

BOARD MEETING DATE: February 5, 2016

Agenda No. 30

PROPOSAL: Amend Rule 1113 – Architectural Coatings

SYNOPSIS: Amendments are being proposed to restrict the small container exemption (SCE) for high use coating categories; eliminate the SCE for categories that do not use the exemption and for high-volatile organic compound (VOC) specialty categories; lower some VOC limits; carve out new categories and establish VOC limits; revise definitions, clarify rule language, and remove outdated language.

COMMITTEE: Stationary Source, October 16, 2015 & January 5, 2016, Reviewed

RECOMMENDED ACTIONS:

Adopt the attached Resolution:

1. Certifying the Final Environmental Assessment for Proposed Amended Rule 1113 – Architectural Coatings; and
2. Amending Rule 1113 –Architectural Coatings.

Barry R. Wallerstein, D.Env.  
Executive Officer

PF:JW:DD:HF:DT

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**Background**

Architectural coatings are one of the largest non-mobile sources of VOC emissions in the South Coast Air Basin (Basin). Rule 1113 applies to manufacturers, distributors, specifiers, and end-users of architectural coatings. These coatings are used to enhance the appearance of and to protect stationary structures and their appurtenances, including homes, office buildings, factories, pavements, curbs, roadways, racetracks, bridges, other structures, on a variety of substrates. Architectural coatings are typically applied using brushes, rollers, or spray guns by homeowners, painting contractors, and maintenance personnel. Rule 1113 was first adopted in 1977, and has undergone numerous amendments, most recently on September 6, 2013, to provide regulatory relief for labeling requirements of containers holding four fluid ounces or less. Although successive amendments to Rule 1113 contributed to significantly reduced emissions, architectural coatings continue to be one of the largest sources of VOC emissions in the SCAQMD, with the exception of consumer products and mobile sources.

## Proposal

The proposed amendments will achieve approximately 0.88 tons of VOC reduction per day. The amendments will also clarify the rule and improve enforceability.

The proposed amendments are summarized as follows:

- Remove all references to the averaging compliance option which sunset on January 1, 2015 and remove outdated language
- Add, clarify, delete, and phase out definitions
- Establish a VOC limit for new coating categories
  - Reduce the VOC limit for Building Envelope Coatings and Recycled Coatings
- Include an exception for Recycled Coatings from the most restrictive clause
- Include colorants in the labeling requirements
- Include new test methods to more accurately test low-VOC coatings and support new or amended coating definitions
- Amend the Small Container Exemption (SCE) such that the exemption is:
  - Restricted for Flat Coatings, Industrial Maintenance Coatings (IMCs), Nonflat Coatings, and Rust Preventative Coatings (RPCs) to containers having less than eight fluid ounces or for touch-ups, and
  - Eliminated for high-VOC specialty coatings and coating categories not using the exemption
- Include a two year sell-through provision for the SCE phase out
- Clarify other rule language

## Key Issues

### 1. *Phase Out SCE for RPCs*

Staff is proposing to eliminate the SCE for RPCs because the exemption is now being used for more than half of all RPC sales. The original intent of the exemption was for small niche uses and/or touch-ups. The SCAQMD, with assistance from the Technical Advisory Committee, concluded in 2006 that the compliant, commercially-available 100 g/L RPCs (e.g. waterborne alkyd emulsions) performed as well as their high-VOC counterparts. Since that study, advancement in resin technology has further improved the performance of waterborne and low-VOC RPCs. A little under half of the volume sold is below the 100 g/L limit (141,000 gallons in 2014) and almost all coating manufacturers have a compliant product line, either using waterborne technology or exempt solvents. The implementation date in 2019 allows sufficient time to phase out and/or color match or reformulate the limited currently-marketed high-VOC products. A local manufacturer has successfully reformulated and commercialized compliant RPCs (i.e., those with VOC content < 100 g/L) in

small containers for the last seven years. The elimination of the SCE for these coatings would yield greater than 70 percent of the emissions reductions from this rule proposal.

2. *Sell-Through Provision*

Staff has received feedback from some coating manufacturers requesting an extended effective date for the phase out of the SCE for RPCs and a sell-through provision for the removal of existing inventory at retail outlets. Representatives from two manufacturers have requested an implementation date of 2021 with a three year sell-through. Since the Special Stationary Source Committee meeting on January 5, 2016, one manufacturer requested an implementation date of 2021 with a two year sell-through. However, another manufacturer has supported the proposed implementation date of 2019 with no sell-through because they have successfully sold compliant coatings for many years.

Rule 1113 includes a three year sell-through provision when there is a VOC limit change in the Table of Standards. As currently written, that is the only time the sell-through provision applies. The sell-through provision allows time for the coatings to sell at the retail level, so the manufacturer does not have to incur the expense of clearing retail or commercial shelves. Depending on the size of the retailer, the coatings may sell-through much quicker than three years (big box store versus a small mom and pop paint shop). In 2006, when the SCE was removed for the Clear Wood Finish category, a one year sell-through period was allowed.

Based on the comments received, the proposed rule will include a two year sell-through period for all coating categories phased out of the SCE and retain the existing proposed effective dates. No additional environmental impacts are expected to occur with a sell-through provision. Staff does not believe an extended effective date is necessary because compliant coatings already exist, technology is currently available for reformulation, and a competitive disadvantage could occur for manufacturers with compliant coatings.

3. *Add VOC Test Method 313*

Method 313 is being proposed as a test method in Rule 1113. Staff collaborated closely with industry over the past year and a half on an improved VOC test method (SCAQMD Method 313 - Determination of Volatile Organic Compounds VOC by Gas Chromatography-Mass Spectrometry). Through this work, an exclusion pathway for semi-volatile compounds evolved and more recently, discussion began for an alternative method for non-film forming coatings. SCAQMD staff and the U.S. Environmental Protection Agency (U.S. EPA) are committed to continuing this work with industry involvement. Industry is generally supportive of the test method, but would like to be included in

discussions regarding the implementation details. SCAQMD staff will hold quarterly meetings with industry until all of the remaining issues have been resolved.

Staff also committed to conducting a small-scale round robin study (inter-laboratory) on Method 313 as well as the intra-laboratory study required by the U.S. EPA. However, staff does not intend to rely on the ASTM round robin results conducted on ASTM D 6886 - Standard Test Method for Determination of the Weight Percent Individual Volatile Organic Compounds in Waterborne Air-Dry Coatings by Gas Chromatography, which is a different analytical method. While the SCAQMD participated in that round robin testing, ASTM did not use the SCAQMD laboratory results since they utilized a different method (SCAQMD Method 313 and not ASTM D 6886). Again, staff plans to include industry stakeholders in all future discussions pertaining to the round robin study, including laboratory and coatings selection.

4. *Removal of Limited VOC Exemption for Tertiary-Butyl Acetate (tBAC)*

TBAC was given a limited exemption from the Rule 1113 definition of a VOC in 2006. Due to concerns about potential toxicity, the exemption was limited to IMCs (including non-sacrificial anti-graffiti coatings) where a large number of alternative coatings were not available and the coating applicators were more likely to be highly trained to employ personal protection equipment. For the 2006 amendment, a CEQA analysis was conducted using the interim Office of Environmental Health Hazard Assessment (OEHHA) unit risk factor as a surrogate for tBAC because of the limited toxicity information available. Those values reflected the best available information at the time and the factors were used to conservatively estimate potential cancer risk and non-cancer effects from tBAC in IMCs. At the time, staff also considered California Air Resources Board (CARB) documents asserting tBAC's ozone reduction benefits. Staff's conservative analysis from the use of tBAC-based products for IMCs indicated the potential chronic cancer risks and acute cancer risks were below the SCAQMD's toxic air contaminants (TAC) significant health risk thresholds (CEQA). Staff did not recommend expanding the exemption for tBAC to other categories because numerous alternative compliant products exist, whereas IMCs for extraordinary long durability were limited in availability. Limiting the exemption for tBAC to IMCs provided manufacturers flexibility in formulating products compliant with the future limits in PAR 1113.

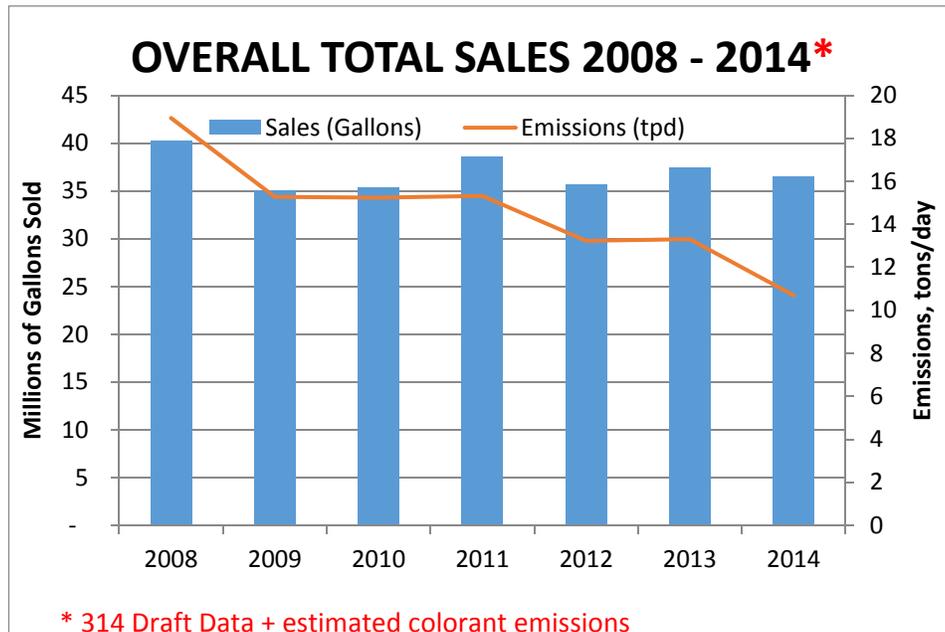
Final risk factors for tBAC have not yet been formally approved by OEHHA's Scientific Review Panel. The final risk factors are expected in the first quarter of 2016 and staff will re-evaluate the potential risks associated with the use of tBAC in IMCs once the risk factors are finalized. Early in 2016, the results of the recent CARB coatings survey will also be available which will include the

volume of tBAC used in IMCs. The new data will provide a basis for a more accurate analysis of the risks associated with tBAC in IMCs.

Potential impacts from removing the current exemption for tBAC were not analyzed as part of this proposed rule amendment. As a result, any proposed removal of the exemption will have to undergo a new rulemaking with a new CEQA analysis.

### Emissions Inventory and Emissions Reductions

The emission inventory of architectural coatings is based on the Rule 314 – *Fees for Architectural Coatings* Annual Quantity and Emissions Reports. Rule 314 requires that any manufacturer that sells architectural coatings into or within the SCAQMD report their sales annually and pay fees based on those sales. The following chart illustrates the sales and emissions trends of architectural coatings in the Basin since the 2008 adoption of Rule 314:



Emission reductions from PAR 1113 will be 0.88 tons of VOC reductions per day (tpd), as summarized below.

Rule Change	Emission Reduction (tpd)	
	January 1, 2018	January 1, 2019
<b>VOC Limit Change</b>		
Building Envelope Coating		0.01
Recycled Coating		0.06
<b>SCE Restriction</b>		
Flat Coatings		0.002
Industrial Maintenance Coatings		0.01
High Temperature IMC		0.001
Zinc-Rich Primers		0.003
Nonflat Coatings		0.15
Reactive Penetrating Sealers	0.0001	
<b>Rust Preventative Coatings</b>		<b>0.63</b>
Shellacs	0.0007	
Tub and Tile Coatings	0.01	
<b>Total Emissions Reductions (tpd)</b>	<b>0.88</b>	

**Cost Effectiveness**

Cost effectiveness is \$1,150 per ton of VOC reduced from lowering the VOC limits and restricting and/or eliminating the SCE for certain categories.

**California Environmental Quality Act**

PAR 1113 is considered a “project” as defined by the California Environmental Quality Act (CEQA), and the SCAQMD is the designated lead agency. Pursuant to CEQA Guidelines §15252 and SCAQMD Rule 110, SCAQMD staff reviewed PAR 1113 and concluded that an EA with no significant impacts was the appropriate CEQA document for the proposed project. Staff released the Draft EA for a 30-day public review period from September 15, 2015 to October 15, 2015. One comment letter was received and the response to the comments has been included in the Final EA. Since the close of the comment period, revisions have been proposed to PAR 1113. Staff has analyzed these proposed revisions and have determined that they do not trigger recirculation pursuant to CEQA Guidelines §15073.5.

**Socioeconomic Analysis**

PAR 1113 affects all architectural coating manufacturers who sell architectural coatings into or within the SCAQMD. The proposed amendments will affect approximately 200 manufacturers and wholesalers who sell architectural coatings into or within the SCAQMD. The annual cost of compliance will be approximately \$368,000. It has been standard socioeconomic practice that, when the annual compliance cost is less than one million current U.S. dollars, the Regional Economic Impact Model (REMI) is not used

to simulate jobs and macroeconomic impacts. This is because the resultant impacts would be diminutive relative to the baseline regional economy.

### **AQMP and Legal Mandates**

The California Health and Safety Code requires the SCAQMD to adopt an AQMP to meet state and federal ambient air quality standards in the South Coast Air Basin. In addition, the California Health and Safety Code requires the SCAQMD to adopt rules and regulations that carry out the objectives of the AQMP. The proposed amendments will implement, in part, Control Measure CM#2012 CTS-01 – Further VOC Reductions from Architectural Coatings.

### **Implementation Plan and Resource Impact**

Existing SCAQMD resources will be sufficient to implement the proposed changes to this rule with minimal impact on the budget.

### **Attachments**

- A. Summary of Proposed Amendments
- B. Rule Development Process
- C. Key Contacts List
- D. Resolution
- E. Rule Language for Proposed Amended Rule 1113
- F. Final Staff Report
- G. Final Environmental Assessment

**ATTACHMENT A**

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**SUMMARY OF PROPOSED AMENDMENTS TO  
RULE 1113 – ARCHITECTURAL COATINGS.**

**SUMMARY OF PROPOSED AMENDMENTS TO  
RULE 1113 – ARCHITECTURAL COATINGS**

Staff proposes the following amendments to achieve emission reductions and clarify rule implementation issues for improved enforceability:

- ◆ Change the applicability section of the rule by eliminating references to the phased out averaging compliance option (ACO) and clarifying that the rule is applicable to all architectural coating manufacturers who sell into or within the South Coast Air Quality Management District (SCAQMD).
- ◆ Add, clarify, delete, and phase out definitions.
- ◆ Change paragraphs (c)(1) and (c)(2) to remove reference to the default category (included in the proposed Table of Standards) and clarify the requirements on the Volatile Organic Compound (VOC) limit for colorants.
- ◆ Change and update the Table of Standards 1.
- ◆ Establish VOC limits for new coating categories and include proposed changes to VOC limits:

Category	Current VOC limit (g/L)	Proposed VOC limit (g/L)	Current Category	New Category
<b>Building Envelope</b>	100	50 <sup>1</sup>	Waterproofing Sealers	Yes
<b>Graphic Arts Coatings</b>	150	200 <sup>2</sup>	N/A - Same	No
<b>Color Indicating Safety Coatings</b>	100	480 <sup>2,3</sup>	Industrial Maintenance	Yes
<b>Recycled Coatings</b>	250	150 <sup>1</sup>	N/A - Same	No
<b>Tile and Stone Sealers</b>	100	100	Waterproofing Concrete/Masonry Sealers	Yes
<b>Tub and Tile Refinishing Coatings</b>	100	420 <sup>2,3</sup>	Flat/Nonflat	Yes
<b>Wood Conditioners</b>	100	100	Default	Yes

1. Effective January 1, 2019
2. Effective upon Rule adoption
3. Previously sold under Small Container Exemption

- ◆ Include an exception to the most restrictive clause (paragraph (c)(3)) for recycled coatings.
- ◆ Include colorants in the labeling requirements for the date of manufacturer and the VOC content.
- ◆ Include the following test methods for VOC content:
  - SCAQMD Method 313 - Determination of Volatile Organic Compounds VOC by Gas Chromatography-Mass Spectrometry.
  - ASTM Test Method D6886 - Standard Test Method for Determination of the Weight

**SUMMARY OF PROPOSED AMENDMENTS TO  
RULE 1113 – ARCHITECTURAL COATINGS**

Percent Individual Volatile Organic Compounds in Waterborne Air-Dry Coatings by Gas Chromatography.

- ◆ Include additional performance test methods used for specific coating categories.
- ◆ Amend the Small Container Exemption (SCE) such that the exemption is eliminated and/or restricted for:
  - Coating categories not using the exemption (effective upon adoption).
  - High-VOC specialty coatings (effective January 1, 2018)
  - High volume categories (effective January 1, 2019):
    - Coating sales are allowed over the VOC limit in eight fluid ounce or smaller containers for touch-up only.
    - To prevent rule circumvention.
- ◆ Add a two year sell-through provision for the SCE phase out.
- ◆ Clarify the rule language.

**ATTACHMENT B**

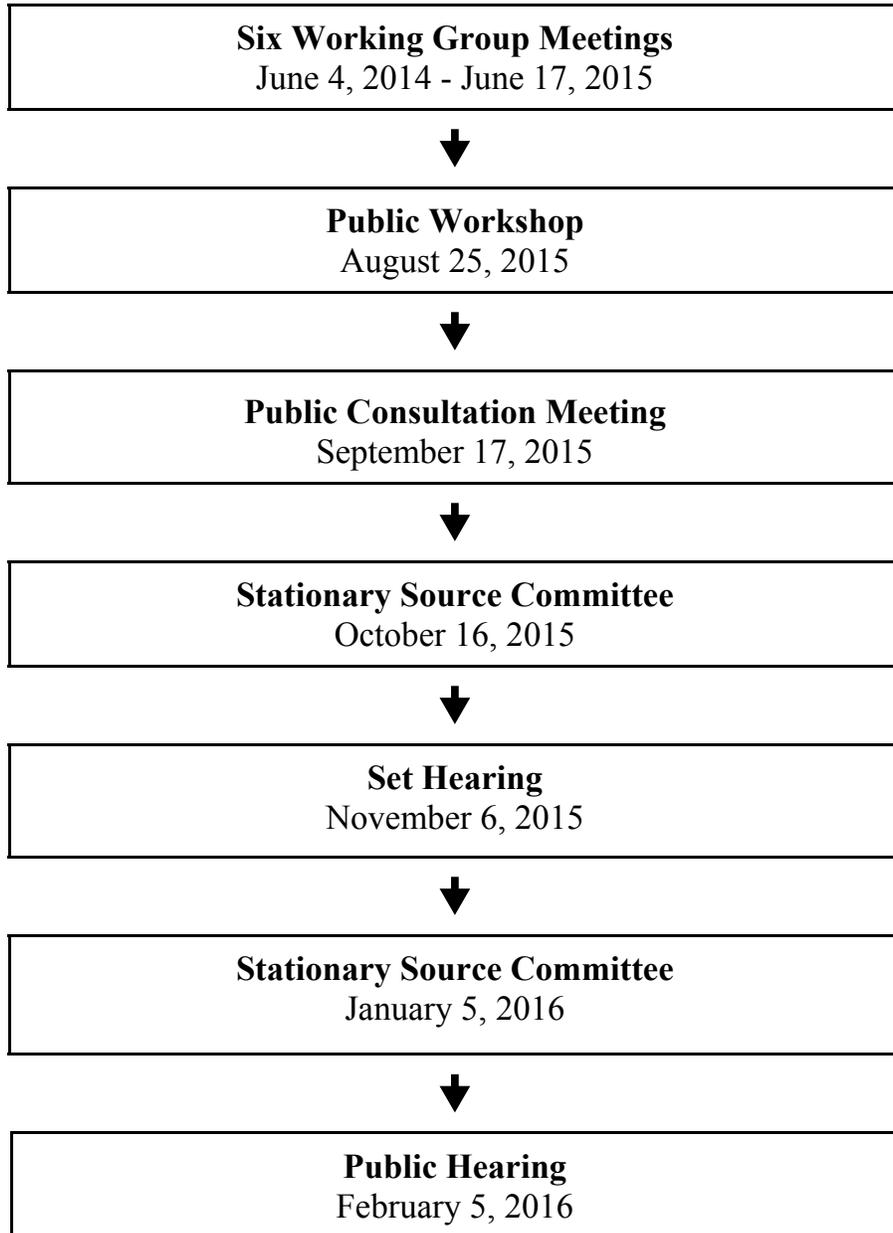
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**RULE DEVELOPMENT PROCESS FOR**

**PROPOSED AMENDED RULE 1113 – ARCHITECTURAL COATINGS**

## **Rule Development Process**

### **Proposed Amended Rule 1113 – Architectural Coatings (2012 AQMP CM#CTS-01)**



**ATTACHMENT C**

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**KEY CONTACTS FOR**

**PROPOSED AMENDED RULE 1113 – ARCHITECTURAL COATINGS**

## KEY CONTACTS

Name	Affiliation
Catherine F. Jacobson	3M
Brian Brittain	Acrylatex
Leslie Berry	American Chemistry Council
David Darling	American Coatings Association
Tim Serie	American Coatings Association
Martin Bergstedt	Amazon
Kent Alexander	Angus Chemical Company
John Gilbert	BEHR
Michael Butler	BEHR Process Corporation
Paul Giunhe	BEHR
Gerald E Thompson	BonaKemi USA, Inc
Lisa King	BonaKemi USA, Inc
Lizette Bonvin	Bostik
Sue Gornick	BP
Dane Jones, Ph.D.	Cal Poly, San Luis Obispo
Barry Marcks	Caltrans
Tom Whitelock	Can-Am Coatings
Jenna Latt	CARB
Terry Link	Cardinal Paint
Mely Escalante Hendricks	Chevron
Mario Fragosa	Chemco
David Podgornik	Clayton
Hao Jiang	Disneyland
Elke Jensen	Dow Corning Corporation
Robert Wendoll	Dunn-Edwards Paints
Emily Taylor	DuPont
Ayaz Khan	Elementis
Jason Stalk	Ellis Paint Company
Joseph Tashjian	Ellis Paint Company
Pat Lutz	Engineered Polymer Solutions
Howard Berman	Environmental Mediation, Inc.
Daniel Goldberg	Evonik Degussa Corporation
Craig Sakamoto	ExxonMobil
John Lund	Ferro
James Dunn	Ferro
Lisa A. Presutti	Fluid Management, Inc.
Ben Gavett	Golden Artists Colors, Inc
Bob Hoppe	HBS Painting
Stacy-Ann Taylor	Henry Company

Name	Affiliation
Joe Reilly	JCR
Aaron Mann	JFB Hart
David Rothbart	Los Angeles County Sanitation Districts
Eunice Leung	Los Angeles Society for Coatings Technology
Curtis Coleman	Law Offices of Curtis Coleman
Don Vulich	Los Angeles Painting & Finishing Contractors Association
Daniel B. Pourreau, Ph.D	Lyondell
Greg Sarnecki	Masco Coatings Group
Joe Salvo	Miracle Sealants
Bob Sypowicz	Modern Masters
Henry Lum	Modern Masters
Jim Rogers	Modern Masters
Carol Yip Kaufman	Metropolitan Water District
Janet Bell	Metropolitan Water District
John Wallace	Metropolitan Water District
James Heumann	Northrop Grumman
Mark Huck	California State Parks Office of Historic Preservation
Joe Malato	Pacific Polymers & Schnee-Morehead Inc.
Wayne Nelson	PPG Architectural Finishes, Inc
Ida Lin	PPG Architectural Finishes, Inc
Bob Clemons	Praxair
Charles McDonald	Praxair
Dwayne Fuhlhage	Prosoco
Ron Webber	Quest
Rita Loof	Radtech International North America
Claude Florent	Rainguard
Doug Raymond	Raymond Regulatory Resources (3R), LLC
Laurel Jamison	Rudd Company, Inc.
Bruce Varne	Rust-Oleum
Megan Gaughan	Rust-Oleum
Mike Murphy	Rust-Oleum
Barrett Cupp	Sherwin-Williams
Fred Anwari	Sherwin-Williams
John A. Fidler	Simpson Gumpertz & Heger
Erica Yee	Southern California Gas Company
Zacharie Muepo	Southern California Gas Company
John Ciente	Solomon Colors, Inc.
Mike Gernon	Taminco
Mike Hakos	Taminco
Susan Stark	Tesoro
Ben York	Texture Coat of America
Mark Gierki	Texture Coat of America

Name	Affiliation
Dustin Kaatz	Tnemec Corporation
Kyle Frakes	Tnemec Corporation
Michael Schmeida	Tremco CS&W Division
Amy Woodard	Tremco CS&W Division
Joseph C. Bellas	Universal Studios
Stanley Tong	U.S. EPA
Tina Glomstead	Valspar
Patrick Gieske	Valspar
Hamid Pourshirazi	Vista Paint
John Long	Vista Paint
Dave Carol	W.R. Meadows
David Carey	W.R. Meadows
Sue Gornick	Western States Petroleum Association
Dixie Richards	Yorke

**ATTACHMENT D**

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**RESOLUTION FOR**

**PROPOSED AMENDED RULE 1113 – ARCHITECTURAL COATINGS**

**RESOLUTION NO. 16-\_\_\_\_**

**A Resolution of the South Coast Air Quality Management District (SCAQMD) Governing Board certifying the Final Environmental Assessment for Proposed Amended Rule 1113 – Architectural Coatings.**

**A Resolution of the SCAQMD Governing Board amending Rule 1113 - Architectural Coatings.**

**WHEREAS**, the SCAQMD Governing Board has determined that a need exists to amend Rule 1113 – Architectural Coatings to clarify rule language and reduce emissions from the use of architectural coatings in order to help achieve air quality standards; and

**WHEREAS**, the SCAQMD Governing Board finds and determines that the proposed amendments to Rule 1113 – Architectural Coatings, are considered a "project" pursuant to the California Environmental Quality Act (CEQA) and that the proposed project would not have a significant adverse effect on the environment; and

**WHEREAS**, the SCAQMD has had its regulatory program certified pursuant to Public Resources Code §21080.5 and has conducted CEQA review and analysis pursuant to such program (SCAQMD Rule 110); and

**WHEREAS**, the SCAQMD staff has prepared a Draft Environmental Assessment (EA) pursuant to its certified regulatory program and pursuant to CEQA Guidelines §15252, setting forth the potential environmental consequences of Proposed Amended Rule 1113 - Architectural Coatings; and

**WHEREAS**, the Draft EA was circulated for a 30-day public review from September 15, 2015 to October 15, 2015; and

**WHEREAS**, one comment letter was received during the comment period relative to the analysis presented in the Draft EA and responses to the comments have been prepared and included in the Final EA; the Draft EA has been revised such that it is now a Final EA; and

**WHEREAS**, it is necessary that the adequacy of the Final EA, including any responses to comments, be determined by the SCAQMD Governing Board prior to its certification; and

**WHEREAS**, a Mitigation Monitoring Plan pursuant to Public Resources Code §21081.6 has not been prepared since no mitigation measures are necessary; and

**WHEREAS**, Findings pursuant to Public Resources Code §21081.6 and CEQA Guidelines §15091 and a Statement of Overriding Considerations pursuant to CEQA Guidelines §15093 were not prepared because the analysis of the proposed project shows that Proposed Amended Rule 1113 - Architectural Coatings would not have a significant adverse effect on the environment, and thus, are not required; and

**WHEREAS**, the SCAQMD Governing Board voting on Proposed Amended Rule 1113 – Architectural Coatings has reviewed and considered the Final EA prior to its certification; and

**WHEREAS**, the SCAQMD Governing Board finds and determines, taking into consideration the factors in Section (d)(4)(D) of the Governing Board Procedures, that the modifications which have been made to Proposed Rule 1113 – Architectural Coatings since notice of public hearing was published do not significantly change the meaning of the proposed project within the meaning of Health and Safety Code §40726 and would not constitute significant new information requiring recirculation of the Draft EA pursuant to CEQA Guidelines §15073.5; and

**WHEREAS**, the staff report, the Final EA and the Socioeconomic Analysis, this January 8, 2016 Board letter, and other supporting documentation was presented to the SCAQMD Governing Board and that the Board has reviewed and considered the entirety of this information prior to approving the project; and

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

**WHEREAS**, the SCAQMD staff conducted a public workshop regarding Proposed Rule 1113 – Architectural Coatings on August 25, 2015; and

**WHEREAS**, California Health and Safety Code §40727 requires that prior to adopting, amending or repealing a rule or regulation, the SCAQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the public hearing and in the staff report; and

**WHEREAS**, the SCAQMD Governing Board has determined that a need exists to amend Rule 1113 - Architectural Coatings to achieve further VOC emission reductions for architectural coatings by implementing Control Measure CM#2012 CTS-01 – Further VOC Reductions from Architectural Coatings of the 2012 AQMP in order to achieve federal PM2.5 standards by 2019 and ozone standards by 2024; and

**WHEREAS**, the SCAQMD Governing Board has determined that Rule 1113 - Architectural Coatings, as proposed to be amended, is written and displayed so that its meaning can be easily understood by persons directly affected by them; and

**WHEREAS**, the SCAQMD Governing Board has determined that Rule 1113 - Architectural Coatings, as proposed to be amended, is in harmony with, and not in conflict with, or contradictory to, existing statutes, court decisions, or state or federal regulations; and

**WHEREAS**, the SCAQMD Governing Board has determined that Rule 1113 - Architectural Coatings, as proposed to be amended, does not impose the same requirements as any existing state or federal regulation, and the proposed amended rule is necessary and proper to execute the powers and duties granted to, and imposed upon, the SCAQMD; and

**WHEREAS**, Health and Safety Code §40727.2 requires the SCAQMD 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 that the SCAQMD's comparative analysis of Proposed Rule 1113 – Architectural Coatings is included in the staff report; and

**WHEREAS**, the SCAQMD Governing Board in amending the regulation, references the following statutes which the SCAQMD hereby implements, interprets or makes specific: Health and Safety Code Sections 40001(a) (air quality standards and enforcement of federal standards), 40440(a) (rules to carry out plan), 40440(b)(1) (BARCT), 40702 (adopt regulation to execute duties), and Federal Clean Air Act Sections 116 (state standards at least as stringent as federal standards); and

**WHEREAS**, the SCAQMD Governing Board determines that there is a problem that Proposed Amended Rule 1113 - Architectural Coatings will alleviate, (i.e., the South Coast Air Basin does not meet state or federal standards for ozone and PM2.5) and the proposed amendment will promote the attainment or maintenance of such air quality standards; and

**WHEREAS**, the SCAQMD Governing Board has determined that Proposed Amended Rule 1113 - Architectural Coatings should be adopted in order to provide air quality benefits at a reasonable cost; and

**WHEREAS**, the SCAQMD Governing Board has determined that the Socioeconomic Assessment contained in the staff report is consistent with the provisions of the March 17, 1989 and October 14, 1994, Board Resolution for rule adoption and Health and Safety Code Sections 40440.8, 40728.5 and 40920.6; and

**WHEREAS**, the SCAQMD Governing Board has reviewed and considered the staff's findings related to cost impacts of Proposed Rule 1113 – Architectural Coatings set forth in the staff report, and hereby finds and determines that cost and impacts are as set forth in that assessment; and

**WHEREAS**, the SCAQMD Governing Board has actively considered the staff report's findings relative to costs and has made a good faith effort to minimize such impacts; and

**WHEREAS**, the proposed amendments to Rule 1113 – Architectural Coatings help achieve emission reductions of VOCs from the various coating categories, estimated to be approximately 0.88 ton/day, and that even after considering the Socioeconomic Assessment, the adoption of such amendments is necessary for achieving the federal and state standards for ozone and for implementing the AQMP; and

**WHEREAS**, a public hearing has been properly noticed in accordance with all provisions of Health and Safety Code, Section 40725; and

**WHEREAS**, the SCAQMD Governing Board has held a public hearing in accordance with all provisions of law; and

**WHEREAS**, the SCAQMD specifies the Program Supervisor for Rule 1113 as the custodian of the documents or other materials which constitute the record of proceedings upon which the adoption of this proposed amendment is based, which are located at the South Coast Air Quality Management District, 21865 Copley Drive, Diamond Bar, California; and

**WHEREAS**, the SCAQMD staff will continue to work with the U.S. EPA and members representing the coatings industry to continue the work on Test Method 313 - Determination of Volatile Organic Compounds VOC by Gas Chromatography-Mass Spectrometry and the exclusion pathway for early eluting semi-volatile compounds, including the internal and external precision and bias demonstration and potential method improvements for the VOC determination of non-film forming oils; and

**WHEREAS**, the SCAQMD staff will continue to work with members representing the coatings industry on a Best Practice Guidance Document for the application of architectural coatings; and

**WHEREAS**, Rule 1113 contains a limited exemption of tertiary butyl acetate for industrial maintenance coatings and a final peer reviewed assessment by the Office of Environmental Health Hazard Assessment is expected later this year; and

**WHEREAS**, the SCAQMD Governing Board, has reviewed, considered, and approve the Final EA including the responses to comments prior to acting on

Proposed Amended Rule 1113 – Architectural Coatings; and

**NOW, THEREFORE, BE IT RESOLVED**, that the SCAQMD Governing Board does hereby certify the Final EA for Proposed Amended Rule 1113 - Architectural Coatings, which was completed in compliance with CEQA and Rule 110 provisions; and

**BE IT FURTHER RESOLVED**, that because no significant adverse environmental impacts were identified as a result of implementing Proposed Amended Rule 1113 – Architectural Coatings, a Statement of Findings, a Statement of Overriding Considerations, and a Mitigation Monitoring Plan are not required; and

**BE IT FURTHER RESOLVED**, that the SCAQMD Governing Board does hereby direct staff to immediately begin a re-evaluation of potential toxic risk to workers due to exposure to tertiary butyl acetate, such that upon finalization of the assessment by the Office of Environmental Health Hazard Assessment, staff will be prepared to quickly propose amendments to SCAQMD rules, as needed, to reduce potential risks; and

**BE IT FURTHER RESOLVED**, that the SCAQMD Governing Board does hereby amend, pursuant to the authority granted by law, Rule 1113 - Architectural Coatings, as set forth in the attached, and incorporated herein by this reference; and

**BE IT FURTHER RESOLVED**, that the Executive Officer is hereby directed to forward a copy of this Resolution and Proposed Amended Rule 1113 – Architectural Coatings to the California Air Resources Board for approval and subsequent submittal to the U.S. Environmental Protection Agency for inclusion into the State Implementation Plan.

