Workshop Commenter #3

Staff selected ethyl acetate for the cost analysis because it is a commercially available solvent used to formulate coatings that can serve as an example of potential cost savings when replacing pCBtF. The analysis was intended to illustrate possible cost recovery scenarios, not to suggest that ethyl acetate should be used as substitute solvent for pCBtF and t-BAc. Manufacturers will ultimately determine the most suitable reformulation strategies for their products, which may or may not include ethyl acetate. Any replacement solvent used must result in a coating that is compliant with the applicable VOC limits in Rule 1107.

Comment Letters

Comment Letter #1

California Council for Environmental and Economic Balance
369 Pine Street, Suite 720, San Francisco, CA 94104
(415) 512-7890 | cceeb.org

September 10, 2025

Mr. Joshua Ewell
Planning, Rule Development, and Implementation
South Coast Air Quality Management District 21865 Copley Drive, Diamond Bar, CA 91765

Subject: Comments on Proposed Amended Rule 1107 – Coating of Metal Parts and Products

Dear Mr. Ewell,

The California Council for Environmental and Economic Balance (CCEEB) is a coalition of business, labor and public policy leaders that work together in pursuit of balanced and effective policy solutions. Many CCEEB member organizations operate facilities in the South Coast Air Quality Management District (SCAQMD or "District"). We are closely following the development of PAR 1107 which applies to maintenance activity at some of our members' facilities.

CCEEB understands the need to move away from the use of pCBtF and t-BAc in coatings. In developing this phaseout, we ask that you consider the following points:

(1) **Reformulation is needed.** CCEEB agrees with District's assessment that reformulating a new system involves many factors and requires significant time and resources. To many CCEEB members, reformulating a new solvent-based coating system without pCBtF or t-BAc is needed because waterborne or acetone-based coatings do not provide the desired protection and durability. A complete coating system includes multiple components such as primer, basecoat, topcoat, catalyst/initiator/hardener/accelerator, thinner/reducer, brush additive, colorant, etc. 1-1

(2) **Colorant Challenge.** It is important to note that a homogeneous colorant is essential to any coating system. While promising progress is made to primer, basecoat, topcoat, catalyst, thinner, brush additive, reformulating a new colorant without pCBtF or t-BAc presents a unique challenge, and requires additional R&D work and field verification tests. 1-2

(3) **Table 2 Prohibitions.** According to the proposed amendment to definitions, adding colorant during color matching is considered as a General One-Component system and determined that reformulation is not needed. In addition, the District also concluded that the 1-3

reformulation is not needed for Extreme High-Gloss, Extreme Performance, Prefabricated Architectural One-Component, Prefabricated Architectural Multi-Component, Touch Up and Repair coatings and imposed a July 1, 2026 manufacture phase out deadline. These conclusions were made without consideration of the need for colorant reformulation and its lengthy process. CCEEB suggests moving those categories to July 1, 2030 manufacturer phase out date.

1-3 Continued

(4) **Colorant Point-of-Sale Concept**. With known challenges of reformulating a new solvent-based colorant without pCBtF or t-BAc, no one could ensure its ultimate success. Because an insignificant amount of colorant is needed in coating applications, CCEEB suggests placing a Rule 1113 style limit to colorant at point-of-sale. CCEEB would agree to limit 55% wt. pCBtF and zero t-BAc in solvent-based colorant after July 1, 2030 at point-of-sale.

1-4

(5) **Metallic Coating Definition.** Metallic Coating is defined differently in Rule 1113 and in Rule 1107. Rule 1113 sets elemental metallic pigment at 48 grams per liter, while Rule 1107 limits the metal element to 5 grams per liter. CCEEB suggests aligning the Metallic Coating definition in Rule 1107 with Rule 1113 to eliminate confusion and streamline coating development and compliance.

1-5

(6) **Qualification for Classification as Extreme-Performance Coating.** Extreme-Performance coating is also included in Rule 1113 (as Industrial Maintenance Coating) and Rule 1136. However, Rules 1113 and 1136 do not require pre-approval from the District prior to applying Extreme-Performance coating. In general, the District assigns compliance responsibilities to facilities, including selecting the right coating categories to apply. It should not be any different in applying Extreme-Performance Coating. CCEEB suggests deleting PAR1107(j), where pre-approval from the District is required prior to applying Extreme-Performance coating, again to align with Rule 1113 and Rule 1136.