Attachment

DATE: \_\_\_\_\_

\_\_\_\_\_  
CLERK OF THE BOARD

## ATTACHMENT E

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### RULE LANGUAGE FOR

### PROPOSED AMENDED RULE 1113 – ARCHITECTURAL COATINGS

Single underline text shows new language added to the existing rule language.

Double underline text shows new language added to the rule subsequent to the Set Hearing.

*~~Italicized Strikeout~~* text shows new deletions from the rule subsequent to the Set Hearing.

~~Underline Strikeout~~ text shows language proposed for addition to the Set Hearing Package, which is now being deleted from the Public Hearing Package.

(Adopted Sept. 2, 1977)(Amended Dec. 2, 1977)(Amended Feb. 3, 1978)  
(Amended Sept. 5, 1980)(Amended Apr. 3, 1981)(Amended July 3, 1981)  
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Proposed Amended February 5, 2016

### **PROPOSED AMENDED RULE 1113. ARCHITECTURAL COATINGS**

(a) Applicability

This rule is applicable to any person who supplies, sells, markets, offers for sale, or manufactures any architectural coating ~~in the District~~ that is intended to be field applied within the District to stationary structures or their appurtenances, and to fields and lawns; as well as any person who applies, stores at a worksite, or solicits the application of any architectural coating within the District. The purpose of this rule is to limit the VOC content of architectural coatings used in the District ~~or to allow the averaging of such coatings, as specified, so their actual emissions do not exceed the allowable emissions if all the averaged coatings had complied with the specified limits.~~

(b) Definitions

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

- (1) AEROSOL COATING PRODUCT means a pressurized coating product containing pigments, resins, and/or other coatings solids that dispenses product ingredients by means of a propellant, and is packaged in a disposable aerosol container for hand-held application, or for use in specialized equipment for ground marking and traffic marking applications.
- (2) ALUMINUM ROOF COATINGS are roof coatings containing at least 0.7 pounds per gallon (84 grams per liter) of coating as applied, of elemental aluminum pigment.
- (3) APPURTENANCES are accessories to a stationary structure; including, but not limited to: hand railings, cabinets, bathroom and kitchen fixtures, fences, rain-gutters and down-spouts, window screens, lamp-posts, heating and air conditioning equipment, other mechanical equipment, large fixed stationary tools, signs, motion picture and television production sets, and concrete forms.

- (4) ARCHITECTURAL COATINGS are any coatings applied to stationary structures or their appurtenances, or to fields and lawns.
- (5) BELOW-GROUND WOOD PRESERVATIVES are wood preservatives formulated to protect below-ground wood.
- (6) BITUMINOUS COATING MATERIALS are black or brownish coating materials, soluble in carbon disulfide, consisting mainly of hydrocarbons and which are obtained from natural deposits, or as residues from the distillation of crude petroleum oils, or of low grades of coal.
- (7) BITUMINOUS ROOF PRIMERS are primers formulated for or applied to roofing that incorporate bituminous coating materials.
- (8) BOND BREAKERS are coatings formulated for or applied between layers of concrete to prevent the freshly poured top layer of concrete from bonding to the substrate over which it is poured. Bond breakers will be exempt from Rules 1113 and 314 upon adoption of Rule 1161 – Release Agents or any other Regulation XI rule limiting the VOC content of bond breakers.
- (9) BUILDING ENVELOPE is the ensemble of exterior and demising partitions of a building that enclose conditioned space.
- (10) BUILDING ENVELOPE COATINGS are fluid applied coatings applied to the building envelope to provide a continuous barrier to air or vapor leakage through the building envelope that separates conditioned from unconditioned spaces. Building Envelope Coatings are applied to diverse materials including, but not limited to, concrete masonry units (CMU), oriented stranded board (OSB), gypsum board, and wood substrates and must meet the following performance criteria:
  - (A) Air Barriers formulated to have an air permeance not exceeding 0.004 cubic feet per minute per square foot under a pressure differential of 1.57 pounds per square foot (0.004 cfm/ft<sup>2</sup> @ 1.57 psf), [0.02 liters per square meter per second under a pressure differential of 75 Pa (0.02 L/(s m<sup>2</sup>) @ 75 Pa)] when tested in accordance with ASTM E2178; and/or
  - (B) Water Resistive Barriers formulated to resist liquid water that has penetrated a cladding system from further intruding into the exterior wall assembly and is classified as follows:
    - (i) Passes water resistance testing according to ASTM E331, and
    - (ii) Water vapor permeance is classified in accordance with ASTM E96/E96M.

- ~~(9)~~ — ~~CLEAR WOOD FINISHES~~ are clear and semi-transparent coatings, including lacquers and varnishes, applied to wood substrates, including floors, decks and porches, to provide a transparent or translucent solid film.
- ~~(10)~~(11) \_\_\_\_\_ COATING is a material which is applied to a surface in order to beautify, protect, or provide a barrier to such surface.
- ~~(11)~~(12) \_\_\_\_\_ COLORANTS are solutions of dyes or suspensions of pigments.
- (13) COLOR INDICATING SAFETY COATINGS are industrial maintenance coatings for safety management of process streams to prevent or minimize the consequences of the release of toxic, reactive, flammable or explosive substances, and include chemical and thermal color indicating coatings.
- ~~(12)~~(14) \_\_\_\_\_ CONCENTRATES are coatings supplied in a form that must be diluted with water or an exempt compound, prior to application, according to the architectural coatings manufacturer's application instructions in order to yield the desired coating properties.
- ~~(13)~~(15) \_\_\_\_\_ CONCRETE-CURING COMPOUNDS are coatings formulated for or applied to freshly poured concrete to retard the evaporation of water. Concrete-curing compounds manufactured and used for roadways and bridges (does not include curbs and gutters, sidewalks, islands, driveways and other miscellaneous concrete areas) are those concrete-curing compounds that meet ASTM Designation C309, Class B, and meet a loss of water standard of less than 0.15-kg/m<sup>2</sup> in 24 hours as determined by the California Transportation Department, California Test 534.
- ~~(14)~~(16) \_\_\_\_\_ CONCRETE SURFACE RETARDERS are coatings containing one or more ingredients such as extender pigments, primary pigments, resins, and solvents that interact chemically with the cement to prevent hardening on the surface where the retarder is applied, allowing the mix of cement and sand at the surface to be washed away to create an exposed aggregate finish.
- (17) DEFAULT COATINGS are specialty coatings (those other than flat or nonflat coatings) that are not defined in section (b) as any other coating category.
- ~~(15)~~(18) \_\_\_\_\_ DRIVEWAY SEALERS are coatings that are applied to worn asphalt driveway surfaces in order to:
- (A) Fill cracks;
  - (B) Seal the surface to provide protection; or
  - (C) Restore or preserve the surface appearance.

~~(16)~~(19) DRY-FOG COATINGS are coatings which are formulated only for spray application so that when sprayed, overspray droplets dry before falling on floors and other surfaces.

~~(17)~~(20) EXEMPT COMPOUNDS (See Rule 102-Definition of Terms.)

~~(18)~~(21) FAUX FINISHING COATINGS are coatings that meet one or more of the following subcategories:

(A) CLEAR TOPCOATS are clear coatings used to enhance, seal and protect a Faux Finishing coating that meets the requirements of subsection ~~(b)(21)~~(B), (C), (D) or (E). These clear topcoats must be sold and used solely as part of a Faux Finishing or graphic arts coating system, and must be labeled in accordance paragraph ~~(d)~~(7).

(B) DECORATIVE COATINGS are coatings used to create a gonioapparent appearance, such as metallic, iridescent, or pearlescent appearance, that contain at least 48 grams of pearlescent mica pigment or other iridescent pigment per liter of coating as applied (at least 0.4 pounds per gallon).

~~(A)~~(C) GLAZES, which are coatings formulated and recommended to be used (or to be mixed with another coating) designed for:

(i) ~~Wet-in-wet~~ techniques, where a wet coating is applied over another wet coating —used— to create artistic effects, including simulated marble or wood grain, or

(ii) Wet-in-dry techniques, where a wet coating is applied over a pre-painted or a specially prepared substrate or base coat and is either applied or is treated during the drying period with various tools, such as a brush, rag, comb, or sponge to create artistic effects such as ~~as but not limited to~~ dirt, old age, smoke damage, simulated marble and wood grain finishes, decorative patterns, or color blending, ~~and wet edge techniques.~~

~~(B)~~ DECORATIVE COATINGS, which are coatings used to create a gonioapparent appearance, such as metallic, iridescent, or pearlescent appearance, that contain at least 48 grams of pearlescent mica pigment or other iridescent pigment per liter of coating as applied (at least 0.4 pounds per gallon).

~~(C)~~(D) JAPANS, which are pure concentrated pigments, finely ground in a slow drying vehicle used by Motion Picture and Television Production Studios to create artistic effects; including, but not limited to, dirt, old age, smoke damage, water damage, ~~and~~ simulated marble, and wood grain.

- ~~(D)~~(E) TROWEL APPLIED COATINGS, ~~which~~ are coatings exclusively applied by trowel that are used to create aesthetic effects, including, but not limited to, polished plaster, clay, suede and dimensional, tactile textures.
- ~~(E)~~ — CLEAR TOPCOATS, ~~which are clear coatings used to enhance, seal and protect a Faux Finishing coating that meets the requirements of subsection (b)(18)(A), (B), (C) or (D). These clear topcoats must be sold and used solely as part of a Faux Finishing or graphic arts coating system, and must be labeled in accordance~~ paragraph (d)(7).
- ~~(19)~~(22) FIRE-PROOFING COATINGS are opaque coatings formulated to protect the structural integrity of steel and other construction materials and listed by Underwriter's Laboratories, Inc. for the fire protection of steel.
- ~~(20)~~(23) FLAT COATINGS are coatings that register a gloss of less than 15 on an 85-degree meter or less than 5 on a 60-degree meter according to ASTM Test Method D 523 as specified in paragraph (e)(5).
- ~~(21)~~(24) FLOOR COATINGS are opaque coatings that are formulated for or applied to flooring; including, but not limited to, flooring for garages, decks, and porches. Floor coatings also include, ~~and~~ clear coatings formulated for or applied to concrete flooring. Floor coatings, ~~but~~ do not include Industrial Maintenance Coatings.
- ~~(22)~~(25) FORM RELEASE COMPOUNDS are coatings designed for or applied to a concrete form to prevent the freshly poured concrete from bonding to the form. The form may consist of metal, wood, or some material other than concrete. Form release compounds will be exempt from Rules 1113 and 314 upon adoption of Rule 1161 – Release Agents or any other Regulation XI Rule limiting the VOC content of form release compounds.
- ~~(23)~~(26) FORMULATION DATA is the actual product recipe which itemizes all the ingredients contained in a product including VOCs and the quantities thereof used by the manufacturer to create the product. Material Safety Data Sheets (MSDS) are not considered formulation data.
- ~~(24)~~(27) GONIOAPPARENT means a change in appearance with a change in the angle of illumination or the angle of view, as defined according to ASTM E 284.
- ~~(25)~~(28) GRAMS OF VOC PER LITER OF COATING OR COLORANT, LESS WATER AND LESS EXEMPT COMPOUNDS, is the weight of VOC per combined volume of VOC and coating or colorant solids and can be calculated by the following equation:

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

- Where:
- Ws = weight of volatile compounds in grams
  - Ww = weight of water in grams
  - Wes = weight of exempt compounds in grams
  - Vm = volume of material in liters
  - Vw = volume of water in liters
  - Ves = volume of exempt compounds in liters

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

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

- Where:
- Ws = weight of volatile compounds emitted during curing, in grams
  - Ww = weight of water emitted during curing, in grams
  - Wes = weight of exempt compounds emitted during curing, in grams
  - Vm = volume of the material prior to reaction, in liters
  - Vw = volume of water emitted during curing, in liters
  - Ves = volume of exempt compounds emitted during curing, in liters

~~(26)~~(29) \_\_\_\_\_ GRAMS OF VOC PER LITER OF MATERIAL is the weight of VOC per volume of material and can be calculated by the following equation:

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

- Where:
- Ws = weight of volatile compounds in grams
  - Ww = weight of water in grams
  - Wes = weight of exempt compounds in grams
  - Vm = volume of the material in liters

~~(27)~~(30) \_\_\_\_\_ GRAPHIC ARTS COATINGS (Sign Paints) are coatings formulated for hand-application by artists using brush or roller techniques to indoor and outdoor signs (excluding structural components) and murals, including lettering enamels, poster colors, copy blockers, and bulletin enamels.

~~(28)~~(31) \_\_\_\_\_ HIGH-TEMPERATURE INDUSTRIAL MAINTENANCE COATINGS are industrial maintenance coatings formulated for or applied to substrates exposed continuously or intermittently to temperatures above 400 degrees Fahrenheit.

~~(29)~~(32) \_\_\_\_\_ INDUSTRIAL MAINTENANCE COATINGS are coatings, including primers, sealers, undercoaters, intermediate coatings and topcoats, formulated for or applied to substrates, including floors, that are exposed to one or more of the following extreme environmental conditions:

- (A) Immersion in water, wastewater, or chemical solutions (aqueous and non-aqueous solutions), or chronic exposure of interior surfaces to moisture condensation;
- (B) Acute or chronic exposure to corrosive, caustic or acidic agents, or similar chemicals, chemical fumes, chemical mixtures, or solutions;
- (C) Repeated exposure to temperatures in excess of 250 degrees Fahrenheit;
- (D) Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial solvents, cleaners, or scouring agents; or
- (E) Exterior exposure of metal structures.

~~(30)~~(33) \_\_\_\_\_ INTERIOR STAINS are stains labeled and formulated exclusively for use on interior surfaces.

~~(31)~~(34) \_\_\_\_\_ LACQUERS are clear or pigmented wood finishes ~~topcoats, including or~~ clear lacquer sanding sealers, both formulated with nitrocellulose or synthetic resins to dry by evaporation without chemical reaction.

~~(32)~~(35) \_\_\_\_\_ LOW-SOLIDS COATINGS are coatings containing one pound or less of solids per gallon of material.

~~(33)~~(36) \_\_\_\_\_ MAGNESITE CEMENT COATINGS are coatings formulated for or applied to magnesite cement decking to protect the magnesite cement substrate from erosion by water.

~~(34)~~(37) \_\_\_\_\_ MANUFACTURER is any person, company, firm, or establishment who imports, blends, assembles, produces, packages, repackages, or re-labels an architectural coating, excluding retail outlets where labels or stickers may be affixed to containers or where colorant is added at the point of sale.

- (35)(38) \_\_\_\_\_ MARKET means to facilitate sales through third party vendors, including, but not limited to, catalog or ecommerce sales that bring together buyers and sellers. For the purposes of this rule, market does not mean to generally promote or advertise coatings.
- (36)(39) \_\_\_\_\_ MASTIC COATINGS are coatings formulated to cover holes and minor cracks and to conceal surface irregularities, excluding roof coatings, and applied in a thickness of at least 10 mils (dry, single coat).
- (37)(40) \_\_\_\_\_ METALLIC PIGMENTED COATINGS are decorative coatings, excluding industrial maintenance and roof coatings, containing at least 0.4 pounds per gallon (48 grams/liter) of coating, as applied, of elemental metallic pigment (excluding zinc).
- (38)(41) \_\_\_\_\_ MULTI-COLOR COATINGS are coatings which exhibit more than one color when applied, ~~and which are packaged in a single container,~~ and applied in a single coat.
- (39)(42) \_\_\_\_\_ MULTI-COMPONENT COATINGS are reactive coatings requiring the addition of a separate catalyst or hardener before application to form an acceptable dry film.
- (40)(43) \_\_\_\_\_ NONFLAT COATINGS are coatings that ~~are not defined under any other definition in this rule and that~~ register a gloss of 5 or greater on a 60 degree meter and a gloss of 15 or greater on an 85 degree meter according to ASTM Test Method D 523 ~~as specified in paragraph (e)(5)~~.
- (41)(44) \_\_\_\_\_ NON-SACRIFICIAL ANTI-GRAFFITI COATINGS are clear or opaque Industrial Maintenance Coatings formulated and recommended to deter adhesion of graffiti and to resist repeated scrubbing and exposure to harsh solvents, cleansers, or scouring agents used to remove graffiti.
- (42)(45) \_\_\_\_\_ PEARLESCENT means exhibiting various colors depending on the angles of illumination and viewing, as observed in mother-of-pearl.
- (43)(46) \_\_\_\_\_ PIGMENTED means containing colorant or dry coloring matter, such as an insoluble powder, to impart color to a substrate.
- (44)(47) \_\_\_\_\_ POST-CONSUMER COATINGS are finished coatings that would have been disposed of in a landfill, having completed their usefulness to a consumer, and does not include manufacturing wastes.
- (45)(48) \_\_\_\_\_ PRE-TREATMENT WASH PRIMERS are coatings which contain a minimum of ~~1/2~~ 0.5 percent acid, by weight, applied directly to bare metal surfaces to provide necessary surface etching.

~~(46)~~(49) \_\_\_\_\_ PRIMERS are coatings applied to a surface to provide a firm bond between the substrate and subsequent coats.

~~(47)~~ — *PRODUCT LINE is a line of coatings reported under one product number and name and subject to one coating VOC limit as specified in subdivision (e) Table of Standards.*

~~(48)~~(50) \_\_\_\_\_ QUICK-DRY ENAMELS are non-flat, high gloss coatings which comply with the following:

(A) Shall be capable of being applied directly from the container by brush or roller under normal conditions, normal conditions being ambient temperatures between 60°F and 80°F; and

(B) When tested in accordance with ASTM D 1640 they shall:- set-to-touch in two hours or less, dry-hard in eight hours or less, and be tack-free in four hours or less by the mechanical test method. Coatings classified as quick-dry enamels are subsumed by the non-flat coating category.

~~(49)~~(51) \_\_\_\_\_ QUICK-DRY PRIMERS, SEALERS, AND UNDERCOATERS are primers, sealers, and undercoaters which are intended to be applied to a surface to provide a firm bond between the substrate and subsequent coats and which are dry-to-touch in one-half hour and can be recoated in two hours when tested in accordance with ~~(ASTM D 1640)~~. Coatings classified as quick-dry primers, sealers, and undercoaters are subsumed by the primer, sealer, undercoater category.

~~(50)~~(52) \_\_\_\_\_ REACTIVE DILUENT is a liquid, ~~which is a~~ VOC during application and one in which, through chemical and/or physical reaction, such as polymerization, becomes an integral part of the coating.

~~(51)~~(53) \_\_\_\_\_ REACTIVE PENETRATING SEALERS are clear or pigmented coatings labeled and formulated for application to above-grade concrete and masonry substrates to provide protection from water and waterborne contaminants, including, but not limited to, alkalis, acids, and salts. Reactive Penetrating Sealers must meet the following criteria:

(A) Used only for reinforced concrete bridge structures for transportation projects within 5 miles of the coast or above 4,000 feet elevation; or for restoration and/or preservation projects on registered historical buildings that are under the purview of a restoration architect.

(B) Penetrate into concrete and masonry substrates and chemically react to form covalent bonds with naturally occurring minerals in the substrate.

- (C) Line the pores of concrete and masonry substrates with a hydrophobic coating, but do not form a surface film.
  - (D) Improve water repellency at least 80 percent after application on a concrete or masonry substrate. This performance must be verified on standardized test specimens, in accordance with one or more of the following standards: ASTM C67, or ASTM C97/97M, or ASTM C140.
  - (E) ~~Not reduce the water vapor transmission rate by more than 2 percent after application on a concrete or masonry substrate.~~ Provide a breathable waterproof barrier for concrete or masonry surfaces that does not prevent or substantially retard water vapor transmission. This performance must be verified on standardized test specimens, in accordance with ASTM E96/E96M or ASTM D6490.
  - (F) Meet the performance criteria listed in the National Cooperative Highway Research Report 244 (1981), surface chloride screening applications, for products labeled and formulated for vehicular traffic.
- ~~(52)~~(54) \_\_\_\_\_ RECYCLED COATINGS are coatings manufactured by a certified recycled paint manufacturer and formulated such that 50 percent or more of the total weight consists of secondary and post-consumer coatings and 10 percent or more of the total weight consists of post-consumer coatings.
- ~~(53)~~(55) \_\_\_\_\_ RESTORATION ARCHITECT is an architect that has a valid certificate of registration as an architect issued by the California State Board of Architectural Examiners or the National Council of Architectural Registration Boards and working on registered historical restoration and/or preservation projects.
- ~~(54)~~(56) \_\_\_\_\_ RETAIL OUTLET means any establishment at which architectural coatings are sold or offered for sale to consumers.
- ~~(55)~~(57) \_\_\_\_\_ ROOF COATINGS are coatings formulated for application to exterior roofs for the primary purpose of preventing penetration of the substrate by water, or reflecting heat and ultraviolet radiation.
- ~~(56)~~(58) \_\_\_\_\_ RUST PREVENTATIVE COATINGS are coatings formulated for use in preventing the corrosion of metal surfaces in residential and commercial situations.
- ~~(57)~~(59) \_\_\_\_\_ SACRIFICIAL ANTI-GRAFFITI COATINGS are non-binding, clear coatings which are formulated and recommended for applications that allow for the removal of graffiti primarily by power washing.

~~(58)~~(60) \_\_\_\_\_SANDING SEALERS are clear wood coatings formulated for or applied to bare wood for sanding and to seal the wood for subsequent application(s) of coatings.

~~(59)~~(61) \_\_\_\_\_SEALERS are coatings applied to either block materials from penetrating into or leaching out of a substrate, to prevent subsequent coatings from being absorbed by the substrate, or to prevent harm to subsequent coatings by materials in the substrate.

~~(60)~~(62) \_\_\_\_\_SECONDARY (REWORK) COATINGS are fragments of finished coatings or finished coatings from a manufacturing process that has converted resources into a commodity of real economic value, but does not include excess virgin resources of the manufacturing process.

~~(61)~~(63) \_\_\_\_\_SHELLACS are clear or pigmented coatings formulated solely with the resinous secretions of the lac insect (*laccifer lacca*). Shellacs are formulated to dry by evaporation without a chemical reaction providing a quick-drying, solid, protective film for priming and sealing stains and odors; and for wood finishing excluding floors ~~effective January 1, 2007~~.

~~(62)~~(64) \_\_\_\_\_SOLICIT is to require for use or to specify, by written or oral contract.

~~(63)~~(65) \_\_\_\_\_SPECIALTY PRIMERS are coatings formulated for or applied to a substrate to seal fire, smoke or water damage,<sup>2</sup> or to condition excessively chalky surfaces. An excessively chalky surface is one that is defined as having chalk rating of four or less as determined by ASTM D-4214 – Photographic Reference Standard No. 1 or the Federation of Societies for Coatings Technology “Pictorial Standards for Coatings Defects”.

~~(64)~~(66) \_\_\_\_\_STAINS are opaque or semi-transparent coatings which are formulated to change the color but not conceal the grain pattern or texture.

~~(65)~~(67) \_\_\_\_\_STATIONARY STRUCTURES include<sub>2</sub> but are not limited to, homes, office buildings, factories, mobile homes, pavements, curbs, roadways, racetracks, and bridges.

~~(66)~~(68) \_\_\_\_\_STONE CONSOLIDANTS are coatings that are labeled and formulated for application to stone substrates to repair historical structures that have been damaged by weathering or other decay mechanisms. Stone Consolidants must meet all of the following criteria:

- (A) Used only for restoration and/or preservation projects on registered historical buildings that are under the purview of a restoration architect.
- (B) Penetrate into stone substrates to create bonds between particles and consolidate deteriorated material.

(C) Specified and used in accordance with ASTM E2167.

~~(67)~~(69) SWIMMING POOL COATINGS are coatings specifically formulated for or applied to the interior of swimming pools, including, but not limited to, water park attractions, ponds and fountains, to resist swimming pool chemicals.

~~(68)~~(70) SWIMMING POOL REPAIR COATINGS are chlorinated, rubber-based coatings used for the repair and maintenance of swimming pools over existing chlorinated, rubber-based coatings.

(71) TILE AND STONE SEALERS are clear or pigmented sealers that are used for sealing tile, stone or grout to provide resistance against water, alkalis, acids, ultraviolet light or staining and which meet one of the following subcategories:

(A) Penetrating sealers are polymer solutions that cross-link in the substrate and must meet the following criteria:

(i) A fine particle structure to penetrate dense tile such as porcelain with absorption as low as 0.10 percent % per ASTM C373, ASTM C97/C97M, or ASTM C642,

(ii) Retain or increase static coefficient of friction per ANSI A137.1,

(iii) Not create a topical surface film on the tile or stone, and

(iv) Allow vapor transmission per ASTM E96/96M.

(B) Film forming sealers which leave a protective film on the surface.

~~(69)~~(72) TINT BASE is an architectural coating to which colorants are added.

(73) TOPCOAT is any final coating, applied in one or more coats, to the interior or exterior of a stationary structure or their appurtenances.

~~(70)~~(74) TRAFFIC COATINGS are coatings formulated for or applied to public streets, highways, and other surfaces including, but not limited to, curbs, berms, driveways, and parking lots.

(75) TUB AND TILE REFINISHING COATINGS are clear or opaque coatings that are used exclusively for refinishing the surface of a bathtub, shower, or sink and which must meet all of the following criteria:

(A) Have a scratch hardness of 3H or harder and a gouge hardness of 4H or harder as determined on bonderite 1000 in accordance with ASTM D3363,

(B) Have a weight loss of 20 milligrams or less after 1000 cycles as determined with CS-17 wheels on bonderite 1000 in accordance with ASTM D4060,

(C) Must withstand 1,000 hours or more of exposure with few or no #8 blisters as determined on unscribed bonderite in accordance with ASTM D4585, and ASTM D714, and

- (D) Must have an adhesion rating of 4B or better after 24 hours of recovery as determined on unscribed bonderite in accordance with ASTM D4585 and ASTM D3359.
- ~~(71)~~(76) UNDERCOATERS are coatings formulated for or applied to substrates to provide a smooth surface for subsequent coats.
- ~~(72)~~(77) VARNISHES are clear or pigmented wood ~~finishes~~ topcoats formulated with various resins to dry by chemical reaction.
- ~~(73)~~(78) VOLATILE ORGANIC COMPOUND (VOC) is as defined in Rule 102 – Definition of Terms. For the purpose of this rule, tertiary butyl acetate (tBAC) shall be considered exempt as a VOC only for purposes of VOC emissions limitations or VOC content requirements and will continue to be a VOC for purposes of all recordkeeping, emissions reporting, photochemical dispersion modeling, and inventory requirements which apply to VOCs, when used in industrial maintenance coatings, including zinc-rich industrial maintenance coatings and non-sacrificial anti-graffiti coatings.
- ~~(74)~~(79) WATERPROOFING SEALERS are coatings which are formulated for the primary purpose of preventing penetration of porous substrates by water.
- ~~(75)~~(80) WATERPROOFING CONCRETE/MASONRY SEALERS are clear or pigmented sealers that are formulated for sealing concrete and masonry to provide resistance against water, alkalis, acids, ultraviolet light, or staining.
- (81) WOOD COATINGS are film forming coatings used for application to wood substrates only, which are applied to substrates including floors, decks and porches. The Wood Coating category includes all lacquers, varnishes and sanding sealers, regardless of whether they are clear, semi-transparent or opaque.
- (82) WOOD CONDITIONERS are coatings that are formulated for or applied to ~~prepare bare wood, for prior to applying a staining, to provide uniform penetration of the stain.~~
- ~~(76)~~(83) WOOD PRESERVATIVES are coatings formulated to protect wood from decay or insect attack by the addition of a wood preservative chemical registered by the California Environmental Protection Agency.
- ~~(77)~~(84) WORKSITE means any location where architectural coatings are stored or applied.
- ~~(78)~~(85) ZINC-RICH INDUSTRIAL MAINTENANCE PRIMERS are primers formulated to contain a minimum of 65 percent metallic zinc powder (zinc dust) by weight of total solids for application to metal substrates.

(c) Requirements

- (1) Except as provided in paragraphs (c)(3), (c)(4), ~~and designated coatings averaged under (e)(6)~~, no person shall supply, sell, offer for sale, market, manufacture, blend, repackage, apply, store at a worksite, or solicit the application of any architectural coating within the District: that is listed in the Table of Standards 1 and contains VOC (excluding any colorant added to tint bases) in excess of the corresponding VOC limit specified in the table, after the effective date specified.
  - (A) ~~That is listed in the Table of Standards 1 and contains VOC (excluding any colorant added to tint bases) in excess of the corresponding VOC limit specified in the table, after the effective date specified; or~~
  - (B) ~~That is not listed in the Table of Standards 1, and contains VOC (excluding any colorant added to tint bases) in excess of 250 grams of VOC per liter of coating (2.08 pounds per gallon), less water, less exempt compounds, until January 1, 2014, at which time the limit drops to 50 grams of VOC per liter of coating, less water, less exempt compounds (0.42 pounds per gallon).~~
- (2) No person within the District shall, at the point of sale of any architectural coating subject to paragraph (c)(1), add to such coating any colorant at the point of sale that is listed in the Table of Standards 2 and contains VOC in excess of the corresponding applicable VOC limit specified in the Table of Standards 2, after the effective date specified.

**TABLE OF STANDARDS 1  
VOC LIMITS  
Grams of VOC Per Liter of Coating,  
Less Water and Less Exempt Compounds**

COATING CATEGORY	Category Codes	Ceiling Limit <sup>1</sup>	Current Limit <sup>12</sup>	Effective Date					Small Container Exemption
				<del>7/1/08</del>	<del>1/1/12</del>	1/1/14	<u>1/1/16</u> Date of adoption	1/1/19	
Bond Breakers	<u>5</u>		350						✓
Building Envelope Coating	<u>62</u>		<u>100</u>					<u>50</u>	✓
Clear Wood Finishes			<u>275</u>						
Varnish	<del>46,47</del>	<u>350</u>	<u>275</u>						
Sanding Sealers	<del>36</del>	<u>350</u>	<u>275</u>						
Lacquer	<u>20</u>		<u>275</u>						
Concrete-Curing Compounds	<u>7</u>		100						✓
Concrete-Curing Compounds For Roadways and Bridges <sup>23</sup>	<u>7</u>		350						✓ <sup>3</sup>
Concrete Surface Retarder	<u>58</u>		<u>250</u>			50			✓
Default	<u>51</u>		<u>50</u>			<u>50</u>			✓
Driveway Sealer	<u>52</u>		<del>100</del> <u>50</u>		50				✓
Dry-Fog Coatings	<u>8</u>		<u>450</u>			50			✓
Faux Finishing Coatings									
Clear Topcoat	<u>9a</u>		<del>350</del> <u>100</u>		200	100			✓
Decorative Coatings	<u>9</u>		350						✓
Glazes	<u>9b</u>		350						✓
Japan	<u>9c</u>		350						✓
Trowel Applied Coatings	<u>9d</u>		<del>350</del> <u>50</u>		150	50			✓
Fire-Proofing Coatings	<u>10</u>		<del>350</del> <u>150</u>			150			✓
Flats	<u>13</u>	<u>250</u>	50	<u>50</u>					✓ <sup>5</sup>
Floor Coatings	<u>14</u>	<u>100</u>	50						✓
Form Release Compound	<u>16</u>		<del>250</del> <u>100</u>			100			✓
Graphic Arts (Sign) Coatings	<u>17</u>		<del>500</del> <u>200</u>			150	<u>200</u>		✓
Industrial Maintenance (IM) Coatings	<u>19</u>	<u>420</u>	100						✓ <sup>5</sup>
Color Indicating Safety Coatings			<u>480</u>						✓ <sup>5</sup>
High Temperature IM Coatings	<u>18</u>		420						✓ <sup>5</sup>
Non-Sacrificial Anti-Graffiti Coatings	<u>19a</u>		100						✓ <sup>5</sup>
Zinc-Rich IM Primers	<u>56</u>		100						✓ <sup>5</sup>
Magnesite Cement Coatings	<u>22</u>		450						✓ <sup>3</sup>
Mastic Coatings	<u>23</u>		<del>300</del> <u>100</u>			100			✓
Metallic Pigmented Coatings	<u>24</u>	<u>500</u>	<del>500</del> <u>150</u>			150			✓
Multi-Color Coatings	<u>25</u>		250						✓ <sup>3</sup>
Nonflat Coatings	<u>26, 27, 28</u>	<u>150</u>	50						✓ <sup>5</sup>
Pre-Treatment Wash Primers	<u>29</u>		420						✓ <sup>3</sup>
Primers, Sealers, and Undercoaters	<u>30</u>		100						✓
Reactive Penetrating Sealers	<u>59</u>		350						✓ <sup>4</sup>
Recycled Coatings	<u>33</u>		250					<u>150</u>	✓
Roof Coatings	<u>34</u>		50						✓
Roof Coatings, Aluminum	<u>53</u>		100						✓

COATING CATEGORY	Category Codes	Ceiling Limit <sup>1</sup>	Current Limit <sup>12</sup>	Effective Date					Small Container Exemption
				<del>7/1/08</del>	<del>1/1/12</del>	1/1/14	<u>1/1/16</u> Date of adoption	1/1/19	
Roof Primers, Bituminous	<u>4</u>		350						<u>√<sup>3</sup></u>
Rust Preventative Coatings	<u>35</u>	<del>400</del>	100						<u>√<sup>5</sup></u>
Sacrificial Anti-Graffiti Coatings	<u>60</u>		<del>100</del> <u>50</u>		<u>50</u>				<u>√<sup>3</sup></u>
Shellac									
Clear	<u>37</u>		730						<u>√<sup>4</sup></u>
Pigmented	<u>38</u>		550						<u>√<sup>4</sup></u>
Specialty Primers	<u>39</u>		100						<u>√</u>
Stains	<u>41</u>	<del>350</del>	100						<u>√</u>
Stains, Interior	<u>40</u>	<del>250</del>	250						<u>√</u>
Stone Consolidants	<u>61</u>		450						<u>√<sup>3</sup></u>
Swimming Pool Coatings									
Repair	<u>43</u>		340						<u>√<sup>3</sup></u>
Other	<u>42</u>		340						<u>√<sup>3</sup></u>
<u>Tile and Stone Sealers</u>	<u>63</u>		<u>100</u>						<u>√</u>
Traffic Coatings	<u>45</u>		100						<u>√</u>
<u>Tub and Tile Refinishing Coatings</u>	<u>64</u>		<u>420</u>						<u>√<sup>4</sup></u>
Waterproofing Sealers	<u>48</u>		100						<u>√</u>
Waterproofing Concrete/Masonry Sealers	<u>49</u>		100						<u>√</u>
<u>Wood Coatings</u>			<u>275</u>						
<u>Varnish</u>	<u>46,47</u>	<del>350</del>	<u>275</u>						
<u>Sanding Sealers</u>	<u>36</u>	<del>350</del>	<u>275</u>						
<u>Lacquer</u>	<u>20</u>		<u>275</u>						
<u>Wood Conditioners</u>	<u>65</u>		<u>100</u>						
Wood Preservatives			<del>350</del>						
<u>Below-Ground</u>	<u>50</u>		<u>350</u>						<u>√<sup>3</sup></u>
<u>Other</u>	<u>55</u>		<u>350</u>						<u>√<sup>3</sup></u>

1. ~~\_\_\_\_\_~~ The specified ceiling limits are applicable to products sold under the Averaging Compliance Option.
1. ~~2-~~The specified limits remain in effect unless revised limits are listed in subsequent columns in the Table of Standards.
2. ~~3-~~Does not include compounds used for curbs and gutters, sidewalks, islands, driveways and other miscellaneous concrete areas.
3. ~~Effective 01/01/2016~~(date of adoption), the small container exemption no longer applies per (f)(1).
4. ~~Effective 01/01/2018~~, the small container exemption no longer applies per (f)(1).
5. ~~Effective 01/01/2019~~, the small container exemption is further restricted per (f)(1).

**TABLE OF STANDARDS 1 (cont.)  
VOC LIMITS  
Grams of VOC Per Liter of Material**

COATING	Limit
Low-Solids Coating	120

**TABLE OF STANDARDS 2  
VOC LIMITS FOR COLORANTS  
Grams of VOC Per Liter of Colorant  
Less Water and Less Exempt Compounds**

COLORANT ADDED TO	Limit <sup>4</sup>
Architectural Coatings, excluding IM Coatings	50
Solvent-Based IM	600
Waterborne IM	50

4. Effective January 1, 2014.

(3) Coating Categorization

- (A) If anywhere on the container of any coating listed in either Table of Standards, on any sticker or label affixed thereto, or in any sales or advertising literature, any representation is made that the coating may be used as, or is suitable for use as, a coating for which a lower VOC standard is specified in the table or in paragraph (c)(1), then the lowest VOC standard shall apply.
- (B) The provisions of paragraph (c)(3)(A) shall not apply to a coating described in part as a flat coating; nonflat coating; ~~or primer, sealer,~~ and undercoater-coating; or represented in part for use on flooring, provided that all of the following requirements are met:
  - (i) The coating meets the definition of a specific coating category for which a higher VOC standard is specified in the Table of Standards, ~~and~~
  - (ii) The coating is labeled in a manner consistent with the definition and all the specific labeling requirements for that specific coating category, and
  - (iii) The coating is suitable and only recommended for the intended uses of that specific coating category.

(C) The provisions of paragraph (c)(3)(A) shall not apply to recycled coatings.

(4) Sell-Through Provision

- (A) Any coating that is manufactured prior to the effective date of the applicable limit specified in the Table of Standards 1, and that has a VOC content above that limit (but not above the limit in effect on the date of manufacture), may be sold, supplied, offered for sale, or applied for up to three years after the specified effective date. ~~The manufacturer shall~~

~~maintain sales and distribution records, as applicable, for any coating manufactured prior to the effective date if that coating volume is not included in an approved Averaging Compliance Option [specified in paragraph (c)(6) of this rule] Program that includes the same coating manufactured on or after the effective date. Such records shall clearly indicate the date of manufacture (or date code or batch code) and volume of coating sold or distributed to distinguish between those coatings subject to the provisions of this paragraph and those subject to the provisions of Appendix A section (K). These records shall be made available to the Executive Officer upon request and shall be maintained for a period of at least three years after the end of a compliance period of the Averaging Compliance Option Program.~~

(B) Any coating sold in a one-liter or smaller container that has a VOC content above the applicable limit specified in the Table of Standards 1 for that coating, which is manufactured prior to the effective date of the elimination or restriction of the small container exemption listed in subparagraph (f)(1)(B) through (f)(1)(E), may be sold, supplied, offered for sale, or applied for up to two years after the specified date.

(5) All architectural coating or colorant containers from which the contents are used by pouring, siphoning, brushing, rolling, padding, ragging or other means, shall be closed when not in use. These containers include, but should not be limited to: drums, buckets, cans, pails, trays or other storage or application containers.

~~(6) Averaging Compliance Option~~

~~Until January 1, 2015, in lieu of specific compliance with the applicable limits in the Table of Standards, manufacturers may average designated coatings such that their actual cumulative emissions from the averaged coatings are less than or equal to the cumulative emissions that would have been allowed under those limits over a compliance period not to exceed one year.~~

~~(A) The following coatings may be averaged: floor coatings; industrial maintenance coatings; interior stains; metallic pigmented coatings; rust preventative coatings; sanding sealers; stains; varnishes; as well as flats and nonflats (excluding recycled coatings).~~

~~(B) Manufacturers using the Averaging Compliance Option shall:~~

~~(i) Comply with the averaging provisions contained in Appendix A, as well as maintain all records for the Averaging Compliance Option (ACO) Program and make these records available to the Executive~~

~~Officer upon request, for a period of at least three years after the end of the compliance period; and~~

- ~~(ii) Use only the sell-through provision in Appendix A for each coating included in the ACO Program in lieu of the sell-through provision of subparagraph (c)(4).~~

~~(7)(6)~~ No person shall apply or solicit the application within the District of any industrial maintenance coatings, except non-sacrificial anti-graffiti coatings, for residential use or for use in areas such as office space and meeting rooms of industrial, commercial or institutional facilities not exposed to such extreme environmental conditions described in the definition of industrial maintenance coatings.

~~(8)(7)~~ General Prohibition

No person shall supply, sell, market, offer for sale, manufacture, blend, or repackage any architectural coating or colorant in the District subject to the provisions of this rule with any materials that contain in excess of 0.1% percent by weight any Group II exempt compounds listed in Rule 102. Cyclic, branched, or linear, completely methylated siloxanes (VMS) are not subject to this prohibition.

(d) Administrative Requirements

- (1) Containers for all coatings, or any colorants manufactured on and after January 1, 2017, subject to this rule shall display the date of manufacture of the contents or a code indicating the date of manufacture. The manufacturers of such coatings or colorants shall file with the Executive Officer of the District and the Executive Officer of the Air Resources Board an explanation of each code.
- (2) Containers for all coatings subject to the requirements of this rule shall carry a statement of the manufacturer's recommendation regarding thinning of the coating. This requirement shall not apply to the thinning of architectural coatings with water. The recommendation shall specify that the coating is to be employed without thinning or diluting under normal environmental and application conditions, unless any thinning recommended on the label for normal environmental and application conditions do not cause a coating to exceed its applicable standard.
- (3) Each container of any coating, or any colorant manufactured on and after January 1, 2017, subject to this rule shall display the maximum VOC content in grams per liter, as follows:

- (A) For coatings or colorants packaged in a single container, the VOC per liter of coating (less water and less exempt compounds, and excluding any colorant added to the tint base) as supplied, after any recommended thinning;
  - (B) For multi-component coatings, the VOC per liter of coating (less water and exempt compounds, and excluding any colorant added to the tint base) after mixing the components, as recommended for use by the architectural coatings manufacturer;
  - (C) For concentrates, the VOC per liter of coating (less water and exempt compounds, and excluding any colorant added to the tint base) at the minimum dilution recommended for use by the architectural coatings manufacturer;
  - (D) For low solids coatings, the VOC per liter of material (excluding any colorant added to the tint bases) after any recommended thinning; and
  - (E) VOC content displayed may be calculated using product formulation data, or may be determined using the test method in subdivision (e). VOC content calculated from formulation data shall be adjusted by the manufacturer to account for cure volatiles (if any) and maximum VOC content within production batches. ~~Effective January 1, 2014, t~~The VOC content shall be displayed on the coating container such that the required language is:
    - (i) Noticeable and in clear and legible English;
    - (ii) Separated from other text; and
    - (iii) Conspicuous, as compared with other words, statements, designs, or devices in the label as to render it likely to be read and understood by an ordinary individual under customary conditions of purchase or use.
- (4) The labels of all rust preventative coatings shall prominently display ~~include~~ the statement “For Metal Substrates Only” ~~prominently displayed~~.
- (5) The labels of all specialty primers shall prominently display one or more of the following descriptions:
- (A) For fire-damaged substrates.
  - (B) For smoke-damaged substrates.
  - (C) For water-damaged substrates.
  - (D) For excessively chalky substrates.

- (6) The labels of concrete-curing compounds manufactured and used for roadways and bridges shall prominently display ~~include~~ the statement "FOR ROADWAYS AND BRIDGES ONLY (Not for Use on Curbs and Gutters, Sidewalks, Islands, Driveways and Other Miscellaneous Concrete Areas)" ~~prominently displayed~~.
- (7) All Clear Topcoat for Faux Finishing coatings shall prominently display the statement "This product can only be sold as a part of a Faux Finishing coating system".
- (8) A manufacturer, distributor, or seller of a coating meeting the requirements of this rule, who supplies that 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 that the supplied coating would be used in a non-compliant manner.
- (9) Manufacturers of recycled coatings shall submit a letter to the Executive Officer certifying their status as a Recycled Paint Manufacturer.

(e) Test Methods

For the purpose of this rule, the following test methods shall be used:

(1) VOC Content of Coatings and Colorants

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

- (A) U.S. EPA Reference Test Method 24 (Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings, Code of Federal Regulations Title 40, Part 60, Appendix A) with the exempt compounds' content determined by Method 303 (Determination of Exempt Compounds) in the South Coast Air Quality Management District's (SCAQMD) "Laboratory Methods of Analysis for Enforcement Samples" manual, or
- (B) Method 304 ~~f~~(Determination of Volatile Organic Compounds (VOC) in Various Materials)~~f~~ in the SCAQMD's "Laboratory Methods of Analysis for Enforcement Samples" manual.
- (C) Method 313 f(Determination of Volatile Organic Compounds VOC by Gas Chromatography-Mass Spectrometry)f in the SCAQMD's "Laboratory Methods of Analysis for Enforcement Samples" manual.
- (D) ASTM Test Method 6886 (Standard Test Method for Determination of the Weight Percent Individual Volatile Organic Compounds in Waterborne Air-Dry Coatings by Gas Chromatography).

~~(C)~~(E) Exempt Perfluorocarbons

The following classes of compounds:

- cyclic, branched, or linear, completely fluorinated alkanes
- cyclic, branched, or linear, completely fluorinated ethers with no unsaturations
- cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations
- 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 formulations. In addition, the manufacturers must identify the U.S. EPA, CARB, and SCAQMD approved test methods, which can be used to quantify the amount of each exempt compound.

(2) Acid Content of Coatings

The acid content of a coating subject to the provisions of this rule shall be determined by ASTM Test Method D 1613-85 (Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products).

(3) Metal Content of Coatings

The metallic content of a coating subject to the provisions of this rule shall be determined by Method 318 (Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction) in the SCAQMD's "Laboratory Methods of Analysis for Enforcement Samples" manual.

(4) Drying Times

The set-to-touch, dry-hard, dry-to-touch, and dry-to-recoat times of a coating subject to the provisions of this rule shall be determined by ASTM Test Method D 1640 (Standard Test Methods for Drying, Curing, or Film Formation of Organic Coatings at Room Temperature). The tack-free time of a coating subject to the provisions of this rule shall be determined by ASTM Test Method D 1640, according to the Mechanical Test Method.

(5) Gloss Determination

The gloss shall be determined by ASTM Test Method D 523 (Specular Gloss).

(6) Gonioapparent Characteristics for Coatings

A coating will be determined to have a gonioapparent appearance by ASTM E 284 (Standard Terminology of Appearance).

- (7) Performance criteria for ~~Water Repellency~~ for Reactive Penetrating Sealers shall be determined by ~~any of~~ the following:
- (A) Water Repellency
    - ~~(A)~~(i) ASTM C67 (Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile);
    - ~~(B)~~(ii) ASTM C97/97M (Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone); or
    - ~~(C)~~(iii) ASTM C140 (Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units).
  - (B) Water Vapor Transmission
    - (i) ASTM E96/96M (Standard Test Methods for Water Vapor Transmission of Materials); or
    - (ii) ASTM D6490 (Standard Test Method for Water Vapor Transmission of Nonfilm Forming Treatments Used on Cementitious Panels).
  - (C) Chloride Screening shall be determined using the National Cooperative Highway Research Report 244 (1981), "Concrete Sealers for the Protection of Bridge Structures".
- (8) Performance criteria for ~~Water Vapor Transmission~~ for Reactive Penetrating Sealers ~~and Building Envelope Coatings~~ shall be determined by the following:
- (A) Air Barriers:
    - ~~(i)~~—ASTM E2178 (Standard Test Method for Air Permeance of Building Materials).
  - (B) Water Resistive Barriers
    - (i) ASTM E331 (Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference); and
    - (ii) ASTM E96/96M (Standard Test Methods for Water Vapor Transmission of Materials).
- (9) Selection and Use of Stone Consolidants shall be determined by ASTM E21767 (Standard Guide for Selection and Use of Stone Consolidants).
- ~~(10) Chloride Screening for Reactive Penetrating Sealer shall be determined using the National Cooperative Highway Research Report 244 (1981), "Concrete Sealers for the Protection of Bridge Structures".~~

- (10) Performance criteria for Tub and Tile Refinishing Coatings shall be determined by the following :
- (A) ASTM D3363 (Standard Test Method for Film Hardness by Pencil Test);
  - (B) ASTM D4060 (Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser);
  - (C) ASTM D4585 (Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation);
  - (D) ASTM D714 (Standard Test Method for Evaluating Degree of Blistering of Paints); and
  - (E) ASTM D3359 (Standard Test Methods for Measuring Adhesion by Tape Test).
- (11) Performance criteria for penetrating Tile and Stone Sealers shall be determined by the following:
- (A) Penetration of Dense Tile
    - (i) ASTM C373 (Standard Test Method for Water Absorption, Bulk Density, Apparent Porosity, and Apparent Specific Gravity of Fired Whiteware Products, Ceramic Tiles, and Glass Tiles);
    - (ii) ASTM C97/C97M (Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone); or
    - (iii) ASTM C642 (Standard Test Method for Density, Absorption, and Voids in Hardened Concrete).
  - (B) Static Coefficient of Friction by American National Standard Specification for Ceramic Tile (ANSI A137.1).
  - (C) Water Vapor Transmission by ASTM E96/96M (Standard Test Methods for Water Vapor Transmission of Materials).
- (12) Degree of Chalking Determination  
ASTM D4214 (Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films).
- ~~(11)~~(13) Equivalent Test Methods  
Other test methods determined to be equivalent after review by the Executive Officer, CARB, and the U.S. EPA, and approved in writing by the District Executive Officer may also be used.
- ~~(12)~~(14) Multiple Test Methods  
When more than one test method or set of test methods are specified for any testing, a violation of any requirement of this rule established by any one of the

specified test methods or set of test methods shall constitute a violation of the rule.

~~(13)~~(15) All test methods referenced in this subdivision shall be the version most recently approved by the appropriate governmental entities.

(f) Exemptions

(1) Small Container Exemption

~~Until December 31, 2013, the provisions of this rule shall not apply to any architectural coatings in containers having capacities of one liter (1.057 quart) or less, excluding clear wood finishes, varnishes, sanding sealers, lacquers, and pigmented lacquers, provided that the provisions in the subparagraphs below are met. Effective January 1, 2014, ¶~~The provisions of the Table of Standards 1 and paragraph (c)(1) of this rule shall not apply to ~~any~~ architectural coatings in containers having capacities of one liter (1.057 quart) or less, ~~excluding but shall apply to the following:~~ clear wood finishes, coatings, varnishes, sanding sealers, lacquers, and pigmented lacquers, provided the provisions in the subparagraphs below are met.

(A) Wood Coatings, including Lacquers, Varnishes, and Sanding Sealers.

(B) Effective January 1, 2016 (date of adoption), Concrete-Curing Compounds For Roadways and Bridges; Magnesite Cement Coatings; Multi-Color Coatings; Pre-Treatment Wash Primers; Roof Primers, Bituminous; Sacrificial Anti-Graffiti Coatings; Stone Consolidants; Repair and Other Swimming Pool Coatings; and Below-Ground and Other Wood Preservatives.

(C) Effective January 1, 2018, Tub and Tile Refinishing Coatings; Clear and Pigmented Shellacs; and Reactive Penetrating Sealers.

(D) Effective January 1, 2019, Flats, Nonflats, and Rust Preventative Coatings that are sold:

(i) In containers having capacities greater than eight fluid ounce, or

(ii) ~~Sold f~~For purposes other than touch up.

(E) Effective January 1, 2019, Industrial Maintenance Coatings, including Color Indicating Safety Coatings, High Temperature IM Coatings, Non-Sacrificial Anti-Graffiti Coatings, and Zinc-Rich IM Primers that are sold:

(i) In containers having capacities greater than one liter, or

(ii) ~~Sold f~~For purposes other than touch up, or

(iii) Displayed or advertised for sale at a retail outlet.

- (2) The small container exemption only applies if the following conditions are met:
- ~~(B)~~(A) The manufacturer reports the sales in the Rule 314 Annual Quantity and Emissions Report. The loss of this exemption due to the failure of the manufacturer to submit the Rule 314 Annual Quantity and Emissions Report shall apply only to the manufacturer.
  - ~~(C)~~(B) The coating containers of the same specific coating category listed in the Table of Standards 1, are not bundled together to be sold as a unit that exceeds one liter (1.057 quarts), or eight fluid ounces for coatings under subparagraph (f)(1)(D) as of January 1, 2019, excluding containers packed together for shipping to a retail outlet.
  - ~~(D)~~(C) The label or any other product literature does not suggest combining multiple containers so that the combination exceeds one liter (1.057 quarts) or eight fluid ounces under (f)(1)(D) as of January 1, 2019.
- ~~(2)~~(3) The provisions of subparagraph (d)(1) through (d)(7) shall not apply to architectural coatings in containers having capacities of two fluid ounces (59mL) or less.
- ~~(3)~~(4) The provisions of this rule shall not apply to:
- (A) Architectural coatings supplied, sold, offered for sale, marketed, manufactured, blended, repackaged or stored in this District for shipment outside of this District or for shipment to other manufacturers for repackaging.
  - (B) Emulsion type bituminous pavement sealers.
  - (C) Aerosol coating products.
  - (D) Use of stains and lacquers in all areas within the District at an elevation of 4,000 feet or greater above sea level or sale in such areas for such use.
- ~~(4)~~(5) The provisions of paragraph (c) shall not apply to facilities which apply coatings to test specimens for purposes of research and development of those coatings.

(g) Solvent Cleaning

- (1) Solvent cleaning that is conducted as part of a business including solvent cleaning of architectural coating application equipment and the storage and disposal of VOC-containing materials used in cleaning operations are subject to the provisions of Rule 1171 - Solvent Cleaning Operations.
- (2) Solvent cleaning that is not conducted as part of a business and solvent thinning of coatings including solvent cleaning of architectural coating application

equipment and solvent thinning of architectural coatings are subject to the provisions of Rule 1143 – Consumer Paint Thinner and Multi-Purpose Solvents.

APPENDIX A: ~~————~~ Averaging Compliance Option (ACO) Provision

The manufacturer shall demonstrate that actual emissions from the coatings being averaged are less than or equal to the allowable emissions, for the specified compliance period using the following equation:

$$\frac{\sum_{i=1}^n G_i M_i}{\sum_{i=1}^n G_i V_i L_i} \leq \frac{\sum_{i=1}^n G_i V_i L_i}{\sum_{i=1}^n G_i V_i L_i}$$

Where:

$\frac{\sum_{i=1}^n G_i M_i}{\sum_{i=1}^n G_i V_i L_i}$  ~~————~~  $\equiv$  ~~————~~ Actual Emissions

$\frac{\sum_{i=1}^n G_i V_i L_i}{\sum_{i=1}^n G_i V_i L_i}$  ~~————~~  $\equiv$  ~~————~~ Allowable Emissions

$G_i$  ~~————~~  $\equiv$  ~~————~~ Total Gallons of Product (i) subject to Averaging;

$M_i$  ~~————~~  $\equiv$  ~~————~~ Material VOC content of Product (i), as pounds per gallon; {as defined in paragraph (b)(22)}

$V_i$  ~~————~~  $\equiv$  ~~————~~ Percent by Volume Solids and VOC in Product (i), {as defined in paragraph (b)(21)}

~~————~~  $\equiv$  ~~————~~  $\frac{V_m - V_w - V_{es}}{V_m}$

~~————~~  $\equiv$  ~~————~~  $\frac{\text{Material VOC}}{\text{Coating VOC}}$   
*For Non-Zero VOC Coatings:*

~~————~~  $\equiv$  ~~————~~  $\frac{\text{Coating VOC}}{\text{Coating VOC}}$   
*For Zero VOC coatings:*

~~————~~  $\equiv$  ~~————~~ % solids by volume

$L_i$  ~~————~~  $\equiv$  ~~————~~ Regulatory VOC Content Limit for Product (i), as pounds per gallon; {as listed in subdivision (c) Table of Standards}

The averaging is limited to coatings that are designated by the manufacturer. Any coating not designated in the ACO Program shall comply with the VOC limit in the Table of Standards. The manufacturer shall not include any quantity of coatings that it knows or should have known will not be used in the District.