1-6

(7) **Touch Up and Repair Application.** The current Rule 1107 definitions limit Touch Up coating only "after the main coating operation" and Repair coating only "following normal painting operations". One could interpret as Touch Up and Repair applications are limited to metal parts and products manufacturer shop coating only. However, field touch up and repair coating to metal parts and products is unavoidable. This is primarily because scratches occur during shipping/handling and installation. CCEEB suggests including field touch up and repair in the definitions. CCEEB could also suggest combining Touch-Up and Repair definitions and VOC limits in Table 1.

1-7

(8) **Aerosol Coating Products.** Aerosol coating products are categorically exempt from District coating rules including Rules 1106, 1113, 1136, 1145 and 1151. However, PAR1107(g)(4) provides partial exemption to VOC limits only, making Rule 1107 the only District coating rule that requires recordkeeping of aerosol coating products. CCEEB suggests aligning with other coating rules and providing full exemption to aerosol coating products.

1-8

(9) **Possession of non-Rule 1107 compliant products.** CCEEB members are concerned about the word "possess" added in PAR1107 section (d)(2) and (e)(2). Coating products possessed by or stored at facilities may be used for different coating rule applications. Rule 1113 compliant products may not meet other coating rules standard, e.g., Rule 1107, but they are stored onsite. Prohibiting the possession of non-Rule 1107 compliant products on property is unreasonable, and impracticable. CCEEB suggests deleting the word "possess" in section (d)(2) and (e)(2) or clarifying that possession is allowed if the product will be used in compliance with another SCAQMD rule or used only outside the SCAQMD jurisdiction. 1-9

(10) Issues Specific to Utilities:

- Durability of the coating is very important. In the water and electric utility industry, the equipment is always in service except for scheduled maintenance and repair outages when there is a short window of opportunity to remove and re-apply protective coatings on the equipment. That is why the coatings used must be reliable, trustworthy and last for multiple years.
    - Coatings that contain t-BAc and/or pCBtF are more durable and perform much better in harsh conditions than other coatings. They have long-lasting corrosion protection, adhere well and maintain a strong bond with minimally prepared surfaces, offer good resistance to abrasion, and can withstand continuous high temperatures. Not applying a strong undercoat will result in premature corrosion and rusting.
    - The frequency of applying protective coating varies and depends on the environmental conditions (e.g., is the coating in contact with water, submerged underwater, in direct sunlight). In ideal conditions, the coatings can be expected to last 10 or more years. 1-10
- Coatings applied to utility equipment are based on specifications provided by the equipment manufacturer or utility engineers. In some cases, the manufacturer or engineer specifies a coating that contains pCBtF and/or t-BAc.
    - Did SCAQMD perform a technology assessment of coatings currently used on utility equipment to identify whether suitable alternative coatings without pCBtF and/or t-BAc are available that would do the same job?
    - Examples of utility equipment include pumps, valves, fuel gas compressors, and transformers.
    - If suitable alternative coatings are not available, the phase out dates should be delayed and/or SCAQMD could consider an exemption for specialty coatings for utility equipment.

- Employee safety is very important; the painters always wear personal protective equipment (PPE) and set up a containment area when applying coatings, so there is no exposure to any toxic substances when applying the coatings.
- Regulatory standards should also be considered. For example, protective coatings that contact drinking water must be approved/certified to comply with California drinking water standards.
- If coatings need to be reformulated, more time is needed before the phase out takes effect. Need to consider a full exemption if the coating cannot be reformulated in a way that does the same job.
- If phasing out pCBtF and/or t-BAc will increase the VOC content of the coatings, should the VOC Limits in Table 1 be increased?

1-10 Continued

CCEEB recognizes the importance of this proposed rule and, along with our members, commits to work with you in its development. Please let me know if you would like to meet to discuss our comments in greater detail.

Sincerely,

William J. Quinn
CCEEB Consultant

cc: Mr. Tim Carmichael
Mr. Peter Okurowski
Ms. Kirstin Kolpitcke
Members of the South Coast Air Project

Staff Response to Comment Letter #1

Response to Comment 1-1

Staff acknowledges reformulating solvent-based coating systems without pCBtF or t-BAc is a complex process requiring investment in research, testing, and product development. The proposed reformulation timelines in PAR 1107 were informed by extensive coordination with coating manufacturers and end users. This process included meetings with coating manufacturers including a coating manufacturer serving the defense industry, as well as ongoing discussions with the American Coatings Association. These discussions provided critical insight into the technical and logistical challenges associated with reformulation, such as the identification of viable replacement technologies (including alternative solvents and non-solvent-based coatings), the limited resources available to support concurrent reformulations across product lines, and the extended testing and qualification processes required to ensure product performance.

In addition to feedback from coating manufacturers, staff also met with coating end users who highlighted reformulation challenges related to colorants. As a result, PAR 1107 includes a separate, extended compliance schedule for colorants to ensure adequate time for research, testing, and field validation. The proposed timelines were further adjusted in response to stakeholder requests to align the initial phase-out dates with the revised Governing Board Public Hearing date.