In addition to the requirements specified in Section (A), a manufacturer shall not include in an ACO Program or supply, sell, offer for sale, manufacture, blend, or repack for use within the District any architectural coating with a VOC content in excess of the ceiling limit in the Table of Standards or the VOC content limits specified in the National VOC Emission Standard, whichever is less.

ACO Program

At least six months prior to the start of the compliance period, manufacturers shall submit an ACO Program, which is subject to all the provisions of Rule 221—Plans and Rule 306—Plan

~~Fees, to the Executive Officer. Averaging may not be implemented until the ACO Program is approved in writing by the Executive Officer.~~

~~Within 45 days of submittal of an ACO Program, the Executive Officer shall approve, disapprove or deem the ACO Program incomplete. The ACO Program applicant and the Executive Officer may agree to an extension of time for the Executive Officer to take action on the ACO Program.~~

#### General Requirements

~~The ACO Program shall include all necessary information for the Executive Officer to make a determination as to whether the manufacturer may comply with the averaging requirements over the specified compliance period in an enforceable manner. Such information shall include, but is not limited to, the following:~~

~~An identification of the contact persons, telephone numbers, and name of the manufacturer who is submitting the ACO Program.~~

~~An identification of each coating that has been selected by the manufacturer for inclusion in this ACO Program that exceeds the applicable VOC limit in the Table of Standards, their VOC content specified in units of both grams of VOC per liter of coating, and grams of VOC per liter of material and the designation of the coating category.~~

~~A detailed demonstration showing that the projected actual emissions will not exceed the allowable emissions for a single compliance period that the ACO Program will be in effect. In addition, the demonstration shall include VOC content information for each coating that is below the compliance limit in the Table of Standards. The demonstration shall use the equation specified in paragraph (A) of this Appendix for projecting the actual emissions and allowable emissions during each compliance period. The demonstration shall also include all VOC content levels and projected volume to be sold and distributed, as applicable, within the District for each coating listed in the ACO Program during each compliance period. The requested data can be summarized in a matrix form.~~

~~A specification of the compliance period(s) and applicable reporting dates. The length of the compliance period shall not be more than one year nor less than six months.~~

~~An identification and description of specific records to be used to calculate emissions and track coating volume for the ACO Program and subsequent reporting. This shall include a detailed explanation as to how the records are to be used to demonstrate compliance with the averaging requirements of the ACO Program. Such records or electronic versions (if hardcopy originals are not generated) shall be made available to the Executive Officer upon request. These records shall include records from each of the following categories:~~

~~Product formulation records (including both coating and material VOCs):~~

~~Lab reports [including percent weight of non volatiles, water, and exempts (if applicable); density of the coating; and raw laboratory data] of test methods conducted as specified in paragraph (e)(1) of the rule or~~

~~Product formulation data, including physical properties analyses, as applicable, with a VOC calculation demonstration; and~~

~~Production records consisting of batch tickets including the date of manufacture, batch weight and volume; and~~

~~Distribution records:~~

~~Customer lists or store distribution lists or both (as applicable) and~~

~~Shipping manifests or bills of lading or both (as applicable); and~~

~~Sales records consisting of point of sale receipts or invoices to local distributors or both, as applicable.~~

~~If the manufacturer requests to demonstrate compliance with the ACO Program by using records other than those specifically listed above, those records must be approved by the U.S. EPA, CARB, and the Executive Officer before an ACO Program can be approved. The Executive Officer may request additional records, as necessary, as a condition of approving the ACO Program or to verify compliance.~~

~~A statement, signed by a responsible party for the manufacturer, certifying that all information submitted is true and correct, and that records will be made available to the Executive Officer upon request.~~

### Reporting Requirements

~~For every single compliance period, the manufacturer shall submit to the Executive Officer a mid-term report listing all coatings subject to averaging during the first half of the compliance period, detailed analysis of the actual and allowable emissions at the end of the mid-term, and if actual emissions exceed allowable emissions an explanation as to how the manufacturer intends to achieve compliance by the end of the compliance period. The report shall be signed by the responsible party for the manufacturer, attesting that all information submitted is true and correct. The mid-term report shall be submitted within 45 days after the midway date of the compliance period. A manufacturer may request, in writing, an extension of up to 15 days for submittal of the mid-term report.~~

~~Within 60 days after the end of the compliance period or upon termination of the ACO Program, whichever is sooner, the manufacturer shall submit to the Executive Officer a final report, providing a detailed demonstration of the balance between the actual and allowable emissions for the compliance period, an update of any identification and description of specific records used by the manufacturer to verify compliance with the averaging requirement, and any other~~

~~information requested by the Executive Officer to determine whether the manufacturer complied with the averaging requirements over the specified compliance period. The report shall be signed by the responsible party for the manufacturer, attesting that all information submitted is true and correct, and that records will be made available to the Executive Officer upon request. A manufacturer may request, in writing, an extension of up to 30 days for submittal of the final report.~~

#### ~~Renewal of an ACO Program~~

~~An ACO Program automatically expires at the end of the compliance period. The manufacturer may request a renewal of the ACO Program by submitting a renewal request that shall include an updated ACO Program, meeting all applicable ACO Program requirements. The renewal request will be considered conditionally approved until the Executive Officer makes a final decision to deny or approve the renewal request based on a determination of whether the manufacturer is likely to comply with the averaging requirements. The Executive Officer shall base such determination on all available information, including but not limited to, the mid-term and final reports of the preceding compliance period. The Executive Officer shall make a decision to deny or approve a renewal request no later than 45 days from the date of the final report submittal, unless the manufacturer and the Executive Officer agree to an extension of time for the Executive Officer to take action on the renewal request.~~

#### ~~Modification of an ACO Program~~

~~A manufacturer may request a modification of the ACO Program at any time prior to the end of the compliance period. The Executive Officer shall take action to approve or disapprove the modification request no longer than 45 days from the date of its submittal. No modification of the compliance period shall be allowed. An ACO Program need not be modified to specify additional coatings to be averaged that are below the applicable VOC limits.~~

#### ~~Termination of an ACO Program~~

~~A manufacturer may terminate its ACO Program at any time by filing a written notification to the Executive Officer. The filing date shall be considered the effective date of the termination, and all other provisions of this rule including the VOC limits shall immediately thereafter apply. The manufacturer shall also submit a final report 60 days after the termination date. Any exceedance of the actual emissions over the allowable emissions over the period that the ACO Program was in effect shall constitute a separate violation for each day of the entire compliance period.~~

~~The Executive Officer may terminate an ACO Program if any of the following circumstances occur:~~

~~The manufacturer violates the requirements of the approved ACO Program, and at the end of the compliance period, the actual emissions exceed the allowable emissions.~~

~~The manufacturer demonstrates a recurring pattern of violations and has consistently failed to take the necessary steps to correct those violations.~~

#### ~~Change in VOC Limits~~

~~If the VOC limits of a coating listed in the ACO Program are amended such that its effective date is less than one year from the date of adoption, the affected manufacturer may base its averaging on the prior limits of that coating until the end of the compliance period immediately following the date of adoption.~~

#### ~~Labeling~~

~~Each container of any coating that is included in an ACO Program, and that exceeds the applicable VOC limit in the Table of Standards shall display the following statement: “This product is subject to the averaging provisions of SCAQMD Rule 1113”. A symbol specified by the Executive Officer may be used as a substitute.~~

#### ~~Violations~~

~~The exceedance of the allowable emissions, as defined in Appendix A, Section (A), at the end of any compliance period shall constitute a separate violation for each gallon of each coating product line that is over the VOC limit specified in the Table of Standards for each day of the compliance period. However, any violation of the requirements of the ACO Provision of this rule, which the violator can demonstrate, to the Executive Officer, did not cause or allow the emission of an air contaminant and was not the result of negligent or knowing activity may be considered a minor violation (pursuant to District Rule 112).~~

#### ~~Sell-Through Provision~~

~~A coating that is included in an approved ACO Program that does not comply with the specified limit in the Table of Standards may be sold, supplied, offered for sale, or applied for up to three years after the end of the compliance period specified in the approved ACO Program. This section of Appendix A does not apply to any coating that does not display on the container either the statement: “This product is subject to architectural coatings averaging provisions of the SCAQMD Rule 1113” or a designated symbol specified by the Executive Officer of the SCAQMD.~~

**A T T A C H M E N T F**

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**FINAL STAFF REPORT FOR**

**PROPOSED AMENDED RULE 1113 – ARCHITECTURAL COATINGS**

# **SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

## **Final Staff Report Proposed Amended Rules 1113– Architectural Coatings**

**February 2016**

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## **ACRONYMS USED IN THIS REPORT**

ACA American Coatings Association

AMP 2-Amino-2-Methyl-1-Propanol

AQMP Air Quality Management Plan

ASTM American Society for Testing and Materials

CARB California Air Resources Board

CEQA California Environmental Quality Act

DBP Dibutyl Phthalate

GC/MS Gas Chromatography/Mass Spectrometry

g/L Grams per Liter

IMC Industrial Maintenance Coatings

MP Methyl Palmitate

NO<sub>x</sub> Oxides of Nitrogen

OEHHA Office of Environmental Health Hazard Assessment

PAR Proposed Amended Rule

PSU Primer, Sealer, & Undercoater

RPC Rust Preventative Coating

SCE Small Container Exemption

SCM Suggested Control Measure

SCAQMD South Coast Air Quality Management District

SIP State Implementation Plan

SWA Sales Weighted Average

SVOC semi-volatile organic compound

TGA Thermogravimetric Analysis

tpd Tons per day

USEPA United States Environmental Protection Agency

VOC Volatile Organic Compound

WPCMS Waterproofing Concrete/Masonry Sealer

## EXECUTIVE SUMMARY

Rule 1113 - Architectural Coatings, was originally adopted by the South Coast Air Quality Management District (SCAQMD) on September 2, 1977, to regulate the Volatile Organic Compound (VOC) emissions from the application of architectural coatings, and has since undergone numerous amendments. The 2012 Air Quality Management Plan (AQMP), included Control Measure CM#2012 CTS-01 – Further VOC Reductions from Architectural Coatings, to achieve 2 – 4 tons of VOC emission reductions per day by 2019. Rule 314 – Fees for Architectural Coatings, was adopted on June 6, 2008, requiring manufacturers to pay fees, as well as report sales and emissions of architectural coatings into the SCAQMD. Based on the sales data collected from Rule 314, numerous site visits, technical research, and working group meetings, staff has developed PAR 1113 in regard to the following:

### *PAR 1113:*

- Eliminate and restrict~~Limit~~ the small container exemption (SCE) for certain categories
- Include a two year sell-through provision for the SCE phase out
- Propose new categories with VOC limits and eliminate categories that will be regulated under a prospective new ~~different~~ rule
- Clarify existing definitions and requirements, as necessary
- Reduce the VOC limit of some architectural coating categories to reflect currently available coatings~~inventory~~
- Include colorants in the labeling requirements
- Include several new test methods
- Remove outdated language

Staff has held six working group meetings, a Public Workshop, and Public Consultation Meeting with stakeholders beginning June 5, 2014, as well as met with individual architectural coating manufacturers and the American Coatings Association (ACA). The current proposal incorporates and addresses numerous comments and concerns expressed by the stakeholders.

Staff proposes the following amendments to achieve emission reductions and clarify rule implementation issues for improved enforceability:

### **PAR 1113:**

- Remove all references to the averaging provision which sunset on January 1, 2015.
- Remove outdated language.
- Add 8 definitions,~~;~~ amend 10 definitions, delete 1 definition, and phase out 2 definitions:

- Add – Building Envelope, Building Envelope Coatings, Color Indicating Safety Coatings, Default Coatings, Tile and Stone Sealers, Topcoat, Tub and Tile Refinishing Coatings, and Wood Conditioners.
- Amend – Clear Wood Finishes (renamed to Wood Coatings), Faux Finishing Coatings Glazes, Flat Coatings, Floor Coatings, Lacquers, Mastic Coatings, Nonflat Coatings, Lacquers, Reactive Penetrating Sealers, Shellacs, and Varnishes, and Clear Wood Finish (re-named Wood Coatings).
- Delete definition – Product Line.
- Phase out – Bond Breakers and Form Release Compounds.
- Clarify the requirements in paragraph (c)(1) and (c)(2).
- Establish a VOC limit for the following new coating categories:
  - Building Envelope Coatings, Color Indicating Safety Coatings, Tile and Stone Sealers, Tub and Tile Refinishing Coatings, and Wood Conditioners.
- Reduce the VOC limit on the following categories:
  - Building Envelope Coatings and Recycled Coatings.
- Amend and update the Table of Standards (TOS) 1 for clarifications.
- Include an exception for Recycled Coatings from the most restrictive clause (c)(3).
- Include colorants in the labeling requirements for the date of manufacturer and the VOC content.
- Include the following test methods:
  - VOC content:
    - SCAQMD Method 313 (M313) - Determination of Volatile Organic Compounds VOC by Gas Chromatography(GC)-Mass Spectrometry(MS).
    - ASTM Test Method D6886 (M6886) - Standard Test Method for Determination of the Weight Percent Individual Volatile Organic Compounds in Waterborne Air-Dry Coatings by GC Gas Chromatography.
  - Reactive Penetrating Sealers
    - ASTM D6490 - Standard Test Method for Water Vapor Transmission of Non-Film Forming Treatments Used on Cementitious Panels.

- Building Envelope Coatings:
  - ASTM E2178 - Standard Test Method for Air Permeance of Building Materials.
  - ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
  - ASTM E96/96M - Standard Test Methods for Water Vapor Transmission of Materials.
- Tub and Tile Refinishing Coating:
  - ASTM D3363 - Standard Test Method for Film Hardness by Pencil Test.
  - ASTM D4060 - Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser.
  - ASTM D4585 - Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation.
  - ASTM D714 - Standard Test Method for Evaluating Degree of Blistering of Paints.
  - ASTM D3359 - Standard Test Methods for Measuring Adhesion by Tape Test.
- Tile and Stone Sealers:
  - ASTM C373 - Standard Test Method for Water Absorption, Bulk Density, Apparent Porosity, and Apparent Specific Gravity of Fired Whiteware Products, Ceramic Tiles, and Glass Tiles.
  - ASTM C97/C97M - Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone.
  - ASTM C642 - Standard Test Method for Density, Absorption, and Voids in Hardened Concrete.
  - American National Standard Specification for Ceramic Tile (ANSI A137.1).
  - ASTM E96/96M - Standard Test Methods for Water Vapor Transmission of Materials.
- Degree of Chalking (method was referenced in section (b) but not section (e)):
  - ASTM D4214 - Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films.
- Amend the SCE Small Container Exemption such that:
  - The exemption is eliminated for high-VOC specialty coatings and coating categories not using ~~needing~~ the exemption,

- Restrict the exemption for Flat Coatings, Nonflat Coatings, Rust Preventative Coatings, and Industrial Maintenance Coatings, and
- Include a two year sell-through provision for the SCE phase out
- Clarify the language.

The overall estimated emission reductions from PAR 1113 are  $\approx 0.88$  tons per day (tpd) by January 1, 2019, and will implement portions of CM#2012 CTS-01.

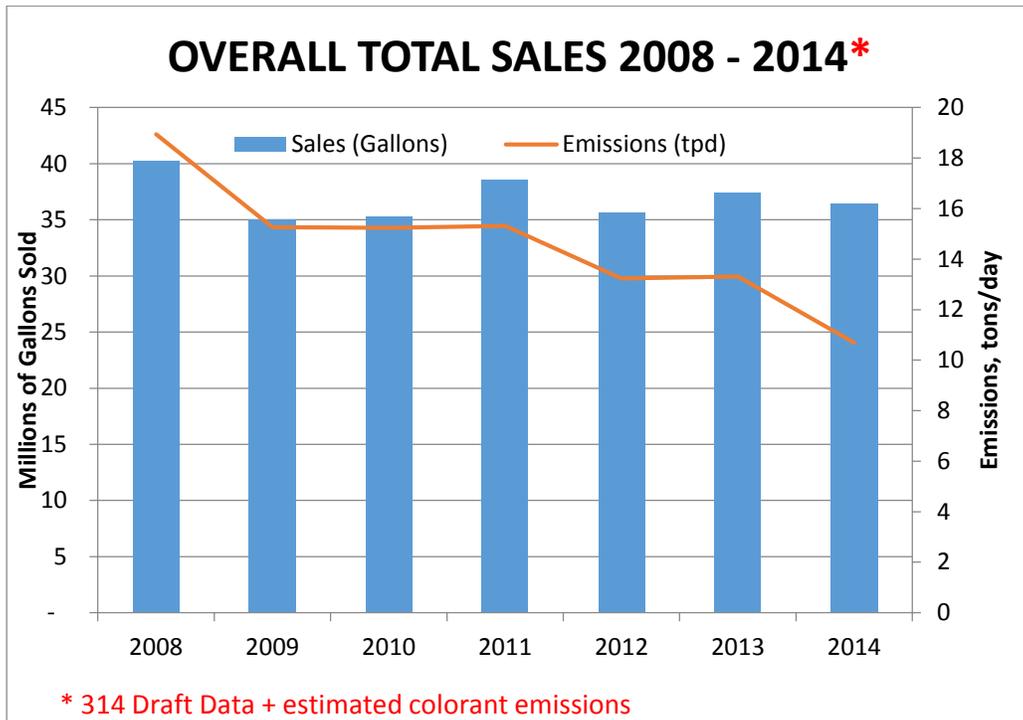
## BACKGROUND

Architectural coatings are one of the largest non-mobile sources of VOC emissions in the SCAQMD. Rule 1113 is applicable to manufacturers, distributors, specifiers, and end-users of architectural coatings. These coatings are used to enhance the appearance of and to protect stationary structures and their appurtenances, including homes, office buildings, factories, pavements, curbs, roadways, racetracks, bridges, other structures; and their appurtenances, on a variety of substrates. Architectural coatings are typically applied using brushes, rollers, or spray guns by homeowners, painting contractors, and maintenance personnel. Rule 1113 was first adopted in 1977, and has undergone numerous amendments, most recently on September 6, 2013, to provide regulatory relief for labeling requirements of containers holding four fluid ounces or less. Although successive amendments to Rule 1113 contributed to significantly reduced emissions, architectural coatings continue to be one of the largest sources of VOC emissions in the SCAQMD, with the exception of consumer products and mobile sources.

Rule 314, which is the fee and reporting rule that applies to architectural coatings, affects about 200 architectural coatings manufacturers. Beginning in 2009 and each subsequent calendar year, Rule 314 requires architectural coatings manufacturers to report to the SCAQMD the total annual quantity (in gallons) and emissions of each of their architectural products distributed or sold into or within the SCAQMD for use in the SCAQMD, during the previous calendar year. Fees are assessed on the manufacturers' reported annual quantity of architectural coatings as well as the cumulative VOC emissions from the reported annual quantity of coatings. Data collected from the manufacturers also provides SCAQMD with an annual emissions inventory that is used for planning purposes.

The 2012 AQMP projected the 2014 Annual Average Emissions for architectural coatings would be ~~16 tons per day (tpd)~~, with a Summer Planning Inventory of 19 tpd. According to more recent Rule 314 data for products shipped in 2014, the emissions in the SCAQMD that can be attributed to architectural coatings is approximately 10 tpd with another 0.2 tpd and 0.4 tpd contributed by colorant and clean-up solvent. Staff notes that the Rule 314 data has not been fully audited, and volumes and emissions may be under or over-reported. The data may be revised upon more detailed audits and subsequent compliance reviews. The following represents the sales and emissions totals. Note the data is not finalized and could change as additional and/or amended data is received.

Figure 1: Rule 314 Quantity and Emissions Summary – 2008 - 2014



## RULE DEVELOPMENT PROCESS

Staff initiated outreach with stakeholders regarding the intent to amend Rule 1113 in April 2014, 20 months prior to the scheduled Public Hearing. Over that period, staff held six working group meetings and a Public Workshop, see Figure 24, including several meetings with sub-groups for more in-depth discussions on Faux Finishing Coatings and VOC Test Methods. Numerous stakeholders participated both in person and via teleconference. Over the course of the discussions, the ACA and the manufacturers provided feedback on rule language, requirements, and appropriate effective dates for the rule proposal. Additionally, staff met individually with local and national manufacturers, both large and small, to discuss the proposal and obtain feedback on the status of technology and desired implementation dates.

Figure 2: Rule Development Flow Chart



## STAFF ASSESSMENT FOR THE PROPOSED AMENDMENTS

### *PAR 314*

Staff initially proposed to amend Rule 314 to include a tiered sales fee in lieu of the 25 g/L VOC limits for Flat coatings, Nonflat Coatings, and Primer, Sealer, Undercoaters (PSU). The proposal was for a lower fee for coatings that contain less than 25 g/L (\$0.01 from \$0.04) and a higher fee for coatings exceeding the VOC limit, e.g. coatings sold under the SCE or self-reported violations (\$0.40 from \$0.04). The proposal is being removed to allow time for additional data analysis and research regarding the impact of a recent court decision regarding fees.

### *PAR 1113*

#### *Applicability*

Staff is removing the reference to the phased out averaging compliance option (ACO) plan which sunset on January 1, 2015. Based on feedback at the Public Workshop and Public Consultation Meeting, staff is changing the wording of the first sentence to make it clear that the rule applies to all coatings manufacturers who sell architectural coatings into and within the District and not just architectural coating manufacturers that operate within the District. Staff further clarified the language to indicate that individuals who sell architectural coatings outside the District are not necessarily culpable for coatings that end up being used within the District. Staff ~~received~~heard a concern during the Stationary Source Committee Meeting about coatings that could be sold at a retailer outside of the SCAQMD jurisdiction, unbeknownst to the retailers, and is applied within the SCAQMD. The proposed rule language clarifies this concern. In addition, the manufacturer and retailer will not be liable because subsection (d)(8) of the rule makes it clear they are not liable for that non-compliant use.

#### *Definitions*

For rule clarification, staff is proposing several new or amended definitions and is proposing to delete several definitions.

#### *Bond Breakers and Form Release Compounds*

Staff is proposing to phase out these two definitions upon the future adoption of Rule 1161 – Release Agents or any other Regulation XI rule limiting the VOC content of bond breakers or form release compounds, which will directly address these categories.

#### *Building Envelope and Building Envelope Coatings*

Staff is proposing a new coating category for Building Envelope Coatings. These coatings currently fall under the waterproofing sealer category, but there has been confusion amongst manufacturers if Rule 1113 applies to these coatings. Staff is proposing to include a specific category for these coatings to make it clear that Rule 1113 applies to Building Envelope Coatings, as this is a growing category. Staff is proposing a VOC limit of 100 g/L, the current VOC limit for waterproofing sealers, with a future reduction to 50 g/L by 2019. The 2019 VOC limit for this category is based on feedback from the majority of manufacturers of these types of products, stating that they can achieve it by that future date.

### *Color Indicating Safety Coatings*

As the SCE is being further restricted, certain small niche categories need to be carved out in the rule. Amongst those coatings are Color Indicating Safety Coatings. These coatings are used by refineries as a safety precaution and include coatings that change color to indicate an acid leak as well as coatings that change color to indicate a temperature change. Staff is proposing a VOC limit of 480 g/L, which is the current VOC content for these coatings, and as such, these coatings will not be given the SCE as it should not be needed.

### *Default Coating*

Rule 1113 has always contained a default category for specialty coatings that are not listed in the ~~Table of Standards~~ (TOS). This category was not defined or included in the TOS but was described in subparagraph (c)(1)(B). For clarification, staff is proposing to add an entry in the TOS and a definition in section (b).

### *Faux Finishing Coatings*

Staff is changing the order of the subcategories to reflect their alphanumeric order. In addition, staff is proposing to update the definition of a Faux Glaze to reflect what is being offered in the marketplace. The Faux definitions underwent considerable revisions during the 2011 rule amendment, but the Glaze definition was not altered significantly at that time. Since the 2011 changes, staff became aware that most of what was being offered in the marketplace did not reflect staff's interpretation of the current Glaze definition. Considerable time and effort was put into the proposed definitions, such that both SCAQMD staff and the regulated industry agree as to what exactly can be categorized as a Faux Glaze. The Faux Trowel definition is also being amended to indicate that these coatings must be applied by trowel to meet the definition.

### *Flat Coating*

Staff is proposing to amend the definition of a Flat coating to harmonize it with the Nonflat definition by including the ASTM method for measuring gloss.

### *Floor Coating*

Staff is proposing to amend the floor coating definition for clarification.

### *Lacquers*

Staff is proposing to amend the definition of a Lacquer to clarify that the Lacquer category only applies to Lacquer topcoats and sanding sealers. There has been confusion in the past that Lacquer undercoaters are allowed for architectural use at a 275 g/L VOC limit. Lacquer undercoaters with a VOC limit of 275 g/L are allowed in Rule 1136; but they have always been categorized as PSU~~primer, sealer, undercoaters~~ with a VOC limit of 100 g/L in Rule 1113. This change is for rule clarification.

### *Mastic Coating*

Staff is proposing to amend the definition of a Mastic Coating in response to a comment received at the Public Workshop. The Roof Coatings Manufacturers Association expressed concern the current definition could lead to confusion on commonly used mastic cements that fall under Rule 1168 – Adhesives and Sealants. Excluding roof coatings from the Rule 1113 definition of Mastic Coatings will address this confusion.

*Nonflat Coating*

Staff is proposing to amend the definition of a Nonflat Coating because as written, it overlapped with the Default definition. A Nonflat Coating will now only be defined by the gloss level, which is the same approach used for the Flat Coating definition.

*Product Line*

Staff is proposing to delete this definition because it is no longer necessary and obsolete. It was only referenced in the ACO and it has been phased out.

*Reactive Penetrating Sealer*

Staff is proposing to amend the definition of this coating category that was added in 2011. These coatings were added to address the needs of the California Department of Transportation (CalTrans) for infrastructure projects near the coast or above 4,000 feet. The definition was adopted based on the California Air Resources Board (CARB) Suggested Control Measure (SCM). Since adoption of the category, CalTrans has conducted a series of tests on potential coatings, and none of them could pass the criteria listed in current Rule 1113 paragraph (51)(E) defining Reactive Penetrating Sealers that includes not reducing the water transmission rate by more than 2 percent after application on a concrete or masonry substrate. Based on the extensive testing conducted, staff is proposing to change that criterion. In addition, since this niche category was adopted with a high-VOC limit to reflect the coatings that were available, staff is also proposing to restrict this category from using the SCE.

*Shellacs*

Staff is proposing to remove the outdated effective date. Also, staff is proposing to remove this category from the SCE as it currently has a high-VOC limit to reflect the limitations of the shellac chemistry (e.g. coatings formulated solely with the resinous secretions of the lac insect cannot be reformulated to a lower VOC limit due to the unique chemistry of the resin).

*Tile and Stone Sealers*

Staff is proposing to add a definition for Tile and Stone Sealers. These coatings are currently included under the broad category of Waterproofing Concrete and Masonry Sealers (WPCMS). Tile and Stone Sealers, which include both penetrating sealers and film forming sealers, are a smaller subset of the WPCMS and carving out a category will assist staff in tracking the sales of these products.

*Topcoat*

Staff is proposing to add a definition for Topcoat as the term is included in the definitions of Lacquers and Varnishes.

*Tub and Tile Refinishing Coatings*

This is another category carve out that is necessary as the SCE is being further restricted. Staff has always interpreted these coatings as Industrial Maintenance Coatings (IMC) that are sold under the SCE, but manufacturers have been reporting these coatings in Rule 314 as either Flat, Nonflat, or Default Coatings; therefore, staff did not add this category under the IMC umbrella. The

proposed definition and VOC limit is based on CARB’s SCM, and since this is a high-VOC category carve out, the SCE will not be allowed.

*Varnish*

Staff is proposing to amend the definition of a varnish to clarify that for the purposes of Rule 1113, Varnishes only refer to topcoats and not to undercoats.

*Volatile Organic Compound*

Prior to the August 25, 2015 Public Workshop, staff proposed to amend the definition of a volatile organic compound (VOC) to include 2-Amino-2-Methyl-1-Propanol (AMP) as an exempt compound. On September 15<sup>th</sup> the Office of Environmental Health Hazard Assessment (OEHHA) issued their final interim reference exposure levels (RELs) for AMP which were low enough to cause concern about the proposed exemption. AMP would largely replace ammonia in low-VOC coatings. AMP is primarily used as a neutralizer to control the pH of waterborne coatings. Some manufacturers switched from AMP to ammonia or sodium hydroxide, as the latter are not defined as VOCs. AMP is used in small quantities in some waterborne coatings, between 0.1% - 1.0%. Based on data from a paint manufacturer and the volatility of ammonia, more ammonia is needed to replace AMP. The initial proposal to exempt AMP was thought to lower the toxicity of coatings as it was assumed that ammonia was more toxic than AMP but the new RELs do not support that conclusion:

**Table 1: AMP and Ammonia RELs**

	Acute REL	Chronic REL
AMP	990 µg/m <sup>3</sup>	1 µg/m <sup>3</sup>
Ammonia	3200 µg/m <sup>3</sup>	200 µg/m <sup>3</sup>

Staff used a simple box model to estimate if the exposure of painting a small room (10 x 10 x 8) could approach the RELs for AMP ~~and therefore,~~ constituting a risk for the painter or homeowner. Staff assumed it would take ~~two~~ 2 gallons of paint with a density of 1.4 g/mL and assumed the AMP will volatilize into the air with the exposure duration. The following are the estimated concentrations of AMP in the room during the painting operation:

**Table 2: AMP Exposure Calculations**

Air Exchange Rate (hourly)	0.3	1	2	5
<b>Acute Concentration (µg/m3)</b>	1,799,546	1,169,705	779,803	389,902
<b>Chronic Concentration (µg/m3)</b>	428,463	278,501	185,667	92,834

Based on the above exposure calculations and the RELs of AMP, staff is not proposing to exempt AMP from the definition of a VOC at this time.

*Wood Coatings*

Staff is proposing to change the Clear Wood Finish definition to Wood Coatings. This change is to address the inconsistency of having pigmented Lacquers and Varnishes fall under the Clear Wood Finish umbrella even though they are not “clear”. In addition, the definition is being changed to more closely reflect the definition in the CARB SCM, but with limited categories included (e.g. only Vvarnish topcoats, Llacquer topcoats and sanding sealers). The definition is also being changed to clearly indicate that it only applies to Lacquer and Varnish topcoats and not to undercoaters.

**Requirements**

Several changes are being proposed to subdivision (c):

- Paragraph (c)(1): staff is proposing the following amendments:
  - Remove references to the default category and the VOC limit for the default category since it will now be included in the TOS.
  - Remove the reference to the ACO
- Paragraph (c)(2): based on feedback from the Public Workshop, staff is proposing to amend (c)(2) to further clarify that the VOC limit for colorants apply to colorant that is added to architectural coatings at the point of sale. This change is just for clarification. The reference to the effective date is also being removed as the effective date has already passed.
- Paragraph (c)(3) – the most restrictive clause: staff is proposing to amend the paragraph to indicate that Recycled Coatings are exempt from the most restrictive clause. This change will allow coatings that contain 50 percent or more of secondary and post-consumer coatings to be marketed for use as coating categories other than Flat, Nonflat or PSUprimer, sealer, undercoaters. This change was prompted by an inquiry during the Public Workshop about a potential future market, using Recycled Coatings as a base for a waterproofing coating. Staff further evaluated the usages of Recycled Coatings and

realized the current sales of sacrificial anti-graffiti coatings (a common application of Recycled Coatings) runs afoul of the most restrictive clause. Since Rule 1113 contains a coating category for sacrificial anti-graffiti coatings with a lower-VOC limit (50 g/L), those coatings must comply with the 50 g/L VOC limit and not the 250 g/L VOC limit for Recycled Coatings. It is not the intent to discourage this usage of Recycled Coatings; therefore, staff is proposing to exempt Recycled Coatings from (c)(3). This change will not likely result in higher emissions from Recycled Coatings but staff will track the sales volumes and future coating categories where they are used.

- Paragraphs (c)(4) and (c)(6): staff is removing all references to the phased out averaging compliance option.

### *Table of Standards (TOS)*

Several changes are being proposed to the TOS for clarification.

- Category Column: the newly proposed categories are being added to the coating category column.
- Category Codes: a column for the CARB category codes is being included. These codes are used for Rule 314 reporting so including them in the TOS could be helpful for reporting purposes.
- Ceiling Limit: the ceiling limit in the rule was used for the ~~averaging compliance options (ACO)~~. As the ACO has been phased out, this column is no longer needed and will be eliminated.
- Current Limit: this column is being renamed Limit because if there is a limit listed to the right of that column, the limit listed is not actually the current limit. In addition, all of the VOC limits listed are being updated to reflect any lower limits that have passed the effective date.
- Effective Dates:
  - 7/1/08 and 1/1/12 columns are being removed as they are already in effect and the three year sell-through period either is expired or will soon expire.
  - 1/1/14 column is being retained for purposes of tracking the three-year sell-through.
  - 1/1/16 column is being added to include an increase in the VOC limit for graphic arts coatings.
  - 1/1/19 column is being included to address a future effective date for a VOC reduction for Building Envelope Coatings and Recycled Coatings.
  - SCE column is being added as staff is proposing several changes to this exemption. Including a column will help clarify the requirements.

*VOC Limit Changes*

As stated above, staff is proposing to change the following VOC limits:

*Building Envelope Coatings*

These coatings would currently fall under the waterproofing sealer category which has a VOC limit of 100 g/L. Staff is proposing to initially set the VOC limit at 100 g/L which will be lowered to 50 g/L effective January 01, 2019. Based on manufacturer feedback, the 50 g/L limit will affect some currently or future available coatings but is achievable in that timeframe. Staff researched the coatings that are currently being offered for sale in the SCAQMD and found the following:

**Table 3: Building Envelope Coatings Available in 2014**

Volume (gallons)	SWA VOC (g/L)	Adjusted SWA VOC (g/L)	Emissions (tpd)	# products	# product over 100 g/L	# products over 50 g/L	Potential Emissions *	Potential Reductions**
20,295	86	22	0.012	12	2	3	0.01	0.005

Based on staff’s findings, from both coatings reported under Rule 314 and coatings not reported under Rule 314, all but three coatings meet the future VOC limit. Of those three, two do not meet the current VOC limit; therefore, are not currently legal for sale. Eliminating the two non-compliant coatings, the sales weighted average is 22 g/L. Staff feels the 50 g/L VOC limit originally proposed and supported by the manufacturers is achievable. The added expense of re-testing products that do not meet the future limit is limited to one product, the other two must be re-tested to be sold into the SCAQMD based on the current limit. For this category, staff was striving to set the VOC limit at the current baseline but not so high as to allow higher VOC coatings to enter the market in the future.

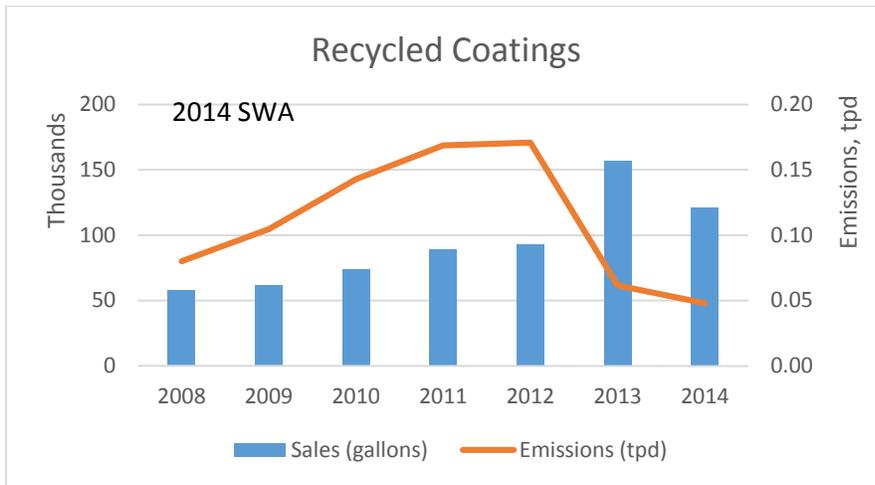
*Graphic Arts Coatings*

During the 2011 amendment to Rule 1113, staff reduced the VOC limit for graphic arts coatings from 500 g/L to 150 g/L based on the coatings that were available at that time. Staff projected an emission reduction of 0.003 tpd when the lower limit was adopted. Since that amendment, the manufacturer who was producing the graphic arts coatings that were less than 150 g/L went out of business. The only graphic arts coatings currently available are being sold under the SCE. The largest manufacturer of these coatings has stated that they will not reformulate to 150 g/L but they can be formulated to 200 g/L. As there currently are no compliant sales of these coatings, staff is not projecting any emissions increase from this change.

*Recycled Coatings*

Based on the currently available Recycled Coatings in our jurisdiction, the maximum VOC content is 130 g/L. Staff is proposing to lower the VOC to just above that level at 150 g/L. This change is not to seek emission reductions, but to have the VOC limits reflect what is being offered for sale and prevent any future increases. As Recycled Coatings are blended from locally available unused paints, it follows that the VOC content of these coatings would decrease over time. Further, with the adoption of PaintCare, the volume of Recycled Coatings has increased. PaintCare was adopted in California on October 19, 2012, and is a paint stewardship program that requires paint manufacturers to develop a financially and environmentally sustainable program to manage postconsumer coatings. There are currently 738 drop-off sites in California for consumers to bring unused paint. The following table demonstrates the trends in Recycled Coating sales:

**Figure 3: Recycled Coatings Sales and Emissions**



Staff is striving to have the VOC limits as low as possible to reflect the currently available products, such that the lower emissions achieved from market driven forces can be submitted under the State Implementation Program (SIP) as enforceable reductions. If all of the Recycled Coatings sold in 2014 (121,355 gallons) were formulated to the currently allowable VOC limit of 250 g/L limit (approximately 100 g/L VOC of Material), the emissions would be 0.14 tpd. The emissions at the proposed VOC limit of 150 g/L (approximately 60 g/L material) would be 0.08 tpd, so this change results in a SIP enforceable reduction of 0.06 tpd.

Based on feedback following the Public Workshop, and subsequent site visits with local Recycled Coatings manufacturers, staff is proposing to delay the effective date for this VOC change until January 1, 2019. Even though all of the coatings reported under Rule 314 were below the proposed 150 g/L limit (most were well below), the manufacturers had concerns over the required testing of these coatings. Unlike conventional coatings, the Recycled Coating manufacturers cannot control the coatings they receive, which serve as their raw materials. Various coatings collected by PaintCare or through household waste collections may still contain old, higher-VOC waterborne coatings. According to the Recycled Coating manufacturers, even some 15 year old coatings can still be good enough to use as a raw material. Staff acknowledges there are occasionally 200 g/L containers of coating collected, but it is offset by increasing quantities of less than 50 g/L coatings, including many ‘zero-VOC’ coatings.

The manufacturers may blend 1,000 batches annually but only test the VOC content quarterly, and they are concerned over the added cost of testing. One of the biggest selling points of Recycled Coatings is the lower cost. Some of the manufacturers have a difficult time finding a market for their products, partially due to the high-VOC content as end users seeking Recycled Coating are also seeking low-VOC coatings. Recycling unused paint is an important mission and the SCAQMD does not want to discourage this practice; therefore, staff is proposing to delay the effective date until January 1, 2019. Over time, the quantities of higher-VOC coatings will diminish. This delay will also mitigate the cost for relabeling coating containers, though one manufacturer already labels their recycled product as less than 100 g/L.

Some manufacturers would prefer not to have any VOC limit for Recycled Coatings, however, staff opposes this concept. Recently, staff discovered a re-use store stocking 250 g/L Nonflat Coating that was shipped in from Florida. Enforcement staff put an end to this practice. Leaving the VOC limit for Recycled Coatings at 250 g/L could further encourage the practice of importing high-VOC coatings as a raw material. With a population of over 17.5 million people and over 35 million gallons of paint sold annually, staff feels there is more than enough unused coating available locally to serve the local needs for Recycled Coatings.

#### ***Averaging Compliance Option (ACO)***

All references to the ACO are being removed as this provision was phased out January 1, 2015. This change affects sections (a) Applicability, (c)(4) Sell-Through Provision, (c) Averaging Compliance Option, and Appendix A.

#### ***Administrative Requirements***

Colorants were added to subparagraphs (d)(1) and (d)(3) to indicate that the VOC and date code labeling requirements apply to colorant containers. Although most colorants already contain the proposed labeling requirements, based on industry feedback, staff is proposing to allow manufacturers until January 1, 2017 to comply with this requirement.

#### ***Tertiary Butyl Acetate (tBAC)***

Questions arose during the January 5, 2016 Stationary Source Committee meeting regarding the toxicity of tBAC and how that may affect Rule 1113. Currently tBAC is given a limited exemption as a VOC for use in industrial maintenance and non-sacrificial anti-graffiti coatings under Rule 1113; however, staff is aware that OEHHA is developing new toxicity information for this compound. OEHHA is planning to finalize their determination on the toxicity of tBAC in the first half of 2016. When tBAC was made exempt as a VOC for certain coatings under Rule 1113 in 2006, the environmental analysis did not have official toxicity criteria available from OEHHA and it is assumed that workers using products with tBAC would wear personal protective equipment (PPE), and tBAC was therefore found to not present a significant health risk. Using the draft OEHHA tBAC toxicity information, workers that do not use PPE may have significant health risks. While health risks to workers using PPE would be substantially reduced, the remaining risk may still be significant. The proposed rule amendment does not address the tBAC exemption provision in Rule 1113 at this time. However, a Governing Board adoption resolution is proposed to direct staff to immediately begin a re-evaluation of potential toxic risk to workers due to exposure to tBAC, such that upon finalization of the assessment by the OEHHA, staff will be prepared to quickly propose amendments to SCAQMD rules, as needed, to reduce potential risks. Any change to the current status of tBAC may have repercussions for VOC emissions, other toxic effects, or product performance issues for compounds that might be used as a substitute, which were not analyzed as part of the current rulemaking.

### *Test Methods*

Several test methods are being added to the rule, most of which are now included to define new coating categories. The following test methods are added as additional performance criteria to reflect the new definitions for specific coating categories:

- ASTM E2178 - Standard Test Method for Air Permeance of Building Materials
- ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference
- ASTM D3363 - Standard Test Method for Film Hardness by Pencil Test
- ASTM D4060 - Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser
- ASTM D4585 - Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation
- ASTM D714 - Standard Test Method for Evaluating Degree of Blistering of Paints
- ASTM D3359 - Standard Test Methods for Measuring Adhesion by Tape Test

In addition to the test methods above, staff is proposing to add SCAQMD Method 313 - Determination of Volatile Organic Compounds VOC by ~~GCGas Chromatography~~ MSMass Spectrometry and ASTM Test Method D6886 (M6886) - Standard Test Method for Determination of the Weight Percent Individual Volatile Organic Compounds in Waterborne Air-Dry Coatings by ~~GCGas Chromatography~~ to measure the VOC content of coatings. There has been a need for an improved VOC test method for a long time, and there has also been consensus that the GC approach used in SCAQMD Method 313 (M313)/M6886 is one way to improve the testing. This approach is already being used by the SCAQMD laboratory and industry laboratories, and therefore is proposed for inclusion in Rule 1113. It is the current practice by both the SCAQMD laboratory and most manufacturers to use a GC method for VOC analysis, and staff intends to clarify this practice in Rule 1113. Methyl Palmitate (MP) will serve as a marker for differentiation between VOCs and semi-volatile VOCs (SVOCs). SVOCs are compounds that have lower volatilities, evaporate less quickly, and have a significant fraction of their mass in both the gas and particle-phase in the atmosphere. Some compounds, such as glycerol, elute or appear in the GC column; although, they are not considered VOCs and should not be included in the VOC calculation. Therefore, M313 will include a reference to the Exclusion Method for Early Eluting SVOCs, and a list of compound(s) that have been determined not to leave the paint film. Staff is open to review methods that consider compounds other than straightforward solvents, such as amines. M313 will also include a precision and bias statement that has been approved by the US E.P.A.

It is current practice for the SCAQMD laboratory to analyze all coating samples using USEPA Method 24 (M24), with a supplemental analysis for low-VOC, high-water coating with a material VOC content of less than 150 g/L using ~~SCAQMD Method 313 (M313)~~. The USEPA and

SCAQMD staff, along with industry and academia, recognize M24 does not yield accurate results for low-VOC, high-water-containing coatings. M24 is an indirect VOC measurement where the water (titration) and non-volatiles (oven) are measured and everything else is assumed to be VOC. As the VOCs in a coating approach zero, the indirect VOC measurement becomes unreliable. M313 is a direct VOC measurement technique which includes dilution of samples and analysis using ~~Gas Chromatography (GC)~~. The VOCs present are separated in a GC, identified by a Mass Spectrometer and quantified by a Flame Ionization Detector.

The GC approach of M313 is similar to the approach developed at California Polytechnic State University, San Luis Obispo (CAL Poly SLO) that was adopted by ASTM as M6886 in 2003. ASTM is the largest developer of consensus standards, and the committee is comprised of members of industry, academia, and regulatory agencies. M313 differs because of additional quality control requirements, and was the first GC method to include a marker compound to indicate when a compound should no longer be counted as a VOC, which was always an issue with the GC approach. The SCAQMD has participated in round robin studies (M313 versus M6886) with strong correlation between the two methods. It is staff's understanding that industry relies on M6886 for in house or third party testing of their products. Staff is proposing to include M6886 as well as M313 in Rule 1113 because manufacturers rely on this test to ensure their coatings are in compliance. For compliance purposes, the SCAQMD laboratory will rely on the more rigorous M313, and provide a guidance document to explain the differences between the two methods such that a manufacturer utilizing M6886 will be aware of how their results could differ from results obtained by the SCAQMD laboratory.

The 1991 version of M313 (Method 313-91) is approved for inclusion in the State Implementation Plan (SIP) and the SCAQMD laboratory staff has been working with the USEPA, CARB, CAL Poly SLO and industry on revising M313 to enhance quality control parameters, include an endpoint, update the equipment, and address industries concerns about compounds that might remove by washing with a solvent (elute) earlier than the endpoint, but are not driven off when tested by M24. The 1991 version of the method references older technology which is currently not in common use. The addition of ~~Methyl Palmitate (MP)~~ as the marker compound serves as a delineation between VOCs and ~~semi-volatile VOCs (SVOCs) which should not be included in the VOC calculation~~. This marker compound was selected to yield consistent results to M24 and the original M313-91. This marker compound was further validated based on its non-volatility under ambient evaporation testing over a 6 month period. Prior to the use of MP as a marker compound, everything detected was measured as a VOC. This 'bright line' approach is used as a straight forward, relatively simple mechanism to determine if a compound should be counted as a VOC.

As VOC testing transitioned to a GC method, the lack of an endpoint created a significant source of uncertainty as to what should be included as a VOC. Formulators have themselves struggled with determining whether a particular product was compliant or not, using M24 or M313/M6886 without an endpoint. The intent in choosing MP was to provide clarity on the question of what is, and what is not, counted as a VOC, while at the same time keeping VOC results tethered to M24 over a broad range of samples and compounds, an important characteristic to demonstrate equivalence to the USEPA.

This bright line approach lead to some concerns from industry. M24 determines volatility based on what is driven off in a 110°C forced air oven in an hour, and some compounds are only partially driven off under those conditions. Alternatively, M313 measures everything that elutes prior to MP as 100% VOC, and everything that elutes after MP as 100% non-VOC, thus over counting small amounts of SVOCs that elute prior to the marker compound, but undercounting small amounts of SVOCs that elute after the marker compound.

The issue of SVOCs and how they are treated in M313 versus M24 has been a topic of discussion and research since the formation of the VOC Working Group in 2010, the first time staff proposed including M313 in Rule 1113. The research conducted at Cal Poly SLO, the SCAQMD laboratory, and sponsored by some industry representatives over the past year and a half has been very enlightening, resulting in a general consensus as to how to treat these compounds. The following is a discussion of the progression of that work and the final conclusions.

During the initial 2014 Working Group meetings, many manufacturers brought up concerns about compounds that were not measured as 100% volatile when tested neat by M24. For example, a compound that is 82% volatile when tested neat by M24 would be measured as 100% volatile when analyzed by M313 leading to a potential bias in the method. There was initial concern that if the compound of interest were in a fully formulated coating, even less of it would volatilize leading to a greater bias. These discussions lead to development of an exclusion method for early eluting SVOCs. One concept that was discussed in the Working Group was to perform a film extraction test after completing the oven testing in M24 to determine how much of the compound of interest is retained in the coating. A similar approach was included in a draft version of M6886, but the method was considered too onerous for routine analysis. Under M24, the compounds of interests remaining in the paint film are not considered VOCs. The compounds of interest are primarily high boiling solvents that are designed to leave the paint film, but it is plausible in theory some of the solvent could get trapped within the film and therefore, not considered as VOCs.

The SCAQMD laboratory and Cal Poly SLO conducted film extractions studies using different approaches. The SCAQMD laboratory found very little of any compound retained in the film after conducting a M24 solids analysis (1 hour in a 110°C oven). The results were not conclusive because it could not be demonstrated if the lack of compounds detected was due to the compounds leaving the film or because the film extraction was not effective. Cal Poly SLO used a slightly different approach where they performed a film extraction after 30 minutes, 1 hour, and 2 hours in the oven under M24 conditions. This study showed that the compounds could be detected after 30 minutes, and the concentration of the retained compounds decreased over time. Both studies seemed to indicate that most compounds were in fact not retained in the paint film, but the testing was onerous to perform and there was resistance to continue this line of research.

The next phase of the research focused on evaluating the neat compounds. Industry provided staff with a list of almost 100 compounds to evaluate, and the working group worked to develop an easier method to screen the list of compounds with a simplified neat test to pare down the list. This proved more difficult than anticipated because the USEPA preferred to retain M24 conditions for this testing; however, M24 does not yield reproducible results for SVOCs. M24 is very repeatable for film forming coatings or any matrix that reaches a stable weight after the hour oven

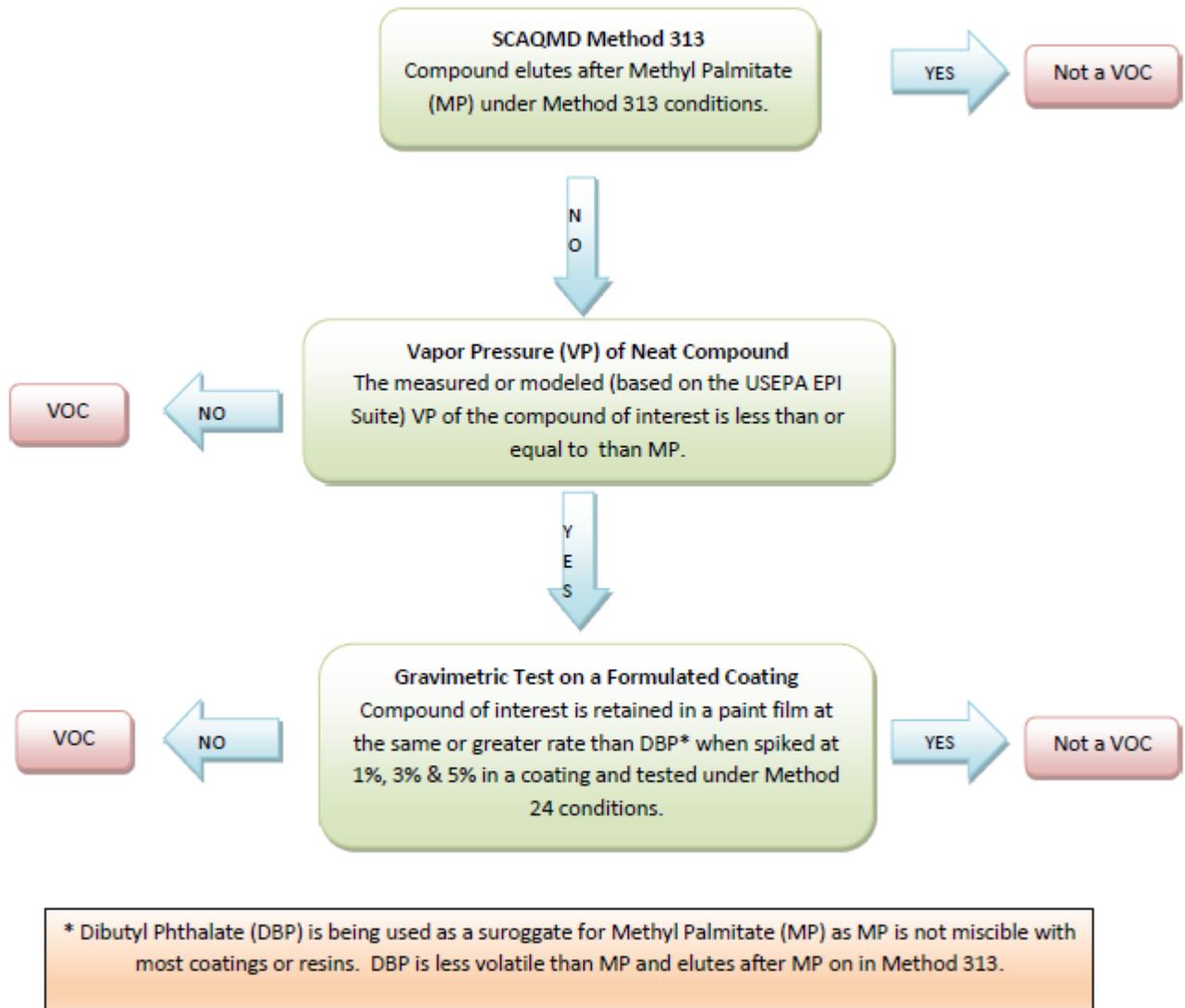
test. Due to their nature, SVOCs do not reach a stable weight, and therefore yield variable results. A method proposed by Cal Poly SLO to address this was to perform M24 on the compound of interest with the reference compound included in the same sample pan. The mixture could be analyzed on a GC before and after the M24 analysis. This was an innovative approach; however, it strayed from a pure neat analysis, and the matrix affects lead to unpredictable results with significant variability. This approach was not deemed viable.

The next approach under consideration was to use a thermogravimetric analysis (TGA) with M24 type parameters. While the SCAQMD laboratory was considering this approach, testing was underway on another Cal Poly SLO designed experiment, film spiking. Cal Poly SLO has conducted a study where they spiked a fully formulated coating and a resin with 1% of a compound of interest, and performed a TGA to determine if the weight loss of that compound could be accurately measured. The SCAQMD took that idea and modified it by spiking the coating/resin with 1%, 3% and 5% of the compound of interest, and then performed a M24 test. As the matrix is a fully formulated coating, M24 was expected to yield repeatable results and duplicate or triplicate sample pans could be tested simultaneously. In addition to the compounds of interest, a reference compound was also tested. The laboratory had difficulty getting the marker compound MP to mix with the coatings, so they experimented with Dibutyl Phthalate (DBP) as a surrogate. Since DBP elutes after ~~MPethyl Palmitate~~, it is already considered a SVOC. This experiment proved successful, relatively simple, and repeatable.

Also during this time, the SCAQMD started to look at vapor pressures as a way to screen the list of 100 neat compounds. The technique uses measured vapor pressures, or where measured vapor pressures are not available, modeled vapor pressures based on the USEPA EPI Suite. This proved an effective screening test that could take the place of a laboratory test on the neat compounds.

A year and a half into this research, staff is proposing to use the following flow chart to evaluate early eluting SVOCs that should not be included in the VOC calculation when detected by M313:

Figure 4: Exclusion Pathway Flowchart for non-Reactive Early Eluting SVOCs



Note: the only compound that has been demonstrated thus far to stay in the film of the coating was pentaethylene glycol (EG5). Staff is recommending that EG5 not be counted as a VOC when measured by M313 or M6886.

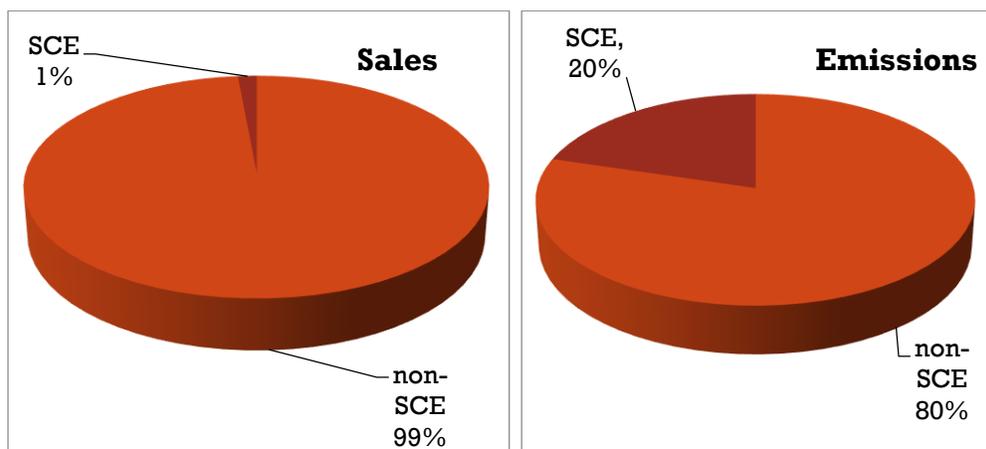
~~There has been a need for an improved VOC test method for a long time, and there has also been consensus that the GC approach used in M313/M6886 is one way to improve the testing. This approach is already being used by the SCAQMD laboratory and industry laboratories, and therefore is proposed for inclusion in Rule 1113. It is the current practice by both the SCAQMD laboratory and most manufacturers to use a GC method for VOC analysis, and staff intends to clarify this practice in Rule 1113. M313 will include a reference to the Exclusion Method for Early Eluting SVOCs, and a list of compound(s) that have been determined not to leave the paint~~

~~film. Staff is open to review methods that consider compounds other than straightforward solvents, such as amines. M313 will also include a precision and bias statement that has been approved by the USEPA.~~

### *Small Container Exemption (SCE)*

Staff is proposing several changes to the SCE to achieve VOC emission reductions, address rule circumvention in the field, and reduce market disincentives for new technologies that may have a higher cost. Staff is focusing on the SCE because of the significant emissions from the relatively small volume of sales as the following pie charts demonstrate:

**Figure 5: 2014 Sales and Emission Summary for Coatings Sold Under the SCE**



The SCE is proposed to be eliminated for specialty categories that are already allowed a high-VOC limit and for the coating categories that have not used the exemption for many years (according to information reported by the manufacturers under Rule 314). The SCE removal will be effective ~~January 1, 2016 upon rule adoption,~~ and includes the following categories:

- Concrete-Curing Compounds For Roadways and Bridges
- Magnesite Cement Coatings
- Multi-Color Coatings
- Pre-Treatment Wash Primers
- Roof Primers, Bituminous
- Sacrificial Anti-Graffiti Coatings
- Stone Consolidants
- Repair and Other Swimming Pool Coatings
- Wood Preservatives

Staff is also proposing to phase out the exemption for the following high-VOC specialty coatings that have used the SCE to a very small extent, but to extend the effective date to January 1, 2018:

- Clear and Pigmented Shellacs (VOC limit 730g/L/550g/L)
- Reactive Penetrating Sealers (VOC limit 350 g/L)
- Tub and Tile Coatings (proposed VOC limit 420 g/L)

Staff initially proposed to phase out these categories by January 1, 2016 but received feedback that more time was needed, especially for tub and tile coatings. This is a newly proposed category and the VOC limit is based on CARB's SCM. The manufacturers of these coatings stated that through the SCM they can utilize tBAC in their formulations and rely on the SCE. Staff changed the proposed amendment to allow for several years for the reformulation of tub and tile coatings and included other categories where small quantities of high-VOC coatings were sold under the SCE. The following are the estimated VOC reductions from this change:

**Table 4: Specialty Coating Phase out from SCE**

Category	Est. Emissions Reduction (tpd)
<b>Tub and Tile</b>	0.01
<b>Reactive Penetrating Sealers</b>	0.0001
<b>Shellacs</b>	0.0007
<b>Total</b>	0.01

In addition, staff is proposing to phase out the exemption for coating categories utilizing this exemption for a large volume of sales. Staff has always acknowledged that the SCE is necessary for certain small niche usages, and for touch up where a small amount of a high-VOC coating could lead to lower emissions than repainting an entire object with a lower-VOC coating. The intent of the SCE is not as a mechanism for end users to utilize large volumes of high-VOC coatings. Staff has been tracking the usage under the SCE since 1999 to look for categories having a high volume of sales or an increase in sales. Based on the current analysis of high volume usage, staff is proposing to phase out the SCE for Flat, Nonflat Coatings and Rust Preventative Coatings (RPCs). Staff is proposing to retain the SCE for 8 fluid ounce or less sample containers for touch up usage only. In regard to touch up as the justification for retaining the SCE, the end user would have to contact the manufacturer of the pre-painted object to determine the exact coating used, in order to perform the proper touch up. ~~In such an instance, having the high-VOC products available on retail shelves would not be necessary.~~

Due to potential crossover between IMC and RPCs, staff is also proposing to restrict the SCE for IMCs. While staff does not believe these coatings are interchangeable, staff does foresee creative marketing to circumvent this rule change. To address the needs for touch up on larger projects, staff is proposing to allow IMC, and the subcategories falling under IMCs (Color Indicating Safety Coatings, High Temperature IM Coatings, Non-Sacrificial Anti-Graffiti Coatings, and IM Zinc-Rich Primers) to be sold over the VOC limits in one liter containers or less, but restrict the exemption to touch up only, and restrict the sales to direct sales (e.g. not allow sales at retail outlets). The inclusion of the IMC subcategories is not intended for emission reductions since the SCE is only used for minimal sales. They would have been included along with other coatings not using the exemption, but staff included them with IMC coatings in case of a need for touch up.