The final reformulation schedule reflects consensus among key stakeholders, including major metal parts and products coating manufacturers and end users. The phase-out is intended to provide a realistic and achievable pathway for transitioning away from pCBtF and t-BAc while maintaining coating performance and compliance with existing VOC limits. PAR 1107 provides extended compliance timelines to accommodate these efforts while ensuring that the rule remains protective of public health and practical for industry implementation.

Response to Comment 1-2

Staff recognizes reformulating colorants without pCBtF or t-BAc presents unique technical challenges. Reformulation requires research and development as well as field testing to ensure consistent quality and performance across a range of coating systems. To address these challenges, PAR 1107 includes a specific provision allowing the use of colorants containing pCBtF and/or t-BAc until December 5, 2033, after which all colorants must comply with the 0.01 percent by weight prohibition of pCBtF and t-BAc. This extended timeline provides additional flexibility for manufacturers to develop compliant colorants, while ensuring the ultimate phase-out of toxic solvents.

Response to Comment 1-3

Staff appreciates the comment regarding colorants and other specialty coating categories. The revisions to the definitions of general one-component and general multi-component coatings in PAR 1107 provide clarity but do not change the nature of these categories. Based on survey results and discussions with manufacturers, suitable alternatives are already available for general one-

component coatings. In addition, PAR 1107 was revised to include a specific provision allowing colorants containing pCBtF and/or t-BAc to continue to be used until December 5, 2033.

Response to Comment 1-4

PAR 1107 includes a provision allowing colorants containing pCBtF and/or t-BAc to continue to be used until December 5, 2033. This extended timeline provides additional flexibility for reformulation while ensuring a complete phase-out. Unlike Rule 1113, PAR 1107 regulates complete coating systems rather than individual components at point-of-sale. Establishing a separate exemption or alternative compliance pathway for colorants would reduce consistency with other provisions of Rule 1107 and undermine the health-protective intent of eliminating toxic exempt solvents. Staff believes the approach in PAR 1107 provides the necessary flexibility to address colorant reformulation challenges without creating regulatory gaps.

Response to Comment 1-5

Staff agrees that consistency across rules is important, but at this time staff is not considering a revision to the metallic coating definition. Aligning the metallic coating definition in Rule 1107 with Rule 1113 to a minimum of 48 grams of metal particles per liter could create compliance challenges with the Rule 1107 metallic coating VOC limit of 420 g/L. South Coast AQMD plans to revisit Rule 1107 in the future to align VOC limits with Rule 1113, at which point the metallic definition can be reassessed through the public process.

Response to Comment 1-6

Staff recognizes concerns about the pre-approval requirement for extreme-performance coatings. The extreme-performance coating category is afforded a higher VOC limit under Rule 1107 to account for its specialized applications, and pre-approval ensures the category is not misused. In contrast, the equivalent extreme-performance coatings in Rule 1113 and Rule 1136 are subject to more stringent VOC limits of 100 g/L and 275 g/L, respectively. Because Rule 1107 allows a higher VOC limit, it is especially important to ensure these coatings are used only in appropriate applications. While other rules do not require pre-approval, staff believes retaining this safeguard in Rule 1107 is necessary to preserve the integrity of VOC limits and ensure these coatings remain available only where justified.

Response to Comment 1-7

Neither Rule 1107 applicability or definitions restrict the use of touch-up or repair coatings in the field, and these operations are not limited to metal parts and products manufacturers. If coatings regulated by Rule 1107 require touch-up or repair in the field, there is nothing in Rule 1107 that prohibits that activity. Creating separate language to specifically address field use could create confusion over when Rule 1107 or Rule 1113 applies. For example, metal architectural components that require touch-up or repair in the field are subject to Rule 1113, not Rule 1107.

Similarly, while both touch-up and repair coatings currently share the same VOC limit, future amendments could establish different limits based on end-user needs and available technologies. Keeping the categories distinct avoids conflict now and preserves flexibility for future adjustments. For these reasons, staff is not considering revisions to the definitions of touch-up or repair coatings or combining them into a single category at this time.

Response to Comment 1-8

~~Staff appreciates the comment regarding the use of aerosol coatings in Rule 1107. Consumer products such as aerosol coatings are primarily regulated by CARB under statewide VOC limits. However, South Coast AQMD retains authority to regulate aerosols when they are used at stationary sources, particularly where they overlap with coating or solvent use in industrial or commercial operations. PAR 1107 does not introduce any new recordkeeping requirements affecting aerosol coatings; the provisions remain unchanged and continue to reference Rule 109 – Recordkeeping for Volatile Organic Compound Emissions. Furthermore, exempting aerosols in PAR 1107 would not exempt them from existing Rule 109 requirements. Additionally, PAR 1107 includes important provisions such as the prohibition of toxic compounds, and a full exemption for aerosols would weaken the transition away from harmful air pollutants. For these reasons, staff is not considering expanding the exemption for aerosols in PAR 1107.~~ PAR 1107 was updated to include a complete exemption for aerosol coatings. Aerosol paints are classified as consumer products under California law and are regulated primarily by California Air Resources Board (CARB). Health and Safety Code § 41712 establishes limitations on the authority of local air districts to regulate aerosol paints. See the discussion in Chapter 3 of this staff report for additional details.

Response to Comment 1-9

Staff acknowledges the concern regarding the inclusion of the term "possess" in PAR 1107, paragraphs (d)(2) and (e)(2). The intent of this language was to prevent the storage of non-compliant Rule 1107 coatings at facilities where they could inadvertently be applied in violation of the rule. However, upon further consideration and in response to stakeholder feedback, the term "possess" was removed from paragraphs (d)(2) and (e)(2) in PAR 1107.

This revision eliminates the potential for confusion regarding compliance for coatings that may be stored on-site for use under other South Coast AQMD coating rules or for use outside South Coast AQMD jurisdiction. Removing "possess" maintains enforceability of the prohibition on the manufacture, sale, supply, and application of non-compliant products within South Coast AQMD jurisdiction, while avoiding unintended restrictions on the storage of coatings used for other purposes.

Response to Comment 1-10

Staff recognizes the importance of durability and long-term performance for protective coatings, particularly in utility applications where reapplication opportunities are limited and coatings must meet stringent specifications set by manufacturers or utility engineers. As part of the technology assessment for PAR 1107, staff conducted a manufacturer survey and had follow-up discussions

with coating manufacturers, including those supplying protective and extreme-performance coatings, to identify categories that continue to rely on pCBtF and/or t-BAc.

Based on this information, and upon review of additional data provided during the rule development process, staff determined that extended timelines are warranted for extreme-performance coatings. The phase-out schedule in PAR 1107 was developed alongside coating manufacturers to ensure adequate time for reformulation, product development, testing, and certification, while maintaining durability and compliance with existing VOC limits. To provide an added safeguard, the Governing Board resolution for PAR 1107 includes a technology check-in to confirm that viable alternatives will be available by the required phase-out dates. Staff does not recommend an exemption for utilities, as the transition away from toxic solvents is necessary to protect public health.

Regarding VOC limits, Rule 1107 requirements are already nearly equivalent to national standards. Staff considered whether increasing limits could ease reformulation but determined this is not feasible, as VOC limits cannot exceed federal levels. Instead, extended timelines were included to balance coating performance specifications with the need to protect public health through the transition away from pCBtF and t-BAc.

Comment Letter #2

To Whom It May Concern,

In response to the request by the SCAQMD for written submissions to be submitted by today:

Our experience with earlier implementations of the 1107 Rule changes was nothing short of catastrophic. We are the only manufacturer of bicycles in the SCAQMD, and as such experienced considerable difficulty finding water-borne substitutes for the Dupont paints we used to paint our products. We were able to get by for many years by using small quantities of paint (well below the minimum amount necessary to trigger enforcement), but the zero tolerance policies adopted and implemented by your organization threatened to put us out of business.

At the time the SCAQMD began to pursue legal action against us for non-compliance, no company was manufacturing water-borne paints adequate to meet the 1107 standards. Midway through the proceedings, we were approached by BASF who had only just developed a line of water-borne paints that could be adapted for use on our high-performance tandem bicycles. If they had not done so, Santana would be shuttered. 2-1

Health and Safety code 40440.8 and 40728.5 require your office to conduct a socioeconomic impact assessment in the event of a proposed rule change. In your presentation of August 27, you claim (without evidence) "ethyl acetate could act as a replacement solvent" at a much lower cost than current formulations using pCBtF. Nowhere is an explanation offered as to how it could be possible that a lower cost formulation had not already been adopted within the SCAQMD.

I hold a Doctorate in Economics from Claremont Graduate University and spent many years teaching undergraduate statistics and econometrics. I have published papers. If any of my students had come to me with the sort of handwaving claims on reformulation costs without considerably more statistical analysis, I'd have failed them.

I respectfully request a more thorough analysis of the socioeconomic impact be done before further consideration of the proposed Rule 1107 changes proceeds.