One of the reasons for the further restriction on the SCE is to prevent end user rule circumvention. With limited resources, SCAQMD inspectors cannot be at all worksites on any given day considering the jurisdiction contains almost 11,000 square miles. The inspection staff enforcing

Rule 1113 during their field activities have encountered several instances of end users utilizing the SCE for higher volume projects to circumvent the VOC limits in Rule 1113. As mentioned, the feedback staff has received from manufacturers is the SCE is necessary for small niche projects, and for touch up of a substrate previously coated with a higher-VOC coating. During field activities, SCAQMD inspection staff received positive feedback about compliant coatings. Contractors have stated they prefer using compliant coatings as opposed to higher-VOC coatings, sold under the SCE, due to the lack of odor, ease of use, quick drying times, and simple clean-up. The use of compliant coatings keeps their inventory lower, thus resulting in less overhead costs. Many new construction products are LEED (Leadership in Energy and Environmental Design) certified and require the use of lower-VOC coatings.

SCAQMD inspection staff has received feedback from larger retailers about paint contractors purchasing coatings above the allowable VOC limits in small containers, and then combining them into larger containers to provide uniform color. This practice is not permitted under the SCE. Staff has also received feedback that contractors order large quantities of small containers, which is supported by the Rule 314 data. In addition, regarding one high-VOC product specifically labeled for use on metal substrates only, SCAQMD inspection staff ascertained from a local retailer the product could be used on wood. Sales staff at this local retailer stated that they do not recommend its use on wood, but if the customer is insistent, then they will recommend the use of a good primer prior to its application. Staff believes this practice is more widespread than first thought.

One example of rule circumvention encountered in the field occurred in the spring of 2014. During an inspection at a sizable construction project, staff discovered the use of large quantities of non-compliant RPCs. The original product was in one gallon containers and had a VOC content of 400 g/L. Since the VOC limit for RPCs is 100 g/L, the product was not compliant with Rule 1113. If that same product was in quarts, then the SCE would apply. On a return inspection to the site, staff discovered the local retailer sold the paint contractor empty, labeled quart containers. The contractor then emptied the one gallon container into four quart containers ~~in an attempt to comply with the rule~~. Furthermore, when they applied the product at the site, they then emptied the quarts into a larger 5 gallon bucket in order to facilitate roller application. The inspection resulted in a Notice of Violation and another example of the circumvention of the rule by taking advantage of the SCE.

In another example, staff spoke with a local paint contractor who was concerned because a coating sales representative had included a high-VOC coating in a specification for a metal fence project. The contractor noted the coating specified was not compliant with Rule 1113. He felt the high-VOC coating was an inferior product compared to new waterborne technologies; therefore, included a waterborne coating in his proposal. His assertion was the waterborne technology had much better color retention, and would not oxidize as quickly as the oil based coating being specified. The sales representative, who is also the manufacturer of the non-compliant product specified, disagreed with this assertion and stated he specifies this non-compliant product on every iron project he manages. The contractor stated he was trying to do the right thing in regards to the rule requirements. He expressed his concerns to staff about getting cited for applying non-compliant coatings as the sales representative directed him to combine the small containers into a

larger container in order to apply the coating, a practice that is not allowed in Rule 1113. This project required 25 gallons of high-VOC coating that could only be purchased in small containers, which reflects up to 100 individual quart size containers. The contractor did not contract for the job; however, another contractor did. This is an example of the SCE being utilized in ways inconsistent with the intent of the exemption. This demonstrates the use of small containers for large projects is not cost prohibitive and is not used only for specialty niche projects.

The assumed cost disincentive of purchasing products in small containers is also not supported by a recent shelf survey of retail prices. Most quart containers had a retail price between \$10.00 and \$15.00, whereas similar products in a gallon container were approximately \$40.00 to \$60.00, about the same cost per quart. In some instances, the gallon price of new, lower-VOC technologies such as waterborne alkyds emulsions were slightly higher on a per quart basis, thus creating an incentive to purchase multiple small containers of higher-VOC conventional solvent based alkyds. Additionally, during a recent retail store inspection, staff saw discounts offering four quarts for the price of three (e.g. buy 3 get one free) accompanied by boxes containing four quarts of higher VOC product. Rule 1113 specifically prohibits bundling small container products of the same category. ~~Since this particular packaging was a shipping box, it was not a clear violation of the rule, but it appeared to have the same intent given the discount offer.~~

While companies may sell the same or similar products in gallons (lower-VOC) and quarts (potentially higher VOC under the SCE) at about the same cost, the older, higher-VOC technology costs less to manufacture with higher profit margins. All manufacturers have at least one low-VOC compliant product line, many manufacturers have already phased out the older technology, and some have entirely moved away from solvent based coatings. Those manufacturers who continue to sell the older technology under the SCE are benefitting from significantly higher profit margins, have not had to spend the resources to develop lower-VOC technologies and, in some cases, through lower pricing, create a competitive disadvantage for companies that have already switched to lower-VOC compliant products. One factor suppressing the market share of lower-VOC technology, is the availability of the older high-VOC technology at similar or lower prices. Staff has received feedback from a manufacturer who has made the switch to lower-VOC coatings, stating that if the SCE remains in place, they will go back to reformulating the higher-VOC product because they are currently giving up market share to their competitors.

Based on feedback from manufacturers, conventional alkyds, which are typically used as RPCs, can be replaced with either waterborne or exempt solvent technologies. As mentioned, some manufacturers eliminated their solvent based alkyd coatings years ago, others feel they eventually will phase them out, while still others have made it their business model to sell predominately solvent based coatings in small containers. In regard to the waterborne alkyds, several manufactures have stated those products are as good if not better than the solvent based products they replaced (better gloss retention, no chalking, better long term durability, less yellowing) while others contend they are currently inferior in performance (inferior corrosion protection, inferior penetration and adhesion, and application issues). For those companies who want to continue to sell solvent based coatings, compliant alkyd coatings can be formulated using exempt solvents. The drawback of both waterborne and exempt solvent based alkyd RPCs is they cost

more to produce, resulting in a smaller profit margin or a higher cost product for the end user. This is at least one reason these technologies have not made larger inroads in the marketplace.

The VOC limit for RPCs was reduced from 400 g/L to 100 g/L effective July 1, 2006. At that time, a sufficient number of compliant products were available to justify the 100 g/L VOC limit. The following table shows the number of compliant products from the 2006 Annual Staff Report compared to currently available coatings.

Staff received feedback from a manufacturer selling a cabinet refinishing kit, comprised of several small coating containers totaling a volume greater than one liter. The kits are designed to provide convenience for the consumer with all the necessary materials to refurbish a kitchen cabinet. The intent of the anti-bundling language is to eliminate the bundling of small containers of the same coating. As a result staff feels the anti-bundling provision should not apply to these bundled restoration kits because the coatings included are all different types of coatings and not the same specific coating category. As a result, new proposed rule language has been added to provide clarification. Because these small containers could be sold separately, staff does not believe that allowing sales in a bundled unit will increase emissions.

**Table 5: Comparison of Compliant Rust Preventative Coatings**

	Total Products Listed	Total Sales Volume (gallons)	Products below the 100 g/L VOC Limit			
			# of Products	Sales Volume	% of Products	% of Sales
<b>2000 Sales Volumes from 2001 CARB survey</b>	81	180,522	3	1,047	4%	1%
<b>2014 Data 314 Report</b>	227	299,229	50	141,103	20%	47%

Staff conducted a technology assessment of RPCs (referred to as RP below) that was conducted by the University of Missouri – Rolla Coatings Institute (UMR) and completed in November of 2005 (Final Report “Architectural & Industrial Maintenance Coatings Technology Assessment.”, 2006). The following is a conclusion of that study:

*“The overall results for the Phase III testing can be broken down into two categories, RP and IMC. Specifically for RP coatings, the low-VOC products had superior dry time characteristics, prohesion, and flash rusting. They were similar in terms of hide, taber abrasion, impact resistance, and adhesion (Battele).”*

The technology assessment was designed and developed by the Technical Advisory Technology Advancement Committee, which consisted of members representing industry, other regulatory agencies, academia, the National Paint and Coatings Association, an engineer, and a specifier. They determined the appropriate performance tests to conduct and the coatings to test. The testing was performed by UMR, cyclic prohesion and flash rust tests were recommended and conducted to assess the corrosion protection of the RPCs rust preventative coatings. Those tests demonstrated the superior performance of the low-VOC coatings.

As a result of the technology assessment, the Governing Board concluded that the 100 g/L VOC limit was technologically feasible. Based on the Rule 314 data, the percent of compliant products sold had increased from 2008 to 2012 but has since started to decline, as noted in the following table:

**Table 6: Compliant versus Non-Compliant Rust Preventative Sales**

Year	Sales ≤ 100g/L (gal)	SCE Sales >100g/L (gal)	Non Compliant Sales or Sell- Through > 100g/L (gal)	Total Sales (gal)	% Sales ≤100g/L
2008	74,990	123,411	146,090	344,491	22%
2009	104,247	145,367	88,463	338,077	31%
2010	174,590	171,675	17,434	363,700	48%
2011	174,281	190,586	10,284	375,150	46%
2012	200,068	149,381	8,736	358,186	56%
2013	166,289	158,027	7,407	331,722	50%
2014	141,103	151,237	6,889	299,228	47%

The following table demonstrates the potential emission reductions from the restrictions on the SCE:

**Table 7: Estimated Emission Reductions from Small Container Exemption Restriction**

Category	Estimated Emission Reduction (tpd)	Effective Year
Flat Coatings	0.002	01/01/19
Industrial Maintenance Coatings	0.01	01/01/19
Color Indicating Safety Coatings	N/A	01/01/19
High Temperature IM	0.001	01/01/19
Non-Sacrificial Anti-Graffiti Coatings	N/A	01/01/19
Zinc-Rich Primers	0.003	01/01/19
Nonflat Coatings	0.15	01/01/19
Reactive Penetrating Sealers	0.0001	01/01/18
Rust Preventative Coatings	0.63	01/01/19
Shellacs	0.0007	01/01/18
Tub and Tile	0.01	01/01/18
<b>TOTAL*</b>	<b>0.81</b>	

\*Note: This total is only from the SCE, it excludes emissions reductions from VOC limit changes.

### Sell-Through Provision

Staff has received feedback from some coating manufacturers requesting an extended effective date for the phase out of the SCE for RPCs and a sell-through provision for the removal of existing inventory at retail outlets. Representatives from two manufacturers requested an implementation date of 2021 with a three year sell-through after the Special Stationary Source Committee meeting on January 5, 2016. Staff received comments from one manufacturer later requesting an implementation date of 2021 with a two year sell-through provision. However, a smaller manufacturer has requested staff to keep supported the proposed implementation date of 2019 with no sell-through because they have compliant coatings.

Rule 1113 includes a three year sell-through provision when there is a VOC limit change in the

Table of Standards. As currently written, that is the only time the sell-through provision applies. The sell-through provision allows time for the coatings to sell at the retail level, so the manufacturer does not have to incur the expense of clearing retail or commercial shelves. Depending on the size of the retailer, the coatings may sell-through much quicker than three years (big box store versus a small mom and pop paint shop). In 2006, when the SCE was removed for the Clear Wood Finish category, a one year sell-through period was allowed.

Based on all comments received, the proposed rule will include a two year sell-through period for all coating categories phased out of the SCE and retain the existing proposed effective dates. No additional environmental impacts are expected to occur with a sell-through provision. Staff does not believe an extended effective date is necessary because compliant coatings already exist, technology is currently available for reformulation, and a competitive disadvantage exists for manufacturers with compliant coatings.

### *Rule Clean Up*

Staff is proposing to remove the effective dates that have now passed. In addition, provisions that have passed their sunset dates have been struck (i.e. averaging compliance option).

### **ALTERNATIVES ANALYSIS**

CM#2012 CTS-01 – Further VOC Reductions from Architectural Coatings had three options for achieving the 2 – 4 tpd reductions:

1. Lower the VOC limits of Flat, Nonflat and PSUs to 25 g/L
2. Include transfer efficiency standards
3. Phase out or restrict the SCE

During the rule making process, the 25 g/L option was deemed to be of the most concern to manufacturers, and staff met with the most resistance to this approach. This change would require extensive reformulations, and feedback from the manufacturers was that the performance and application properties of the coatings would be compromised. In addition, if staff moved forward with this change, there would have to be many subcategories carved out where the high-VOC coatings were needed. An alternative approach suggested by manufacturers was to alter the fee structure in Rule 314. The lower fees for coatings containing less than 25 g/L will reflect the lower cost of compliance for those coatings. The proposal is being removed to allow time for additional data analysis and research regarding the impact of a recent court decision regarding fees.

In regard to transfer efficiency, staff decided not to include spray equipment requirements to improve the transfer efficiency for applying architectural coatings. Instead, staff is going to work with industry, the Los Angeles Painting and Finishing Contractors Association, and possibly local retailers to develop a Best Practices Guideline for painting architectural structures, including a certification program for contractors and end users. This could serve as a pilot project to improve transfer efficiency and reduce paint usage in the SCAQMD.

Staff is moving forward with the proposed restrictions on the SCE, but is not proposing to phase out the exemption entirely. Staff acknowledges that the exemption is useful for specialty uses, and for introducing innovative products into the marketplace. Staff will continue to monitor all coating categories that will retain the exemption, and consider conducting a technology assessment of high usage categories such as stains and tile and stone sealers as new, lower-VOC technology become available.

### Potential Tradeoffs of Using Low-VOC Coatings

Issues were raised by industry representatives in Working Group meetings and Public Workshops regarding the efficacy and potential tradeoffs that may occur as a result of using low-VOC coatings. Some of these tradeoffs included the potential need for more priming, more topcoats, more touch-ups and repair work, and more frequent recoating associated with the use of low-VOC coatings. A detailed analysis was conducted on these potential issues in the May 4, 1999 *Final Subsequent Environmental Assessment for Proposed Amended Rule 1113 – Architectural Coatings*. Notably, similar claims have been raised and found to not have merit in litigation on CEQA documents prepared for previous versions of Rule 1113 (e.g., *Sherwin-Williams v. SCAQMD*, (2001) 86 Cal.App.4th 1258, *Dunn-Edwards v. SCAQMD*, (1993) 19 Cal.App.4th 519). In all of the above potential tradeoff scenarios, the following was concluded:

- Priming – It was concluded that the material needed and time necessary to prepare a surface for coating is approximately equivalent for conventional and low-VOC coatings. More Primers were not needed because low-VOC coatings possess comparable coverage to conventional coatings, similar adhesion qualities and consistent resistance to stains, chemicals and corrosion. Low-VOC coatings tend not to require any special surface preparation different from what is required before applying conventional coatings to a substrate. Therefore, it was found that claims of significant adverse air quality impacts resulting from more priming were unfounded.
- Topcoats – It was concluded that both low-VOC and conventional coatings had comparable coverage and performance. The low-VOC coatings possess scrub and stain resistant qualities, as well as blocking and resistance to UV exposure for the exterior coatings. Both low-VOC and conventional IM coatings tend to have chemical and abrasion resistant qualities, gloss and color retention, and comparable adhesion qualities. With comparable coverage and equivalent durability qualities, it was found that additional topcoats for low-VOC coatings should not be required.
- Touch-ups and Repair Work – Based on the durability characteristics information contained in the coating product data sheets, low-VOC coatings and conventional coatings had comparable durability characteristics. As a result, it was not anticipated that more touch up and repair work would need to be conducted with usage of low-VOC coatings. Consequently, claims of significant adverse air quality impacts resulting from additional touch-up and repair for low-VOC coatings were concluded to be unfounded.

- Recoating – A review of coatings manufacturers’ own data sheets indicated that the low-VOC coatings for both architectural and industrial maintenance applications are durable and long lasting. Any durability problems experienced by the low-VOC coatings are not different than those seen with conventional coatings. It was also noted that recent coating technology has improved the durability of new coatings. Because the durability qualities of the low-VOC coatings were comparable to the conventional coatings, it was concluded that more frequent recoatings would not be necessary.

SCAQMD’s research and analysis of resin manufacturers’ and coating formulators’ product information sheets in the 1999 Supplemental EA prepared for Rule 1113 concluded on each separate issue that the low-VOC compliant coatings had comparable performance as current coatings, and therefore, the potential tradeoff issues were unfounded. Since this time, the coating technologies have advanced, and it is staff’s current understanding that there is still no additional need to increase coatings usage due to low-VOC requirements of the proposed amendments to Rule 1113.

### COMPARATIVE ANALYSIS

The following analysis compares Rule 1113 with the CARB SCM and the USEPA Architectural Coatings rule. The comparison includes proposed changes to Rule 1113 where applicable.

Section	Rule 1113 Architectural Coatings	California Air Resources Board 2007 Suggested Control Measure	40 CFR, Subpart D National Volatile Organic Compound Emission Standards for Architectural Coatings
<b>Applicability</b>	This rule is applicable to any person who supplies, sells, markets, offers for sale, or manufactures any architectural coating that is intended to be field applied <u>within the District</u> to stationary structures or their appurtenances, and to fields and lawns; as well as any person who applies, stores at a worksite, or solicits the application of any architectural coating within the District. The purpose of this rule is to limit the VOC content of architectural coatings used in the District.	1.1 Except as provided in subsection 3, this rule is applicable to any person who: 1.1.1 Supplies, sells, or offers for sale any architectural coating for use within the District; or 1.1.2 Manufactures, blends, or repackages any architectural coating for use within the District; or 1.1.3 Applies or solicits the application of any architectural coating within the District.	(a) Except as provided in paragraphs (b) and (c) of this section, the provisions of this subpart apply to each architectural coating manufactured on or after September 13, 1999 for sale or distribution in the United States. (b) For any architectural coating registered under the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. Section 136, et seq.), the provisions of this subpart apply to any such coating manufactured on or after March 13, 2000 for sale or distribution in the United States.
<b>Definition Modifications and VOC Content Limits</b>	Bond Breakers (350 g/L) and Form Release Compounds (100 g/L)– phased out	Bond Breakers (350 g/L) and Form Release (250 g/L) remain	Bond Breakers (600 g/L) and Form Release (450 g/L) remain
	Building Envelope (100 g/L) – New Category	No Category	No Category
	Color Indicating Safety Coatings (480 g/L) – subcategory of IM coatings that was sold under SCE	Fall under IMC (250 g/L), sold under SCE	Fall under IMC (450 g/L), sold under SCE
	Default Coatings (50 g/L) – defined instead of just referenced	Un-defined coatings fall under Flat (50 g/L), Nonflat (100 g/L) or Nonflat – High Gloss (150 g/L)	Un-defined coatings fall under Flat (250 g/L) or Nonflat (380 g/L)
	Faux Glaze (350 g/L) – includes wet-in-wet and wet-in-dry applications (artistic as well as architectural uses)	Faux Glaze (350 g/L) includes textured coatings	Faux Glaze (700 g/L) only includes wet-in-wet techniques
	Flat Coatings (50 g/L) – references gloss test method	Flat Coatings (50 g/L) – equivalent definition	Flat Coatings (250 g/L) – equivalent definition

Section	Rule 1113 Architectural Coatings	California Air Resources Board 2007 Suggested Control Measure	40 CFR, Subpart D National Volatile Organic Compound Emission Standards for Architectural Coatings
	Lacquer (275 g/L) – specifies they are only topcoats and sanding sealers	Lacquer (275 g/L) – includes undercoaters	Lacquer (680 g/L) – includes clear Lacquer sanding sealers, not Lacquer stains
	Mastic Coatings (100 g/L) – excludes roof coatings	Mastic Texture Coating (100 g/L) – does not exclude roof coatings	Mastic Texture Coating (300 g/L) – does not exclude roof coatings
	Nonflat (50 g/L) – removed clause stated they are not defined by another category as those coatings could fall under default	Nonflat (100 g/L) – equivalent definition but also includes a Nonflat – High Gloss (150 g/L)	Nonflat (380 g/L) – equivalent definition
	Reactive Penetrating Sealer (350 g/L) – changed the 2% water vapor transmission rate to provide a breathable waterproof barrier	Reactive Penetrating Sealer (350 g/L) – includes the 2% water vapor transmission rate	Waterproofing Sealers and Treatments (600 g/L) – no performance requirements
	Recycled Coatings (150 g/L) – VOC limit change only	Recycled Coatings (250 g/L)	Recycled Coatings - adjusted-VOC content is determined by multiplying the percentage of postconsumer content of the coating by the VOC content of the Recycled Coating, which is then subtracted from the VOC content of the end product.
	Tile and Stone (100 g/L) – new subcategory of waterproofing concrete/masonry sealer	Concrete/Masonry Sealer (100 g/L) – Broader Category	Waterproofing Sealer and Treatments (600 g/L) – Broader Category
	Topcoat – new definition as the term is used in several proposed definitions	Not defined	Not defined
	Tub and Tile Refinishing Coatings (420 g/L) – new high-category that was sold under SCE	Tub and Tile Refinishing Coatings (420 g/L) – equivalent definition	Industrial Maintenance (450 g/L) – due to the immersion in water and heavy abrasion clauses
	Varnish (275 g/L) - specifies they are only topcoats	Wood Coatings (275 g/L) - could include undercoaters	Varnish (450 g/L) – could include undercoaters
	Wood Coatings (275 g/L) – modified from Clear Wood Finish definition to address pigmented Lacquers and Varnishes	Wood Coatings (275 g/L) – includes undercoaters, penetrating oils, clear stains, wood conditioners, and wood sealers	No umbrella category, just Lacquer (including sanding sealers) (680 g/L) and Varnishes (450 g/L)
	Wood Conditioners (100 g/L) – new category to provide clarification, products used to fall under PSU	Wood Coatings (275 g/L) – includes wood conditioners	Primers, Sealers, and Undercoaters (450 g/L) – broader category

Section	Rule 1113 Architectural Coatings	California Air Resources Board 2007 Suggested Control Measure	40 CFR, Subpart D National Volatile Organic Compound Emission Standards for Architectural Coatings
<b>Requirements</b>	Default limit (50 g/L) applies or VOC limits specified in the Table of Standards on listed effective dates.	Coatings default to Flat (50 g/L), Nonflat (100 g/L) or Nonflat – High Gloss (150 g/L) or VOC content not to exceed applicable limit in Table 1.	Coatings default to Flat (250 g/L) or Nonflat (380 g/L) or VOC content not to exceed applicable limit in Table 1 to Subpart D.
<b>Sell-Through Provision</b>	Removed ACO language	No ACO provision	No ACO provision
<b>Administrative Requirements</b>	Require VOC and date of manufacturer on colorant containers	No requirements for colorants	No requirements for colorants
<b>New Test Methods</b>	<p>VOC Test Methods: Method 313 [Determination of Volatile Organic Compounds VOC by <del>GCGas Chromatography-MSass Spectrometry</del>] in the SCAQMD’s “Laboratory Methods of Analysis for Enforcement Samples” manual.</p> <p>ASTM Test Method 6886 (Standard Test Method for Determination of the Weight Percent Individual Volatile Organic Compounds in Waterborne Air-Dry Coatings by <del>GCGas Chromatography</del>).</p>	Requires Reference Method 24	Requires Reference Method 24
	Reactive Penetrating Sealer: Included ASTM D6490 (Standard Test Method for Water Vapor Transmission of Non-Film Forming Treatments Used on Cementitious Panels along with ASTM E96/96M.	Only references ASTM E96/96M.	No Reactive Penetrating Sealer Category

Section	Rule 1113 Architectural Coatings	California Air Resources Board 2007 Suggested Control Measure	40 CFR, Subpart D National Volatile Organic Compound Emission Standards for Architectural Coatings
	<p>Building Envelope Test Methods:                      ASTM E2178 (Standard Test Method for Air Permeance of Building Materials).                      ASTM E331 (Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference).                      ASTM E96/96M (Standard Test Methods for Water Vapor Transmission of Materials).</p>	<p>No Building Envelope Category</p>	<p>No Building Envelope Category</p>
	<p>Tub and Tile Refinishing Coatings                      ASTM D3363 (Standard Test Method for Film Hardness by Pencil Test)                      ASTM D4060 (Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser)                      ASTM D4585 (Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation)                      ASTM D714 (Standard Test Method for Evaluating Degree of Blistering of Paints)                      ASTM D3359 (Standard Test Methods for Measuring Adhesion by Tape Test).</p>	<p>Same test methods referenced</p>	<p>No Tub and Tile Coatings category</p>

Section	Rule 1113 Architectural Coatings	California Air Resources Board 2007 Suggested Control Measure	40 CFR, Subpart D National Volatile Organic Compound Emission Standards for Architectural Coatings
	<p>Tile and Stone Sealer</p> <p>ASTM C373 (Standard Test Method for Water Absorption, Bulk Density, Apparent Porosity, and Apparent Specific Gravity of Fired Whiteware Products, Ceramic Tiles, and Glass Tiles).</p> <p>ASTM C97/C97M (Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone).</p> <p>ASTM C642 (Standard Test Method for Density, Absorption, and Voids in Hardened Concrete).</p> <p>Static Coefficient of Friction by American National Standard Specification for Ceramic Tile (ANSI A137.1).</p> <p>ASTM E96/96M (Standard Test Methods for Water Vapor Transmission of Materials).</p>	<p>No Tile and Stone Sealers category.</p>	<p>No Tile and Stone Sealers category.</p>

Section	Rule 1113 Architectural Coatings	California Air Resources Board 2007 Suggested Control Measure	40 CFR, Subpart D National Volatile Organic Compound Emission Standards for Architectural Coatings
<b>Exemptions</b>	<p>Small Container Exemption: Effective <del>January 1, 2016</del> <u>upon rule adoption</u>, remove exemption for: Concrete-Curing Compounds For Roadways and Bridges; Magnesite Cement Coatings; Multi-Color Coatings; Pre-Treatment Wash Primers; Roof Primers, Bituminous; Sacrificial Anti-Graffiti Coatings; Stone Consolidants; Repair and Other Swimming Pool Coatings; and Wood Preservatives</p> <p>Effective January 1, 2018, remove exemption for: Tub and Tile Coatings; Clear and Pigmented Shellacs; and Reactive Penetrating Sealers</p> <p>Effective January 1, 2019, limit exemption to 8 fluid ounce touch up for: Flats, Nonflat, and <u>RPCs</u> <del>Rust Preventative Coatings</del></p> <p>Effective January 1, 2019, limit exemption to one liter for touch up only, limit sales to non-retail for: Industrial Maintenance Coatings, including Color Indicating Safety Coatings, High Temperature IM Coatings, Non-Sacrificial Anti-Graffiti Coatings, and Zinc-Rich IM Primers</p>	<p>Rule does not apply to any architectural coating that is sold in a container with a volume of one liter (1.057 quart) or less</p>	<p>The provisions of subpart D do not apply to any architectural coating that is sold in a container with a volume of one liter or less</p>
<b>Averaging Compliance Option</b>	<p>Removed all references to ACO, including Appendix A as ACO sunset effective January 1, 2015</p>	<p>No ACO provision</p>	<p>No ACO provision</p>

## SUMMARY OF POTENTIAL EMISSION REDUCTIONS

The following table represents the potential emission reductions:

**Table 8: Summary of Potential Emission Reductions from PAR 1113**

Rule Change	Estimated Emission Reduction (tpd)	Effective Year
<b>VOC Limit Change</b>		
<b>Building Envelope Coatings</b>	0.01	01/01/19
<b>Recycled Coatings</b>	0.06	01/01/19
<b>SCE Restrictions</b>		
<b>Flat Coatings</b>	0.002	01/01/19
<b>Industrial Maintenance Coatings</b>	0.01	01/01/19
<b>High Temperature IMC</b>	0.001	01/01/19
<b>Zinc-Rich Primers</b>	0.003	01/01/19
<b>Nonflat Coatings</b>	0.15	01/01/19
<b>Reactive Penetrating Sealers</b>	0.0001	01/01/18
<b>Rust Preventative Coatings</b>	0.63	01/01/19
<b>Shellacs</b>	0.0007	01/01/18
<b>Tub and Tile Coatings</b>	0.01	01/01/18
<b>Totals</b>	<b>0.88</b>	

## CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

~~The proposed amendments to Rule 1113—Architectural Coatings has been reviewed pursuant to CEQA and an appropriate CEQA document has been prepared, and will be considered for certification concurrently with the consideration for adoption of PAR 1113. PAR 1113 is considered a “project” as defined by the California Environmental Quality Act (CEQA), and the SCAQMD is the lead agency. Pursuant to CEQA Guidelines §15252 and SCAQMD Rule 110, SCAQMD staff reviewed PAR 1113 and concluded that an Environmental Assessment (EA) with no significant effects was the appropriate CEQA document for the proposed project. Staff released the Draft EA for a 30-day public review period from September 15, 2015 to October 15, 2015. One comment letter was received and the response to the comments have been included in the Final EA. Since the close of the comment period, revisions have been proposed to PAR 1113. Staff has analyzed these proposed revisions and have determined that they do not trigger recirculation pursuant to CEQA Guidelines §15073.5.~~

## COST EFFECTIVENESS

### *VOC Reductions (Recycled Coatings and Building Envelope Coatings)*

The reductions for Recycled Coatings will not have any associated costs as the coatings are already formulated at the lower level. Staff has found no evidence of any Recycled Coatings currently being offered for sale that exceed the proposed VOC limit. Staff received feedback that

extra VOC testing would be required because of the proposed lower VOC limit. Staff addressed this by extending the effective date of the lower limit to January 1, 2019 to allow time for the higher-VOC coatings collected at drop off sites to be processed into Recycled Coatings. Overtime, there will be less of the high-VOC coatings collected and more low and near-zero VOC coatings collected.