Best Regards,

Alex Huemer
General Manager
Santana Cycles, Inc.
P.O. Box 206
La Verne, CA 91750

(909) 596-7570 x110 (office)
(909) 276-1591 (cell)

Staff Response to Comment Letter #2

Response to Comment 2-1

Staff appreciate the comments and perspective from a specialty manufacturer. The current proposal in PAR 1107 focuses on phasing out two toxic solvents (pCBtF and t-BAc) while maintaining existing VOC limits. This phase-out does not affect water-based coatings, which already comply without the use of pCBtF or t-BAc. Furthermore, PAR 1107 does not require the use of water-based coatings and allows manufacturers flexibility in selecting compliant technologies that meet performance and operational needs. To minimize disruption, the reformulation timelines in PAR 1107 were developed alongside coating manufacturers and are intended to provide sufficient time for new coatings to meet performance needs.

A socioeconomic impact assessment is included in Chapter 4 of this Final Staff Report. Staff reached out to manufacturers for detailed reformulation cost data but received limited responses. The analysis presented is intended to provide clarity on the potential cost implications of PAR 1107 with the information currently available.

The use of ethyl acetate as one potential solvent option in new resins systems was used to estimate raw material costs. pCBtF is considered a relatively expensive solvent. Replacement technologies, whether utilizing another solvent such as ethyl acetate or a water-based coating, are expected to benefit from reductions in raw material costs once reformulation is complete. For the purpose of the cost analysis ethyl acetate was used as an example to illustrate how lower raw material costs could influence overall reformulation costs. Ethyl acetate is not prescribed or assumed to be a universal substitute for pCBtF or t-BAc.

South Coast AQMD maintains technological neutrality when developing rules. The actual reformulation pathways will vary by product line and may involve different solvents, resins, or technological approaches. Any substitute must still meet applicable VOC limits and performance requirements.

Comment Letter #3

September 10, 2025

Mr. Michael Morris
Panning and Rules Manager
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765
mmorris@aqmd.gov

Re: Public comments on Proposed Amended Rule 1107 (Coating of Metal Parts and Products)

Dear Mike:

RadTech International is pleased to comment on the proposed amendments to Rule 1107. UV/EB/LED technology plays a role in the metal parts and products coatings market. RadTech supports the district's efforts to improve air quality in the Basin without sacrificing a healthy business climate and believes that the implementation of UV/EB technology can accomplish both goals. The comments below reiterate those made during recent public meetings.

Request for Exemption

Our Association believes that the district can achieve voluntary emission reductions from companies who convert their processes to UV/EB/LED technology. According to staff, Proposed Amended Rule 1107 will seek to phase out two toxic compounds, para-ChloroBenzotriFluoride (pCBtF) and tertiary-Butyl Acetate (tBAc). UV/EB/LED materials are not formulated with pCBtF or tBAc therefore, RadTech urges the district to provide regulatory flexibility to UV/EB/LED processes. Our materials are typically well below 50 grams/liter in VOC content which is minimal compared to the proposed limits. 3-1

In keeping with past district policies and direction from the Governing Board, we respectfully request that UV/EB/LED materials be exempted from the rule requirements An exemption would be an incentive for businesses to voluntarily choose UV/EB/LED technology resulting in additional emission reductions for the District.

Test Method

In order to avoid confusion, we urge the district to include ASTM D7767-11 in the rule. Currently Section (f)(5) "Multiple Test Methods" does not specify a method for energy curable materials. The Environmental Protection Agency has recognized that due to the very low VOC content 3-2

of our materials, the traditional EPA Method 24 is not suitable. Neither the EPA or the district have been able to develop a method that would accurately measure the very low levels of volatiles in our products. This leaves our companies in test method limbo. The problem is exacerbated by the labeling provisions in section (m) of the rule which require manufacturers to list a VOC content but yet, there is no specified method. The current language that allows "multiple" test methods is vague and could result in enforcement problems for our members and their customers. Since the impetus of the labeling requirements is to ensure that coatings are free of pCBtF or tBAc, we urge the district to spare UV/EB/LED materials of these requirements.

3-2
Continued

We appreciate your attention to this matter and look forward to a productive rulemaking process.

Sincerely,

Rita M. Loof

Director, Environmental Affairs

Staff Response to Comment Letter #3

Response to Comment 3-1

Staff agrees that lowering emissions through the use of low emission technology is beneficial. UV/EB/LED coatings may not contain pCBtF or t-BAc and typically contain low VOC content. However, staff is not considering an exemption for UV/EB/LED coatings at this time. If these coatings are formulated at VOC levels well below the applicable limits in Rule 1107, they should already be able to comply with the rule without difficulty.

South Coast AQMD remains technology neutral with respect to how persons choose to comply with rule requirements. The intent of PAR 1107 is to establish health-protective limits, while allowing manufacturers and end users flexibility to determine which technologies best meet their operational needs. PAR 1107 applies existing VOC limits consistently across coating categories, and coatings that already meet or outperform those limits remain fully compliant.

Response to Comment 3-2

Staff acknowledges the concern regarding the lack of a federally approved test method for certain UV/EB/LED coatings. U.S. EPA Method 24 is generally suitable for radiation-curable materials when used in conjunction with ASTM D5403. However, Method 24 is not compatible with thin film UV/EB/LED coatings. While ASTM D7767 or formulation data are tools manufacturers can use to estimate the VOC content of their thin-film UV/EB/LED coatings for product labeling, ASTM D7767 is not an enforceable method for compliance determinations by the South Coast AQMD. Furthermore, ASTM D7767 is not a federally approved test method for coatings due to a lack of enforceability and therefore cannot be incorporated into Rule 1107 without risking U.S. EPA disapproval and federal sanctions. For these reasons, PAR 1107 does not include ASTM D7767.

South Coast AQMD understands that the lack of an approved test method for thin film UV/EB/LED coatings creates compliance challenges. In these cases, manufacturers may rely on formulation data and ASTM D7767 to determine product VOC content for labeling purposes, consistent with existing regulatory practices. The intent of referencing Rule 443.1 in PAR 1107 is not to create new obligations but to reinforce existing requirements. Staff is not considering an exemption for UV/EB/LED coatings from labeling or other Rule 1107 requirements, as these provisions are necessary to ensure compliance and to verify that coatings are free of toxic solvents such as pCBtF and t-BAc.

ATTACHMENT H

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 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 Land Use and Climate Innovation for posting on their CEQAnet Web Portal which may be accessed via the following weblink: https://ceqanet.lci.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-2025.

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 Land Use and Climate Innovation – State Clearinghouse	**From:**	South Coast Air Quality Management District 21865 Copley Drive Diamond Bar, CA 91765

Project Title: 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: Rule 1107 limits emissions of volatile organic compounds (VOC) from metal coating operations. The primary objective of Proposed Amended Rule (PAR) 1107 is to partially implement control measure CTS-01: Further Emission Reductions From Coatings, Solvents, Adhesives, and Lubricants of the 2022 Air Quality Management Plan to phase out the use of para-Chlorobenzotrifluoride (pCBtF) and *tert*-Butyl Acetate (t-BAc) in metal parts and products coatings due to toxicity concerns. PAR 1107 includes: 1) a prohibition for the manufacture, sale, and use of coatings with more than trace levels of pCBtF and t-BAc at future effective dates; 2) sell-through and use-through provisions to ensure that manufacturers, distributors, and end users are provided with adequate time to transition to products without pCBtF and/or t-BAc; 3) prohibitions of other toxic compounds in coatings; 4) new provisions to enhance enforceability; and 5) revisions for clarity. The primary benefit of phasing out pCBtF and t-BAc is the reduced risk of exposure to these toxic chemicals by workers, nearby receptors and the public.

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 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. It can be seen with certainty that there is no possibility that the proposed project (PAR 1107) may have a significant adverse effect on the environment because: 1) no change in VOC emissions is expected relative to baseline conditions; 2) some alternative compliant formulations that do not contain pCBtF and/or t-BAc are commercially available; 3) additional time is provided for reformulating metal coatings if needed; 4) manufacturer's reformulation efforts are expected to occur using existing equipment and processes without the need for physical modifications to existing equipment; and 5) the sell-through and use-through provisions will prevent stranded assets and the generation of waste by ensuring that manufacturers, distributors, and end users have sufficient time to find suitable replacements. 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: December 5, 2025		
CEQA Contact Person: Sina Taghvaee, Ph.D.	**Phone Number:** (909) 396-2192	**Email:** staghvaee@aqmd.gov
PAR 1107 Contact Person: Joshua Ewell	**Phone Number:** (909) 396-2212	**Email:** jewell@aqmd.gov