The building envelope coatings may have a high cost associated with reformulation and recertification, if the manufacturer decides to certify the coatings (this is not a requirement of Rule 1113). Staff found only one currently compliant coating that was over the proposed 50 g/L VOC limit. The sales volume of this product was so low that the manufacturer will likely stop sales of this product within the SCAQMD instead of re-formulating. That same manufacturer has a product that meets the 50 g/L VOC limit.

*SCE Phase out for Specialty Products (Reactive Penetrating Sealers, Shellacs, & Tub and Tile Coatings)*

For reactive penetrating sealers, there is only one product that is slightly over the VOC limit (by 27 g/L). This manufacturer also has several compliant coatings and will likely discontinue the higher-VOC product.

For Shellacs, there are three out of ten products over the 550 g/L VOC limit for pigmented shellacs and one out of twenty four products over the 730 g/L VOC limit for clear shellacs. The manufacturer can either slightly reduce the VOC content or discontinue marketing those coatings in the SCAQMD. There are new waterborne shellac replacements currently available and staff disagrees that there is any ~~questions the~~ need for pigmented and clear shellacs available for sale and use in the SCAQMD with a VOC limit of 550 and 730 g/L.

Tub and tile coatings are a new carve out requested by industry as the SCE is being restricted for Flat, Nonflat and IM coatings. Staff set the limit consistent with the CARB SCM as to not be less restrictive. The VOC limit agreed upon by CARB and industry back in 2007 was 420 g/L, and yet the seven out of twelve coatings reported as tub and tile coatings under Rule 314 exceed this VOC limit. Based on manufacturer's feedback, the reformulated coatings are estimated to cost 20% more than current formulations. These products are supplied in quarts, and the increase would be approximately \$9/quart.

*SCE Phase out for High-Volume Products (Flats, Nonflats, IMCs, & RPCs)*

For the SCE restrictions, the lower-VOC products are already available from ~~by~~ most, if not all manufacturers. There will be some higher-VOC product lines that will no longer be available in the SCAQMD, but in all instances, significant quantities of compliant coatings are currently being sold:

**Table 9: Small Container Exemption - Compliant versus non-Compliant Sales**

Category	2014 Sales		
	Compliant Sales (gal)	SCE Sales (gal)	% Compliant Sales
<b>Flat Coatings</b>	11,311,224	5,983	100%
<b>Industrial Maintenance Coatings</b>	677,054	2,687	100%
<b>Color Indicating Safety Coating</b>	0	0	
<b>High Temperature IMC</b>	4,377	PD	99%
<b>Non-Sacrificial Anti-Graffiti</b>	0	0	
<b>Zinc-Rich Primers</b>	9,670	PD	100%
<b>Nonflat Coatings</b>	11,566,568	83,772	99%
<b>Reactive Penetrating Sealers</b>	PD	PD	77%
<b>Rust Preventative Coatings</b>	141,103	151,237	48%
<b>Shellac</b>	PD	PD	96%
<b>Tub and Tile Coatings</b>	PD	PD	19%

PD = Protected data, less than three companies reported sales.

In the case of RPCs, the restriction on the SCE could result in some reformulation costs and/or reduced profit margins for the manufacturers who have not already switched to compliant technologies. In those instances, the manufacturer could choose to only sell their compliant product lines in the SCAQMD and the market share from the high-VOC sales would be redistributed amongst the available compliant products. Consumers who otherwise would purchase the high-VOC products could purchase the lower-VOC products without a compromise in performance. Alternatively, the manufacturers selling the high-VOC products could replace the higher-VOC products sold in quarts with their compliant products that they now sell in gallons. As previously stated, all manufacturers have a compliant RPC product line. Shelf surveys of the coatings currently being offered for sale in the field, show that the exempt product formulations of RPCs cost a few cents less than the higher-VOC RPCs sold in quart containers. Packaging and shipping in gallon containers instead of 4 quarts is also less expensive for the manufacturer. One manufacturer has indicated that their waterborne line of RPCs is less expensive due to the resin cost and the cost of water versus solvent. Based on this, staff feels ~~that~~ the removal of the SCE will lead to an overall cost savings. However, one manufacturer has indicated that the change in formulation will yield a 100% increase to the cost of their quart containers. This manufacturer is the same one selling the exempt solvent version of their product for several cents less than the high-VOC product. Staff acknowledges that some exempt solvents and low-VOC replacement solvents are more expensive than conventional solvents. As for reformulation costs for switching to the exempt solvent version of RPCs, feedback from the one manufacturer who does not feel the waterborne coatings perform adequately indicated the only work needed is color matching of their current product line.

Staff estimates that the cost per ton for PAR 1113 is ~~\$46,013.93~~ 1,150 per ton. As described previously, there are additional reasons for removing the SCE for certain categories other than VOC emissions reductions (circumvention, pricing disincentives for consumers, and competitive disadvantages).

## SOCIOECONOMIC ASSESSMENT

PAR 1113 affects all architectural coating manufacturers who sell architectural coatings into or within the SCAQMD. The purpose of PAR 1113 is to implement, in part, Control Measure CM#2012 CTS-01 – Further VOC Reductions from Architectural Coatings, limit the SCE small container exemption for certain categories, propose new categories with VOC limits and eliminate categories once they are regulated under a different rule, reduce the VOC limit of some architectural coating categories to reflect currently available inventory, clarify rule language, strengthen the enforceability of the rule, and remove and update outdated provisions.

### Affected Facilities

The proposed amendments will affect approximately 28–200 facilities ~~manufacturers and~~ wholesalers who sell architectural coatings into or within the SCAQMD. Of those 200 facilities, 54 are located in the Basin. Twenty ~~Thirty-three~~ of the affected facilities are located in Los Angeles County, while six facilities and two facilities ~~16 facilities~~ are located in Orange County, 2 facilities are located in and San Bernardino Counties respectively, and 3 facilities are located in Riverside County. The affected facilities belong to the sectors of Chemical Manufacturing (NAICS 325), Petroleum and Coal Products Manufacturing (NAICS 324), and Non-Metallic Mineral Product Manufacturing (NAICS 327) and Wholesale Trade (NAICS 423). Table 10 shows the distribution of these facilities by industry.

**Table 10: Number of Affected Facilities**

Industry (NAICS)	Number of Facilities
Chemical Manufacturing (325)	<u>212</u>
Petroleum and Coal Products Manufacturing (324)	<u>34</u>
Non-Metallic Mineral Product Manufacturing (327)	<u>45</u>
Wholesale Trade (42)	<u>23</u>
<b>Total</b>	<b><u>2854</u></b>

### Cost of Compliance

~~Based on the assumptions in the staff report for PAR 1113, the~~ The annual cost of compliance of \$46,000 is estimated to be approximately \$368,000 for each implementation year from 2016 to 2019 \$15,000 on average, from 2016 to 2019. As Table 11 illustrates, m Manufacturers of tub and tile coatings would incur 100% of this cost. Since only 19% of their products sold recently would be compliant, these manufacturers are expected to incur costs for reformulation and other related expenses, which is anticipated to be approximately a 20% increase based on staff analysis and stakeholder feedback. No tub and tile manufacturers qualify as small businesses.

**Table 11: Coating Categories with Socioeconomic Impact**

<b>Rule Change</b>	<b>Annual Cost</b>
Rust Preventative Coatings (RPCs)	(\$17,590.80)
Tub and Tile Coatings	\$46,013.93
<b>Total</b>	<b>\$46,013.93*</b>

\* Total does not include potential cost saving from RPCs because they represent the status quo.

Manufacturers of waterborne RPCs ~~are will not expected to~~ incur any additional costs from PAR 1113 given that waterborne RPCs are similarly priced as 37 cents cheaper than their higher VOC, solvent-based counterparts in the current marketplace and the manufacturers have already developed both high- and low-VOC product lines. ~~Given this price differential, the annual cost savings for waterborne RPCs is about \$18,000 and represents business as usual in this analysis. However, if manufacturers choose to continue working with exempt solvents rather than switching production to solely waterborne ed RPCs, then these manufacturers would~~ incur additional production costs. This will likely have no impact on consumers who can switch to waterborne RPCs, which are not only cheaper, but have also been shown to be equal to, if not superior than, higher VOC RPC products.<sup>1</sup>

It has been standard socioeconomic practice that, when the annual compliance cost is less than one million current U.S. dollars, the Regional Economic Impact Model (REMI) is not used to simulate jobs and macroeconomic impacts. ~~This is because the impact would most likely be diminutive and would fall within the noise of the model.~~ This is because the resultant impacts of approximately 10 jobs created or not created is relatively small compared to the baseline economy of about 10 million jobs; therefore, these results would be considered too unreliable to use. REMI results constitute a major component of the SCAQMD’s socioeconomic analysis. Therefore, when annual compliance cost is less than one million dollars and REMI is not used, the socioeconomic report can be brief and be included in the staff report, unless otherwise determined on a case-by-case basis.

## LEGISLATIVE AUTHORITY

The California Legislature created the SCAQMD in 1977 (The Lewis Presley Air Quality Management Act, Health and Safety Code Section 40400 et seq.) as the agency responsible for developing and enforcing air pollution controls and regulations in the Basin. By statute, the SCAQMD is required to adopt an AQMP demonstrating compliance with all state and federal ambient air quality standards for the Basin [California Health and Safety Code Section 40440(a)].

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<sup>1</sup> See Response to Comment 3-12.

Furthermore, the SCAQMD must adopt rules and regulations that carry out the AQMP [California Health and Safety Code Section 40440(a)].

## **AQMP AND LEGAL MANDATES**

The California Health and Safety Code requires the SCAQMD to adopt an AQMP to meet state and federal ambient air quality standards in the South Coast Air Basin. In addition, the California Health and Safety Code requires the SCAQMD to adopt rules and regulations that carry out the objectives of the AQMP.

## **DRAFT FINDINGS UNDER CALIFORNIA HEALTH AND SAFETY CODE**

Health and Safety Code Section 40727 requires that prior to adopting, amending or repealing a rule or regulation, the SCAQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the hearing. The draft findings are as follows:

**Necessity** - The SCAQMD Governing Board has determined that a need exists to amend Rule 1113 - Architectural Coatings to clarify rule language, reduce emissions from the use of architectural coatings, including previously unregulated colorants that are used to tint the coatings at the point of sale, and improve rule compliance.

**Authority** - The SCAQMD Governing Board obtains its authority to adopt, amend, or repeal rules and regulations from Health and Safety Code Sections 39002, 40000, 40001, 40440, 40702, and 41508.

**Clarity** - The SCAQMD Governing Board has determined that the proposed amendments to Rule 1113 - Architectural Coatings, are written and displayed so that the meaning can be easily understood by persons directly affected by them.

**Consistency** - The SCAQMD Governing Board has determined that PAR 1113 - Architectural Coatings, is in harmony with, and not in conflict with or contradictory to, existing statutes, court decisions, federal or state regulations.

**Non-Duplication** - The SCAQMD Governing Board has determined that the proposed amendments to Rule 1113 - Architectural Coatings do not impose the same requirement as any existing state or federal regulation, and the proposed amendments are necessary and proper to execute the powers and duties granted to, and imposed upon, the SCAQMD.

**Reference** - In adopting these amendments, the SCAQMD Governing Board references the following statutes which the SCAQMD hereby implements, interprets or makes specific: Health and Safety Code Sections 40001-(a) (air quality standards and enforcement of federal standards), 40440(a) (rules to carry out plan), 40440(b)(1) (BARCT), 40702 (adopt regulation to execute duties), and Federal Clean Air Act Sections 116 (state standards at least as stringent as federal standards) ~~(rules to achieve ambient air quality standards), 40440(a) (rules to carry out the Air~~

~~Quality Management Plan), and 40440(c) (cost effectiveness), 40725 through 40728 and Federal Clean Air Act Sections 171 et seq., 181 et seq., and 116.~~

## **REFERENCES**

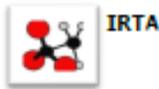
40 CFR Part 59, Subpart D – National Volatile Organic Compound Emission Standards for Architectural Coatings, September 11, 1998.

## **COMMENTS AND RESPONSES**

The following are the comment letters and emails, which have the paragraphs numbered to reference staff responses, that were received after the August 25<sup>th</sup> Public Workshop and the September 17<sup>th</sup> Public Consultation Meeting.

*The following are comments from the Institute for Research and Technical Assistance – Comment Letter #1.*

Institute for Research and  
Technical Assistance  
a nonprofit organization



August 28, 2015

Comment Letter #1

Heather Farr  
South Coast Air Quality  
Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

Dear Ms. Farr:

I am writing with comments on the proposed changes to Rule 1113 "Architectural Coatings." I am Director of the Institute for Research and Technical Assistance (IRTA), an environmental technical nonprofit organization that develops and demonstrates low-VOC, low toxicity alternatives, primarily in solvent applications. I attended the workshop on August 26 and provided testimony; I am following up the testimony with written comments.

1-1

My letter focuses on two issues that are related. First, the District is proposing to exempt 2-methyl-2-amino propanol (AMP), a chemical used in coating formulations as a pH adjuster. SCAQMD asked Dr. Julia Quint to evaluate the toxicity of AMP. Dr. Quint is a toxicologist and the former head of the Hazard Evaluation System and Information Service (HESIS), a state agency concerned with worker exposure. Dr. Quint indicates that AMP may be a developmental toxicant and that the chemical itself or impurities in it may lead to the formation of nitrosamines which are potent carcinogens. She goes on to say that, unless it can be demonstrated that these toxic endpoints will not arise, the District should not exempt the chemical. Her review and references was sent to you and is in the record.

The District has asked OEHHA to evaluate the toxicity of AMP and that evaluation is apparently still underway. If the OEHHA review indicates that the developmental toxicity endpoint and nitrosamine formation are not viable, then the District could move forward with the exemption. IRTA agrees with Dr. Quint and opposes the exemption unless OEHHA determines that these endpoints are not of concern.

1-2

The second issue concerns an exemption the District adopted many years ago for tert-butyl acetate (TBAC) in Industrial Maintenance (IM) coatings. TBAC forms a metabolite, tert-butyl alcohol, which is a carcinogen. The issue of exempt chemicals and toxicity has been a problem for the District in several rules over the last three or four years. In two other rules, Rule 1107 "Coating of Metal Parts and Products" and Rule 1168 "Adhesives and Sealant Applications," amendments were cancelled because the District proposed an exemption for TBAC in certain applications and the issue became controversial. In Rule 1168, the District proposed exempting TBAC for use in adhesive applications used in roofing. The District's CEQA staff calculated very high risks to workers and community members based on a cancer unit risk value OEHHA had developed earlier. The District argued that Personal Protective Equipment (PPE) could be used to reduce the risk to workers but there was a question as to the effectiveness of PPE and whether or not the District had the authority to require it. The risks calculated by the CEQA staff also indicated the risk to surrounding community members was very high and, in that case, PPE could not be used for mitigation.

To address the issue of exempt chemical toxicity, which had become an important policy question, the District held a symposium in October of last year where experts provided presentations on the topic. Virtually all the participants indicated that the best option for reducing or eliminating the risk of a toxic chemical is to use a safe alternative and that PPE should be used only as a last resort.

8579 Skyline Drive  
Los Angeles, CA 90046  
Phone (323) 656-1121 Fax (323) 656-1122

1-2  
cont.

The District prepared white papers on various topics over the last several months. The VOC white paper addressed the issue of exempt chemical toxicity and it stated that the District would use the precautionary approach to exempting chemicals. The precautionary approach means that chemicals should not be used unless it can be shown that they do not pose a risk. When a chemical is exempted, its use is encouraged and, indeed, promoted. Based on OEHHA's evaluation of toxicity for TBAC and the District's white paper position, TBAC should not have an exemption in any District rule.

Because TBAC became so controversial and because it does pose a carcinogenic risk, OEHHA conducted a further analysis to decide on a final proposed cancer unit risk. In OEHHA's earlier evaluation, the agency indicated that the cancer unit risk factor was  $4 \times 10^{-7}$  per microgram per meter cubed. Dr. Quint, when she was Chief of HESIS, had calculated a risk to workers using the OEHHA risk factor of 74,000 in a million at the current Permissible Exposure Limit (PEL). OEHHA's new evaluation, which is on their website, is that the cancer unit risk factor is now higher, at  $1.9 \times 10^{-6}$  per microgram per meter cubed. This translates into a worker risk of 350,000 in a million at the current PEL. Another way to put the new unit risk factor in perspective is to note that it is almost twice the cancer unit risk factor for methylene chloride which is a potent carcinogen.

Based on the revised OEHHA value for TBAC and the fact that the District is using a precautionary approach, IRTA is requesting that the District remove the exemption for TBAC in Rule 1113. Removing an exemption does not necessarily restrict a chemical. Rather it simply removes the preference given it by reason of the exemption. Once the exemption is removed, it is just considered to be a VOC like many other chemicals. Over the next few months, because of the risk posed by TBAC, the District should also consider covering it in a toxics regulation so users would have to meet the significance level when they use it.

In summary, then, IRTA opposes the exemption of AMP in Rule 1113 unless or until OEHHA indicates the chemical is definitively not a developmental toxin and does not lead to the formation of nitrosamines. IRTA also requests that the District remove the exemption in Rule 1113 for TBAC in industrial maintenance coatings.

I appreciate the opportunity to comment on this important issue. If you have questions on my comments, please call me at (323) 656-1121.

Sincerely,



Katy Wolf, Ph.D.  
Director

cc: Philip Fine, Jill Whynot

*Response to comment 1-1*

As mentioned in the staff report, the OEHHA analysis on AMP was released September 15, 2015. Based on the RELs, which are expected to be the final RELs unless further studies are conducted and submitted for review, staff has removed the proposal to exempt AMP from the definition of a VOC.

*Response to comment 1-2*

OEHHA is still in the process of finalizing their analysis on tBac. Until there is a final peer reviewed analysis on tBac, staff will not propose any changes to the current tBac exemption.

*The following are comments from the Angus Chemical Company– Comment Letter #2.*



Comment Letter #2

August 31, 2015

Ms. Heather Farr  
Air Quality Specialist  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

**Subject:** Comments on Draft Rule for 1113

Dear Ms. Farr,

ANGUS Chemical Company (ANGUS) supports the South Coast Air Quality Management District's (SCAQMD) recent proposal to exempt 2-Amino-2-Methyl-1-Propanol (AMP) as a volatile organic compound (VOC) according to Rule 1113 covering Architectural and Industrial Maintenance (AIM) coatings.

ANGUS appreciates the opportunity to comment on the amendments to Rule 1113. The following comments are specific to the VOC exemption for AMP.

As you are aware, AMP's use in AIM coatings is not a new application. AMP has been used for decades without adverse health effects as a multifunctional additive in paints and coatings. Only recently have paint manufacturers moved away from AMP, due to AMP's classification as a VOC. As stated during the public workshop, SCAQMD has learned that paint manufacturers prefer to use AMP over ammonia in many of their low to zero-VOC paints.

In the final ruling exempting AMP as a VOC, the U.S. EPA wrote that "AMP's performance as a multifunctional neutralizer, combined with its reduced ozone potential and favorable toxicity data, makes this product a preferred one compared to more toxic chemicals used for the same purpose."

The U.S. EPA agreed with the findings of Dr. Carter from the University of California, Riverside who determined that AMP forms negligible to no tropospheric ozone, and that under certain scenarios AMP can actually inhibit the formation of tropospheric ozone to a small degree. The U.S. EPA also concluded that AMP has a low potential to contribute to global warming and AMP will not deplete stratospheric ozone. As a result, exempting AMP as a VOC will assist SCAQMD in meeting its clean air goals.

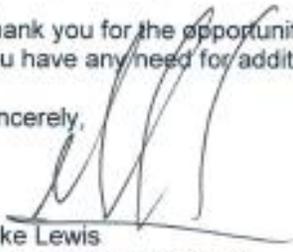
AMP is an established, widely studied compound which is typically used in concentrations at or below one percent of a total formulation. As a specialty amino alcohol, AMP cannot be used in high concentrations in the manner associated with industrial solvents. In addition to AIM coatings, it is used in personal care applications such as hair sprays, hair gels, semi-permanent and permanent hair colors as well as hand sanitizers, where it is valued for its buffering capacity as well as its mildness. AMP also has FDA clearance to be used in adhesives for indirect food contact (such as food packaging).



In summary, AMP provides paint manufacturers a safe alternative for improving the performance of their low- to -zero-VOC paint formulations. In anticipation of a favorable assessment from the Office of Environment Health Hazard Assessment in September, we support and look forward to SCAQMD's recommendation and approval to exempt AMP as a VOC at its upcoming board meeting currently scheduled for November.

Thank you for the opportunity to provide comments. Please contact me at your convenience if you have any need for additional information.

Sincerely,



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ANGUS Chemical Company  
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*Response to comment 2*

As mentioned in the staff report and in response to comment 1-1, based on the OEHHA analysis on AMP, staff is no longer proposing to exempt AMP from the definition of a VOC due to toxicity concerns and potential AMP exposure during painting.

*The following are comments from the Dunn-Edwards Corporation– Comment Letter #3.*



Comment Letter #3

THE #1 CHOICE OF  
PAINTING PROFESSIONALS®

DUNN-EDWARDS CORPORATION  
4885 East 52<sup>nd</sup> Place, Los Angeles, CA 90058

ENVIRONMENTAL AFFAIRS  
Phone: (323) 826-2663  
Fax: (323) 826-2653

September 3, 2015

VIA EMAIL

hfarr@aqmd.gov

Heather Farr  
Air Quality Specialist  
SOUTH COAST AQMD  
21865 Copley Drive  
Diamond Bar, CA 91765

**RE: PROPOSED AMENDED RULES 1113 & 314**

Dear Ms. Farr:

Dunn-Edwards Corporation is a California-based manufacturer and distributor of architectural coatings, serving the Southwestern United States. Our Main Office, one of two factories, and almost half of our retail outlets are located in the South Coast Air Quality Management District (SCAQMD), where we employ more than 800 people directly, and contribute indirectly to the livelihoods of thousands more professional painting contractors and maintenance staff painters throughout the region.

This letter is a follow-up to the oral comments offered on behalf of Dunn-Edwards Corporation at the Public Workshop on Proposed Amended Rules 1113 (Architectural Coatings) and 314 (Fees for Architectural Coatings) on Wednesday, August 26, 2015. Comments are presented here in order by rule section.

**RULE 1113: ARCHITECTURAL COATINGS**

(a) Applicability

3-1

We agree with the deletion of reference to averaging of coatings, since the Averaging Compliance Option is no longer operative in the rule. We notice, however, that the first sentence of this paragraph, through an apparent mis-wording, inadvertently excludes from rule applicability manufacturers located outside the District: "This rule is applicable to any person who...manufactures any architectural coating in the District...." This can be remedied by moving

Heather Farr  
September 3, 2015  
Page 2

3-1  
cont.

the phrase "in the District" (or "within the District" to be consistent with the second half of the sentence) as follows: "This rule is applicable to any person who supplies, sells, markets, offers for sale, or manufactures any architectural coating that is intended to be field applied to stationary structures or their appurtenances **within the District**...." etc.

(b) Definitions

3-2

(21)(c) GLAZES: While the definition is now accurate and acceptable, we think a minor change in the first sentence would make the intent clearer, as follows: "GLAZES are coatings formulated and recommended **to be used** (or **to be** mixed with another coating) for." etc.

3-3

(23) FLAT COATINGS: Unlike the definition of Nonflat Coatings, this definition lacks specification of the test method to be used for determination of gloss levels. We recommend including the same language used in the Nonflat Coatings definition, as follows: "FLAT COATINGS are coatings that register a gloss of less than 15 on an 85-degree meter or less than 5 on a 60-degree meter **according to ASTM Test Method D 523 as specified in paragraph (e)(5).**"

3-4

(81) WOOD COATINGS: In the interest of maintaining consistent definitions of categories, which we believe promotes efficient compliance and enforcement, we suggest making this definition functionally equivalent to the definition given this category when it was created in the ARB 2007 SCM, as follows: "WOOD COATINGS are film-forming coatings **formulated and labeled for application only to wood substrates, including floors, decks, and porches. The Wood Coatings category includes all lacquers, varnishes, and sanding sealers, whether clear, semi-transparent or opaque. This category also includes penetrating oils, clear stains, wood conditioners for use as undercoats, and wood sealers for use as topcoats.**"

The Draft Staff Report indicates that the proposed definition was intended "to clearly indicate that it only applies to Lacquer and Varnish topcoats and not to undercoaters." This seems to us inappropriate, since Wood Coatings are typically applied as finishing systems that involve multiple coats of multiple products. An opaque lacquer system applied to bare wood, for example, requires an undercoater to penetrate and seal the wood before application of topcoats. Options are limited; ideally, an opaque lacquer undercoater would be used. Latex and alkyd undercoaters are not compatible with lacquer topcoats. The only currently available viable product would be pigmented shellac, which has much higher VOC content than the opaque lacquer undercoater – the material VOC content of pigmented shellac is 4 to 5 times greater than that of an opaque lacquer undercoater.

3-5

(82) WOOD CONDITIONERS: This new definition includes the word "used" in a way that would prevent any coating from being categorized as a Wood Conditioner before it is applied. A better wording, consistent with other definitions, would be: "WOOD CONDITIONERS are coatings that

Heather Farr  
September 3, 2015  
Page 3

3-5  
cont.

are **formulated and recommended** to prepare bare wood for staining, to provide uniform penetration of stain.”

(c) Requirements

3-6

(2) No person within the District shall add colorant at the point of sale that is listed in the Table of Standards 2 and contains VOC in excess of the corresponding VOC limit specified in the Table of Standards 2 after the effective date specified.

Because the effective date specified in Table of Standards 2 is proposed to be deleted, the above paragraph should delete reference to the effective date. Also, the wording of this paragraph is somewhat awkward, making it vague and ambiguous as to what the colorant is being added to, what is being sold, and what is listed in the Table of Standards 2. A simple rewording would clarify this paragraph greatly, as follows:

**(2) No person within the District shall, at the point of sale of any architectural coating subject to paragraph (c)(1), add to such coating any colorant that is listed in the Table of Standards 2 and contains VOC in excess of the corresponding limit specified in the table.**

TABLE OF STANDARDS 1

3-7

The table includes a proposed new VOC limit for Recycled Coatings, at 150 g/L to be effective on January 1, 2016. We believe this is inappropriate, and may be based on a misunderstanding of the process by which Recycled Coatings are manufactured. The Draft Staff Report indicates that Recycled Coatings “are manufactured from locally available unused paints.” This is not, however, the case: unwanted leftover paints used by recyclers to make Recycled Coatings can come from all over the Western United States, or from even further away, and may be as much as 10 to 15 years old. All such usable coatings are blended together, with only minor adjustments to color, to make Recycled Coatings. These products are not “formulated” in the same manner as virgin paints. Sorting by VOC content is not a feasible option because labels are often obscured by paint drips, torn, or partly missing. Also, such a sorting process would be too time- and labor-intensive, and would make the price of Recycled Coatings too high for market acceptance. This category should have been made exempt from Rule 1113, although recyclers accepted the 250 g/L limit as equivalent to exemption, since all latex coatings manufactured in the past 20 years or more were at or generally below that level. We recommend leaving the 250 g/L limit in place.

(4) Sell-Through Provision

3-8

Previously, this paragraph was amended to add certain recordkeeping requirements applicable to those manufacturers who made use of the rule’s Averaging Compliance Option and its

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3-8  
cont.

special Sell-Through Provision in Appendix A, Section (K). The portions of this added language that make specific reference to the Averaging Compliance Option are now proposed to be deleted, leaving other portions intact. This would have the effect of imposing special recordkeeping requirements on all manufacturers, not just those who made use of the Averaging Compliance Option. This is burdensome and unnecessary, since adequate recordkeeping requirements are already included in Rule 314 (Fees for Architectural Coatings). We recommend deleting all of the language following the first sentence of this paragraph, leaving the original Sell-Through Provision, as follows: "Any coating that is manufactured prior to the effective date of the applicable limit specified in the Table of Standards 1, and that has a VOC content above that limit (but not above the limit in effect on the date of manufacture), may be sold, supplied, offered for sale, or applied for up to three years after the specified effective date."

(d) Administrative Requirements

3-9

Paragraphs (1) and (3) of this section are proposed to be amended to make containers of colorants subject to requirements for displaying date of manufacture and VOC content. As a practical matter, it appears that most colorant manufacturers are already doing so. As a new requirements for any colorant manufacturer, however, we believe it must include an effective date such that the requirements apply only to colorants manufactured on and after the effective date. This is because, without that provision, it is not clear who would have responsibility for relabeling containers of colorants, wherever they may be located: at the manufacturer's warehouse, a distributor's warehouse, or numerous retail locations. Restricting the new requirements to product manufactured on and after the effective date means that a relatively short implementation period is possible, even as little as six months.