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

Kevin Ni
Program Supervisor, CEQA
Planning, Rule Development, and Implementation

Attachment I

Proposed Amended Rule 1107 – Coating of Metal Parts and Products

Governing Board Presentation

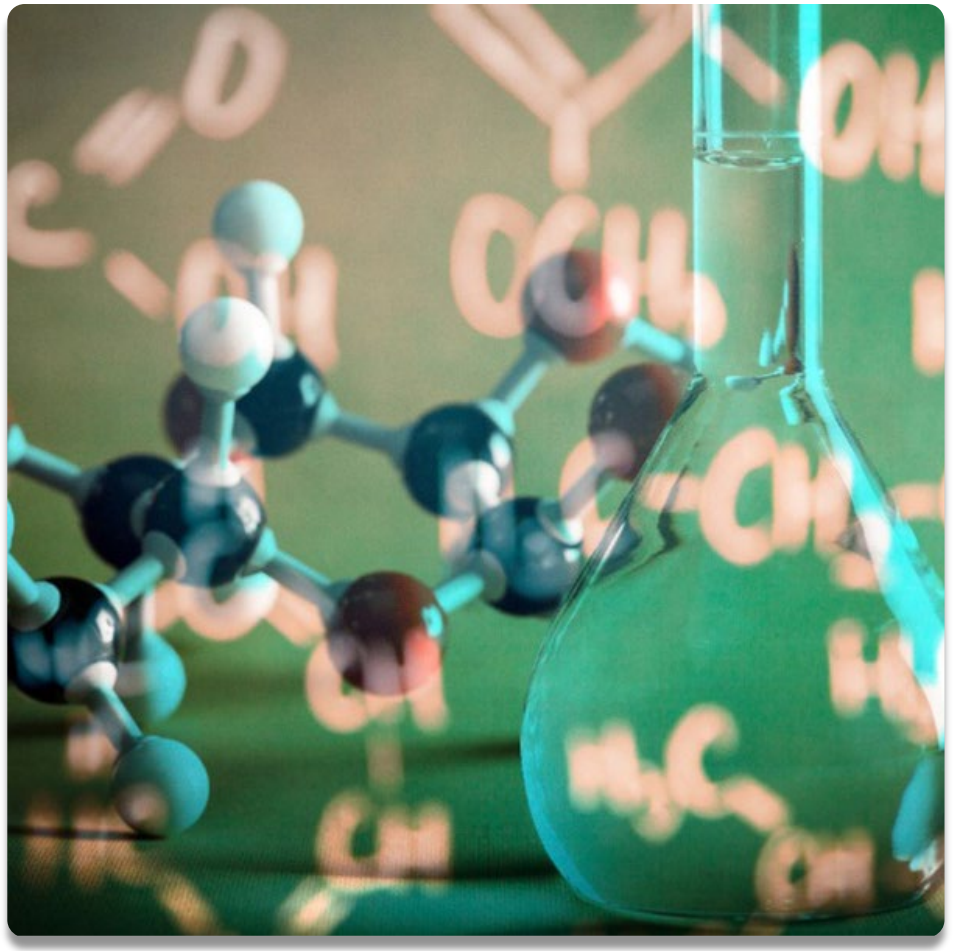
December 5, 2025

Rule 1107 Background

- Adopted in June 1979 and amended most recently in 2023
  - Establishes VOC limits for 22 coating categories for metal coating operations
- Proposed amendments needed to:
  - Partially implement 2022 AQMP control measure CTS-01
  - Phase-out pCBtF and t-BAc
- Public process began in June 2024
  - Four Working Group Meetings
  - One Public Workshop

Background: pCBtF and t-BAc

- Some solvents are exempt under the definition of VOC and are used to meet lower VOC limits
- In 2017 the Stationary Source Committee directed staff to prioritize toxicity reduction over VOC considerations recognizing potential toxicity concerns for pCBtF and t-BAc
  - OEHHA determined that pCBtF and t-BAc were carcinogens*
- Seven metal coating categories still rely on pCBtF and t-BAc
- Proposed rule includes a phased prohibition of pCBtF and t-BAc



*The Health Risk Assessments for t-BAc and pCBtF were finalized in 2018 and 2020, respectively

Proposed Phase-Out Timeline

Category	Final Manufacture Date	Final Sell-Through Date	Final Use-Through Date
Military Specification and Camouflage	December 5, 2031	December 5, 2032	December 5, 2034
Metallic, General Multi-Component, Etching Filler, Extreme Performance, and Extreme High-Gloss	December 5, 2030	December 5, 2031	December 5, 2033
All Other Categories	December 5, 2026	December 5, 2027	December 5, 2029

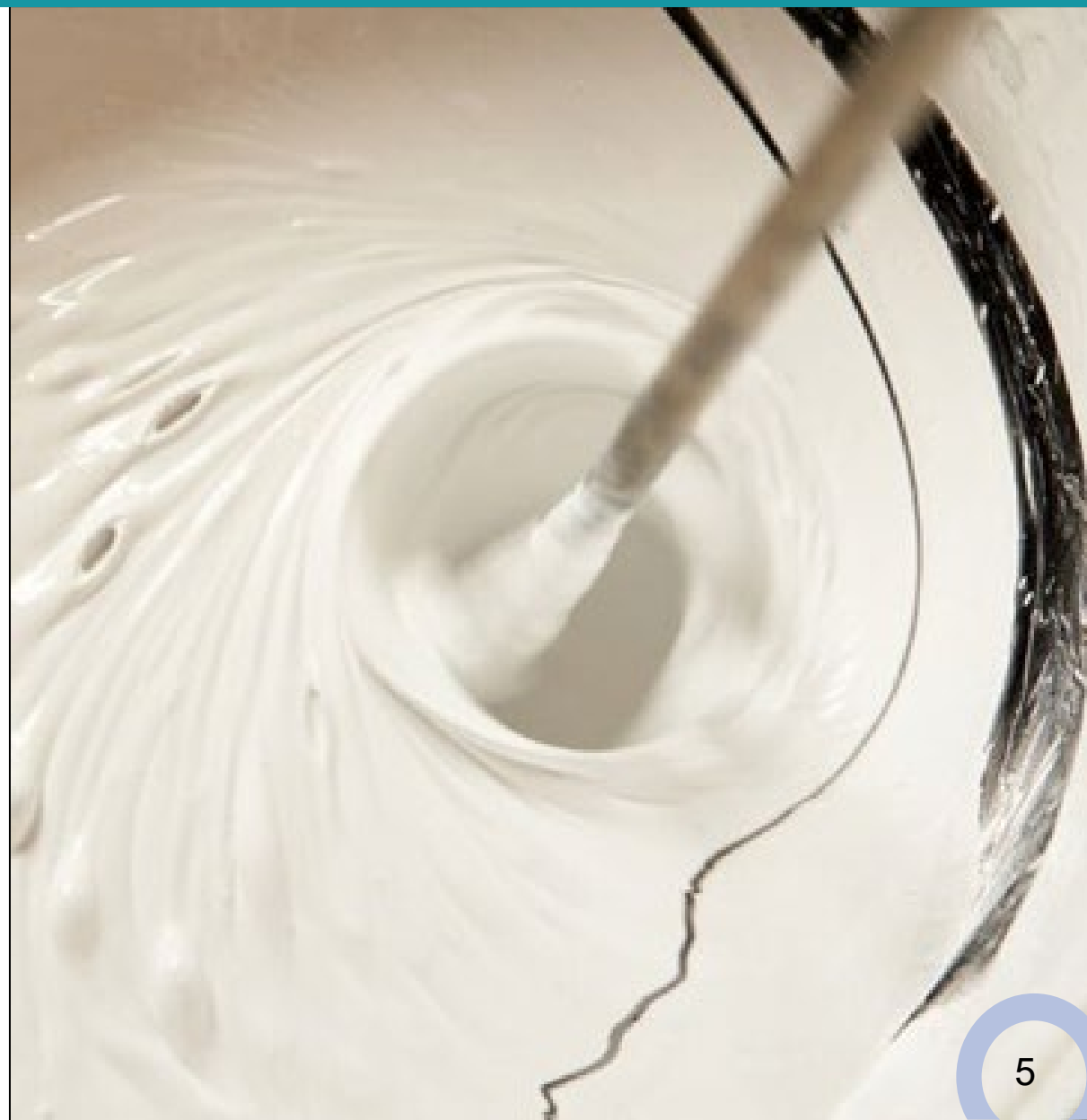
Colorants are provided a separate phase-out schedule with final compliance by 2033

Staff will report back to SSC in 2029 to provide an update on the progress of the pCBtF and t-BAc phase-out

Other Changes

- Multi-use coatings must meet lowest applicable VOC limit
- Prohibits cadmium, hexavalent chromium, and Group II exempt compounds (except volatile methylated siloxanes)*
- References existing labeling requirements in Rule 443.1 – Labeling of Materials Containing Organic Solvents

*OEHHA has not established a health risk threshold for volatile methylated siloxanes



CEQA and Socioeconomic Impact Assessment

California Environmental Quality Act (CEQA)	▶ Prohibition of pCBtF and t-BAc is health protective ▶ No significant adverse environmental impacts expected ▶ A Notice of Exemption has been prepared
Socioeconomic Impact Assessment	▶ Upfront reformulation costs to be offset over time by material cost savings and replacement solvents generally cost less than pCBtF or t-BAc ▶ Transition to reformulated coatings not expected to result in substantial price increase ▶ Minimal to no compliance costs and socioeconomic impacts expected

Staff Recommendations

Determining that Proposed Amended Rule 1107 is exempt from CEQA; and

Amending Rule 1107 – Coating of Metal Parts and Products