(1): This paragraph should be reworded to include the effective date in either one of two ways, as follows:

"Containers for all coatings, and for colorants manufactured on and after [effective date], subject to this rule shall display the date of manufacture of the contents or a code indicating the date of manufacture. The manufacturers of such coatings and colorants shall file with the Executive Officer of the Air Resources Board an explanation of each code."

OR

"Containers for all coatings and colorants subject to this rule shall display the date of manufacture of the contents or a code indicating the date of manufacture. The manufacturers of such coatings and colorants shall file with the Executive Officer of the Air Resources Board an explanation of each code. The provisions of this paragraph (d)(1) shall not apply to any colorant manufactured prior to [effective date]."

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3-10 (3): This paragraph needs to have a new subparagraph (E) added, as follows: (E) For colorants manufactured on and after [effective date], the VOC per liter of colorant (less water and exempt compounds).

(f) Exemptions

(1) Small Container Exemption

3-11 (B): It seems that the exclusion of numerous categories of coatings that are acknowledged to have made little, if any, use of the Small Container Exemption is an unnecessary complication to the rule and accomplishes nothing of value. The Small Container Exemption remains a necessary "safety valve" in the rule, to allow for small quantities of specialty coatings for uses that may not be anticipated.

(C): As we have discussed previously, Dunn-Edwards would be adversely impacted by deletion of the Small Container Exemption for Rust Preventative Coatings, since it would cause the shutdown of our Los Angeles Factory, which today manufactures only solventborne alkyd Rust Preventative Coatings that are distributed primarily under the Small Container Exemption in the SCAQMD, our major marketing region. This would result in the loss of high-paying union jobs, while having no measurable impact on air quality.

3-12 Dunn-Edwards manufactures waterborne Rust Preventative Coatings at our factory in Arizona, as well as the solventborne alkyds in Los Angeles. The performance characteristics of solventborne alkyd Rust Preventative Coatings cannot be fully duplicated in lower-VOC waterborne alternatives at present. Solventborne alkyds have better penetration and adhesion on lightly rusted substrates; require less surface preparation and priming; develop higher gloss and harder finishes; and protect better because of superior film build, flow and leveling.

Additionally, our solventborne alkyds contain primarily low-reactivity mineral spirits (ARB Hydrocarbon Bin 11, MIR value: 0.7) and therefore have little, if any, impact on ozone formation. If no longer available, we believe that some portion of the solventborne alkyd Rust Preventative Coatings would be replaced by aerosol Rust Preventative Coatings, which emit more VOC, and more reactive VOC, per unit of area coated.

For these reasons, among others, we request that the Small Container Exemption for Rust Preventative Coatings be retained. We believe that off-setting emission reductions might be claimed in a variety of alternative ways, and we look forward to discussing these with you at future meetings.

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RULE 314: FEES FOR ARCHITECTURAL COATINGS

3-13

(g)(2)(A)(i): It is difficult to evaluate whether the proposed graduated fees are appropriately “revenue neutral” as intended, given the limited data available to us. Consequently, we request certain data that were likely used in developing the proposed fees, specifically the following: (1) total 2014 gallons reported under Rule 314; (2) total 2014 Annual Quantity Fees paid; (3) a breakdown of 2014 total gallons by VOC range as given in the Fee Rate table, including a further breakdown of the first range into 0 to 5 g/L and >5 to 10 g/L; and the number of gallons that would fall into the “above applicable VOC limit” category. In addition to the numeric data requested, we would also like to know any assumptions that may have been relied upon in setting the proposed fees.

Thank you for your consideration of our comments. If you have any questions regarding this letter or the suggested revisions, please feel free to call me at (323) 826-2663, or respond by email to <robert.wendoll@dunnedwards.com>

Very truly yours,

**DUNN-EDWARDS CORPORATION**



Robert Wendoll  
Director of Environmental Affairs

cc: David Darling, ACA

*Response to comment 3-1*

Staff concurs with this suggested rule change, but altered the suggested language slightly to address another manufacturer’s concern about coatings sold at a retailer outside of the SCAQMD that, unbeknownst to the retailers, is applied within the SCAQMD.

*Response to comments 3-2, 3-3, 3-5, 3-6, 3-8, & 3-9*

Staff concurs with these suggested rule changes.

*Response to comment 3-4*

Staff attempted to harmonize the definition of a wood coating in Rule 1113 with the definition in the SCM, but the 2007 SCM definition of a wood coating is much more broad than the Rule 1113 clear wood finish definition. The proposed amendment to the definition was to address the inconsistency of having white pigmented Lacquers as a subcategory of *clear* wood finishes, and not to expand the definition. The CARB definition includes:

- Penetrating oils and clear stains, which are categorized as stains in Rule 1113 with a VOC limit of 100 g/L or 250 g/L.
- Wood Conditioners, which are categorized as PSU in the current version of Rule 1113 (a separate category is being proposed) with a VOC limit of 100 g/L.
- Undercoaters, which are categorized as PSUs with a VOC limit of 100 g/L.

The definition of Lacquer in Rule 1113 does not include Lacquer undercoaters. In regard to lacquer undercoaters, which have never been included in the definition of a lacquer by Rule 1113, there are waterborne alternatives to solvent based lacquers. The statement that the only alternative to Llacquer undercoaters are shellacs, ~~which have a higher VOC limit,~~ is not true. Switching to a Wwaterborne Llacquer alternatives can be used and system would result in lower VOC emissions.

*Response to comment 3-7*

Staff worked with the local Recycled Coating manufacturers on the suggested change to the VOC limit and there was a consensus that delaying the implementation date to January 1, 2019 would alleviate concerns over the lower VOC limit. This time frame would also allow for the current labels on the containers to be consumed to avoid re-labeling costs. Staff found that one major Recycled Coating manufacturer already labels their products as less than 100 g/L, which is lower than the suggested VOC limit. Further, Dr. Dane Jones of California Polytechnic University in San Luis Obispo, where numerous architectural coatings are tested for the VOC content, stated that in the last four years they have tested over 250 Recycled Coatings and none were over 120 g/L, most were under 80 g/L. According to the Rule 314 data, the highest VOC reported for Recycled Coatings in 2014 was 130 g/L.

*Response to comment 3-10*

Staff agrees with the statement that clarification is needed on how to determine the VOC content for colorants. Paragraph (d)(3) contains language for determining the VOC content of multi-component coatings, concentrates, low solids coatings, etc. Staff included colorants in subparagraph (d)(3)(A) as the metric for determining the VOC content of colorants is the same as for architectural coatings packaged in a single container.

*Response to comment 3-11*

Staff is proposing to phase out the exemption for the SCE in part to prevent backsliding. During the rule amendment process, industry argued that they should get SIP credit for market driven emissions reduction as the current 2014 inventory (approximately 11 tpd) is below the inventory that was projected for 2014 in the 2012 AQMP (12.2 tpd). The USEPA's counterpoint to this argument is that industry could just reformulate to the VOC limits at any time so the reductions that have been achieved are not permanent or enforceable. By proposing to remove the exemption for coating categories that do not take advantage of the ability to sell high-VOC coatings, staff is preventing backsliding. Industry's argument that we should retain the exemption in case there is a need in the future reinforces the position of the USEPA and SCAQMD. If there is a need in the future, staff will consider potentially amending the rule.

*Response to comment 3-12*

In regard to the statement that the removal of the SCE for RPCs ~~rust preventative coatings~~ will result in the shutdown of Los Angeles plant. Based on the following statement from Dunn Edwards, they have more than 120 stores and 80 dealers throughout the Southwest:

“With more than 120 company stores in California, Arizona, Nevada, New Mexico and Texas, and more than 80 authorized dealers throughout the Southwest, Dunn-Edwards is one of the nation’s largest independent manufacturers and distributors of architectural, industrial and high performance paints and paint supplies. Dunn-Edwards Paints international presence includes authorized dealers in China, Guam, Lebanon, Lithuania, Mexico, Nigeria, Philippines, Saipan, Singapore and South Korea. The company is dedicated to preserving and protecting the environment, and produces its coatings in the world’s first and only LEED® Gold-certified manufacturing plant. Based in Southern California, the company is composed of approximately 1,500 employees.”

According to the list of stores available from the Dunn Edward’s website, 58 out of 120 stores are located in the SCAQMD. While the SCAQMD likely represents a significant market share for the company, this is not the only location where their coatings are sold. Prior to the adoption of Rule 314, staff traditionally estimated coating sales in the SCAQMD based on CARB surveys and based the sales volumes on population. The sales in the SCAQMD were estimated to be approximately 45% of California sales. Dunn Edwards also sells their products in Arizona, Nevada, New Mexico and Texas, as well as the countries listed above. The loss of sales for the high-VOC RPCs rust preventative coatings in the SCAQMD cannot would not be the sole cause of the closure of the Los Angeles manufacturing facility, since such coatings would still be sold in many areas. Moreover, Dunn Edwards could convert its Los Angeles plant to manufacturing compliant coatings.

In regard to the performance differences between solvent based and waterborne ~~rust preventative coatings~~RPCs, this issue was already addressed by the technology assessment conducted back in 2005 by UMR (Final Report “Architectural & Industrial Maintenance Coatings Technology Assessment.”, 2006). The overall results showed that for RPCs, the low-VOC products had superior dry time characteristics, prohesion, and flash rusting. They were similar in terms of hide, taber abrasion, impact resistance, and adhesion (Battele). These results were based on third party testing and resulted in the SCAQMD Governing Board concluding that the 100 g/L VOC limit was technologically feasible in 2006. Since that time, the technology has only improved and advanced. There is also an alternative to switching to waterborne technology, which is exempt solvents. We have multiple statements by another major manufacturer of high-VOC ~~RPCs rust preventative coatings~~ that the exempt solvent formulation performs just as well as their higher-VOC counterparts. In addition, ~~we have~~ statements from a smaller local manufacturer, of state their waterborne RPCs rust preventative coatings those products perform just as well. The MIR value of the exempt solvent formulation would be even lower than the current formulations and this would eliminate any need to transition into aerosol products. Further, a switch to waterborne or exempt solvent formulations would allow Dunn Edwards to retain manufacturing solvent based RPCs for sale in the SCAQMD at their Los Angeles facility.

The following is an evaluation of the MIR of ~~RPCs rust preventative coatings~~ with different VOC contents that was conducted during the 2006 rule amendment:

	VOC Regulatory Ranges (grams/liter)														
	0	51	101	151	201	251	301	351	401	451	501	551	601	651	> 700
	50	100	150	200	250	300	350	400	450	500	550	600	650	700	
<b>RPC</b>		0.04	0.11	0.14	0.22	1.25	1.36	0.41	0.64	0.42					1.34

The MIR values would be even lower if the ~~RPCs rust preventative coatings~~ were formulated with exempt solvents.

*Response to comment 3-13*

Staff is no longer proposing to amend Rule 314 at this time.

*The following are comments from the Rust-Oleum Corporation– Comment Letter #4.*

Comment Letter #4

**Rust-Oleum Corporation**

11 Hawthorn Parkway • Vernon Hills, IL 60061 • 847-367-7700 • Fax 847-816-2300



September 8, 2015

**RE: SCAQMD Rule 1113/Rule 314 Amendments; Rust-Oleum comments**

Rust-Oleum appreciates the opportunity to submit written comments on the proposed amendments to Rules 1113 and 314. We also appreciate the time staff has dedicated to meeting with us regarding these amendments.

4-1

In a conversation with Heather Farr on 9/3/2015, Rust-Oleum was told the draft Rule 314 will be revised to remove the \$0.051, 0.061 and 0.071 fee tiers. This would leave a maximum fee of \$0.041 per gallon for coatings that comply with their category VOC limit. Rust-Oleum supports this change and thanks staff for the consideration given to comments made during the public workshop. Rust-Oleum does not oppose the proposed fee of \$0.41 per gallon for coatings sold over VOC limits. We feel this will incentivize reformulation of products sold under the small container exemption to lower VOC where feasible.

Rust-Oleum opposes the elimination of the small container exemption for rust preventative coatings from Rule 1113.

4-2

We do not believe this rule amendment is necessary. Staff has presented the amendments as being necessary to achieve 2012 AQMP goals. However, current VOC emission reductions from architectural coatings already far exceed the 2-4 tons per day committed to in the 2012 AQMP (preliminary 2014 Rule 314 data indicate a 9 tpd reduction over 2008 baseline). If historical trends continue, emissions will be even lower by the 2019 goal date. Staff acknowledges this, but states the amendments are intended to prevent backsliding. However this argument lacks merit as, if coatings sales increase, VOC emissions have the potential to increase no matter where VOC regulatory levels are set.

Staff has also stated the small container exemption elimination for rust preventative coatings is necessary to prevent rule circumvention. Staff points to examples of paint stores offering “Buy 3 get 1 free” deals for small containers and contractors buying many small containers and combining the contents in one large container. However, these actions are in violation of Rule 1113 as currently written. Adequate tools are already at the District’s disposal to punish illegitimate use of small containers like these. The conduct of these bad actors should not be used as an excuse to deprive those who need small containers of coatings with unique properties access to these products.

The elimination of the small container exemption for rust preventative coatings will lead manufacturers of these coatings, like Rust Oleum, with few options for compliance. The District has pointed to waterbased alkyd enamel technology as a viable option for low

An  Company

VOC rust preventative coatings. Rust-Oleum has obtained competitor's products listed by the district as examples of this technology – Vista's Protec 9900 and Dunn Edwards W10 Syn Lustr. We tested these two alkyd enamel products against Rust-Oleum's Stops Rust product in a salt fog chamber. This is a standardized corrosion test method, used to check corrosion resistance of surface coatings. These panels are normally tested for 300 hours. The Dunn Edwards and Vista products had both **rusted completely in less than 92 hours and had to be removed from the test chamber**. We have included pictures of the Vista and Dunn Edwards salt fog panels after 92 hours in the chamber. For contrast, we've also attached pictures of the Rust-Oleum Stops Rust panels after 334 hours in the chamber. The Stops Rust panels look far superior to the Vista and Dunn Edwards panels, even after running 3.5 times as long in the salt fog chamber. Currently marketed waterbased alkyd enamel products fail at the primary purpose of a rust preventative coating: preventing corrosion.

The preliminary draft staff report states "One factor suppressing the market share of lower-VOC technology, is the availability of the older high-VOC technology at similar or lower prices. Staff has received feedback from a manufacturer who has made the switch to lower-VOC coatings, stating that if the SCE remains in place, they will go back to reformulating the higher-VOC product because they are currently giving up market share to their competitors. "Staff has presented data indicating low VOC and exempt, higher VOC products are sold at approximately the same cost per gallon to consumers. The reason lower VOC coatings are giving up market share is due to results like those seen in our salt fog chamber testing: consumers are choosing higher VOC products because they work better, not because they cost less.

If the small container exemption is eliminated for rust preventative coatings our only option would be to reformulate these products with exempt solvents in order to provide our customers the performance they expect from a Rust-Oleum Stops Rust paint. Given the solvents currently exempted by the District for architectural coatings, we anticipate the consumer would see the cost of one quart of our Stops Rust paint increase by nearly 100% in the South Coast. By any measure, this would be a significant impact on Rust-Oleum and the consumer living in the greater Los Angeles area.

Although we do not feel further VOC reductions from architectural coatings are necessary for the aforementioned reasons, if Staff insists on realizing these reductions, Rust-Oleum would be more in support of lowering the VOC limit for primers, sealers and undercoaters to 50 g/L than the currently proposed small container exemption elimination. In the October 30, 2014 PAR1113 Working Group Meeting Slides, Staff states that a reduction in the VOC limit for PSU to 50 g/L would result in a 0.57 ton per day VOC reduction. This is virtually equivalent to the 0.63 tpd reduction that would be realized from eliminating the small container exemption. This has the added benefit of not forcing the elimination of the small container exemption for flats, non-flats and industrial maintenance coatings to avoid manufacturer reclassification. Rust-Oleum

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4-2  
cont.

**Rust-Oleum Corporation**

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4-2  
cont.

believes this compliance option was abandoned too early in the Working Group process and would like to reopen this topic for discussion.

In conclusion, Rust-Oleum urges the district to continue to allow the use of low reactivity solvents, such as the mineral spirits commonly used in solventborne alkyds (ARB Hydrocarbon Bin 11, MIR value: 0.7) in rust preventative coatings. To continue using these solvents with low ozone forming potential, the small container exemption for rust preventative coatings must be maintained. Staff is proposing a fee of \$0.41 cents per gallon for coatings sold over VOC limits, which Rust-Oleum supports. This fee will naturally drive manufacturers using the small container exemption towards lower VOC options as technology allows while not forcing them to market inferior coatings.

Thank you for your consideration of our comments. Please contact me with any questions or concerns regarding the above position, or any other matter related to Rules 1113 and 314.

Regards,

Megan Gaughan  
Manager, US Regulatory  
Rust-Oleum Corporation

Stops Rust Gloss White  
334 Hours B117 Salt Fog  
9/1/15



Dunn Edwards W10 WB Syn-Lustro  
92 Hours B117 Salt Fog  
8/21/15



Vista Protec 9900  
92 Hours B117 Salt Fog  
8/21/15



*Response to comments 4-1*

Staff appreciates Rust-Oleum's support on the proposed fee changes in Rule 314 but is no longer proposing a tiered sales fee.

*Response to comments 4-2*

Staff credits the strides the coatings industry has made in reducing VOC emission, including some above and beyond the rule requirements. While staff acknowledges these trends and that the trends are demonstrated in the Rule 314 Annual Quantity and Emissions Reports, these market driven reductions are not permanent or enforceable. The industry makes that point when they argue against reducing the VOC limits to reflect the currently available inventory (e.g. Recycled Coatings and building envelope coatings) or phase out the SCE for categories not using the exemption. For emission reductions to be submitted for SIP credit they need to be permanent and enforceable. During the 2012 AQMP, the SCAQMD committed to achieving 2 – 4 tpd VOC reductions from architectural coatings. Staff is proposing to achieve approximately 1 tpd from this amendment and find another 1 – 3 tpd from another VOC or Area Source rule. The USEPA will not accept the currently achieved market driven reductions in place of enforceable and permanent reductions.

In regard to the rule circumvention staff cited in the staff report, issues of end users taking advantage of the SCE cannot be fully addressed through enforcement. The SCAQMD covers over 11,000 square miles with countless jobsites and inspectors cannot be at every job site on any given day. When staff finds violations, they issue violations. ~~The 'buy 3, get 1 free' specials that refer to shipping packages are not technically violations of the rule, but they add market incentives for end users to purchase the higher VOC products.~~

The manufacturers have multiple options for formulating compliant coatings, as can be demonstrated by the quantity of compliant coatings already in the market place. Based on Rust-Oleum's statements, their exempt solvent based formulations perform just as well as their conventional high-VOC solvent based coatings, the only drawback is the cost/loss of profits. Rust-Oleum's claims regarding the low performance of the waterborne alkyd enamel technology is also refuted by the manufacturers of waterborne products. They acknowledge that more surface preparation is needed for the waterborne products, but question the test protocol that was used for the Rust-Oleum cited testing, salt spray (ASTM B117 developed between 1910 – 1920 and standardized in 1939) versus cyclic prohesion (ASTM D5894 adopted in 1996 and revised in 2005 and 2010). During the 2005 ~~t~~Technology ~~a~~Assessment, the Technical Advisory~~Advancement~~ Committee also agreed that cyclic prohesion and not salt spray testing was the most appropriate accelerated test method to evaluate corrosion. The work was conducted at UMR, the lead professor on the project, Dr. Michael R. Van De Mark, stated that at least since the 1990s, it has been known throughout the coatings industry that salt spray results do not reflect real world results. The testing may be appropriate for marine coatings, hence the higher VOC-limits allowed for marine coatings

Staff found a report from the manufacturer of the testing equipment (*Prohesion Compared to Salt Spray and Outdoors Cyclic Methods of Accelerated Corrosion Testing* by N. D. Cremer, Managing Director - c. & W. Specialist Equipment Ltd., Shropshire, England, presented at Federation of Societies for Coatings Technology 1989 Paint Show; <http://www.q-lab.com/documents/public/dbdbd3fd-1e74-4749-9f3c-f5de2f0f1035.pdf>) that questions the validity of the salt spray test and how the results relate to real world conditions:

*“With the continual development of paint systems, there are many coatings available today which are capable of standing the most severe of environments. However their performance is essentially dependent on the adhesion of a primer to the base metal. Laboratory tests such as ASTM B117*

*Salt Spray, Humidity and Sulphur Dioxide influence the development of coatings yet they still allow coatings into the market place which then fail in practice. These accelerated tests consequently bear little or no resemblance to natural weathering.*

*Foremost among these tests is the hot Salt Spray for example ASTM B117. This test method has been and is still widely used and accepted as the definitive accelerated test to assess reliability. However, it is in reality totally unrealistic, as the majority of products are not exposed to the conditions of this test in their working environment.*

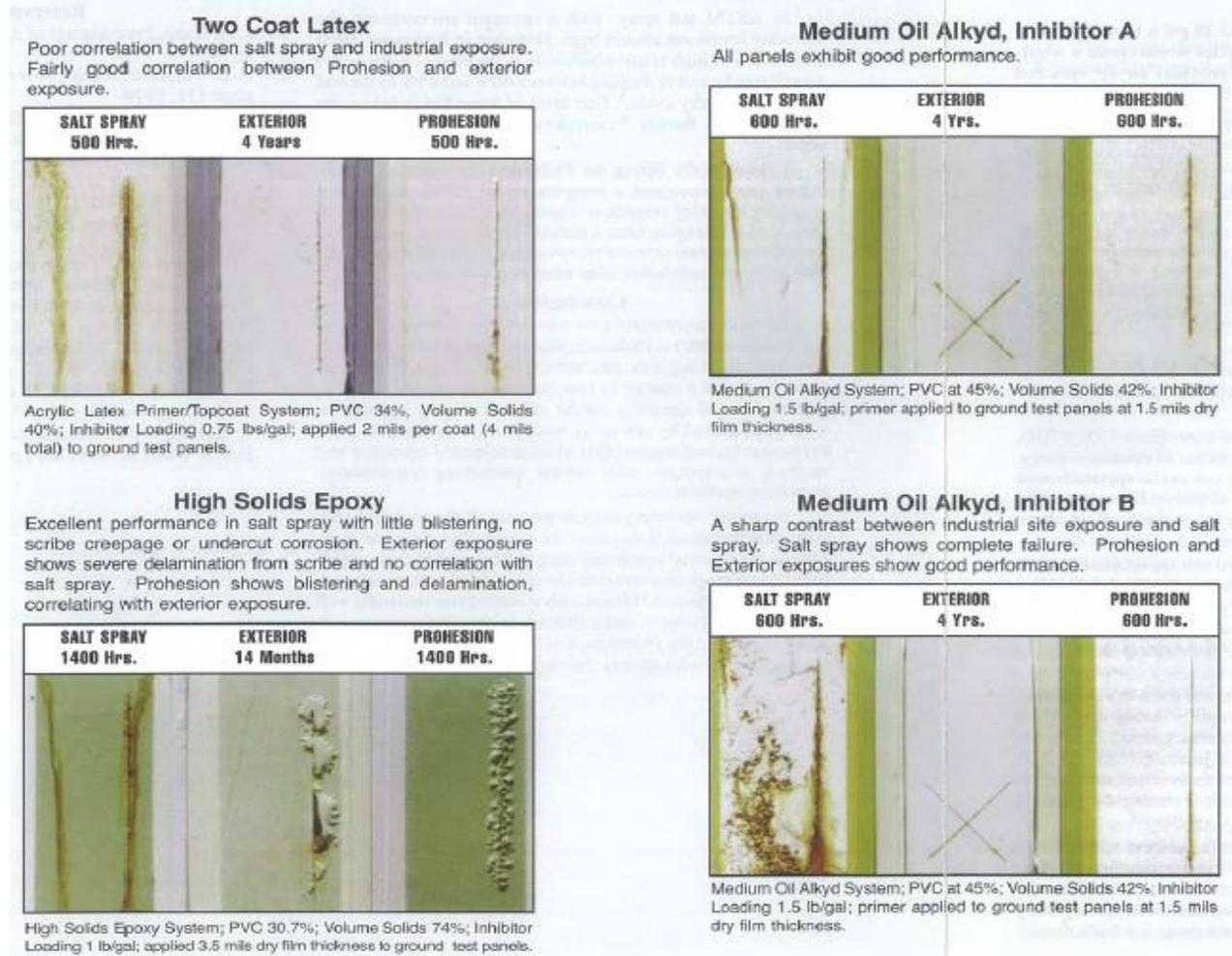
*When a chemist is looking at his results after Salt Spray testing, he often decides a coating with good salt spray performance is accepted over a coating with poor salt spray performance. Consequently if a coating passes its laboratory examination, then it is considered suitable and often introduced to the market place.*

*If a coating fails its laboratory examination then it is discarded. With this philosophy a chemist could have thrown away an ideal product for the natural world and a winner in the market place!”*

The paper states the salt spray test is useful for marine coatings but is now inappropriately used across the board to predict long term weathering for many types of coatings. As early as 1962, it was observed that coatings that performed excellently in outdoor environments tested poorly by salt spray. This led to the development of a cyclic test which allows for the wetting and drying of each test specimen to allow samples the opportunity to absorb more water than in a continuous spray test. The conclusion of the paper is:

“Salt spray testing provides answers which are unrealistic in the natural world, yet Prohesion provides realistic results which correlate with long term exterior exposure. These results also show that with a change in raw material input, the long term performance of a coating can be effected exactly opposite to what is predicted by salt spray testing. Results obtained from Prohesion testing suggest that as an accelerated corrosion test method, it correlates with natural weathering consequently providing realistic results.”

The following are some photographs from the paper cited above that demonstrate this point:



Vista's Protec 9900 waterborne alkyd emulsion underwent prohesion testing (ATM D 5894) on steel panels for 1,000 hours and found no corrosion ([https://d1wg3emhath1s.cloudfront.net/uploads/product/product\\_pi\\_sheet/29/9900.pdf](https://d1wg3emhath1s.cloudfront.net/uploads/product/product_pi_sheet/29/9900.pdf)). Rust-Oleum does not list performance testing (prohesion or salt spray) for their Stops Rust® brand, although, they do for their industrial tint based alkyd (which states it was formerly Stops Rust® Tint Base High Gloss Finish):

**CYCLIC PROHESION** Rating 1-10 10=best  
 METHOD: ASTM D5894, 3 cycles, 1008 hours  
 RESULT: 10 per ASTM D714 for blistering  
 RESULT: 9 per ASTM D610 for rusting

There are no salt spray results. The technical datasheet (<http://www.rustoleum.com/tds/2011990%20RO-15.pdf>) appears to be old, with a revision date of 05/04 but the results of the cyclic prohesion for the waterborne Vista product appear almost exactly the same as the solvent based Stops Rust® product. In addition, one of the low-VOC coatings that was tested in the 2005 Technology Assessment was a Rust-Oleum product, a near zero-VOC product from their Sierra Performance line. This coating demonstrated superior performance to the high-VOC solvent based coatings. Again, the product datasheet does not list salt spray results but does include the following prohesion results:

**PROHESION (1 coat DTM)**

Rating 1-10 10=best

METHOD: ASTM D5894, 1,000 hours

RESULT: 10 per ASTM D714 for blistering

RESULT: 6 per ASTM D1654 for corrosion

RESULT: 10 per ASTM D610 for rusting

Based on the two results that are listed for both coatings (blistering and rusting), the Sierra product outperformed the Stops Rust® coating. The Sierra product is currently being used successfully at several local oil and gas facilities. Further, if the salt spray results were such a critical test for Rust-Oleum's RPCs, those results would be included in the technical datasheets.

Regarding the cost difference of using exempt compounds versus conventional solvents, this is not unique to RPCs. There are manufacturers who serve as whistle blowers on their competitors who can distinguish non-compliant gallons of concrete/masonry waterproofing sealers just based on the cost. If the cost is too low and the product is not waterborne they call staff to notify which manufacturer is not producing compliant products. They do this to help keep a level playing field. That is all that staff is trying to achieve by phasing out the SCE, a leveling of the playing field. This is not a technology forcing change; compliant high performing coatings already exist in the market place, with the biggest issue presented to staff as being a loss of profit margin or potential high cost to the customer. This is a cost other manufacturers have already had to bear. In addition, a switch to waterborne ~~rust preventative coatings~~ RPCs would result in cost savings and not an increased cost. Rust-Oleum's own prohesion testing using solvent borne coatings indicates comparable performance to a competitor's waterborne RPC~~rust preventative coating~~.

The indication that the change in formulation will result in a 100% increase in quart containers differs in research staff has found. This manufacturer has an exempt solvent version of their product for several cents less than the high-VOC product. Staff acknowledges exempt solvents or low-VOC replacement solvents are more expensive than conventional solvents, but does not foresee a 100% increase.

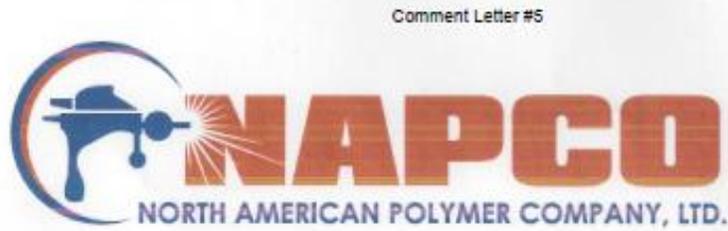
Regarding the proposal to lower the VOC limit on the ~~primer, sealer, undercoater category~~ (PSU) category, staff did not receive any support for this concept when it was initially introduced, including from Rust-Oleum. The comment letter from the ACA states why lowering the VOC for PSUs is problematic. Of all the original proposals, the one which staff received the most negative feedback from industry was lowering the VOC limit on PSUs, because extensive reformulations would be required and industry felt the performance would be compromised. In order to reduce this limit, staff would have to break out multiple specialty categories, or the high-VOC niche products would otherwise be driven to the SCE. The PSU category encompasses multiple types of products and the only category that could easily be reduced would be drywall Primers, and they are already below 50 g/L, so no reductions would be achieved. Staff still believes ~~that~~ reducing the VOC limits for large volume categories (Flat, Nonflat, & PSU) is feasible, but has changed direction during this rule amendment due to the overwhelmingly negative response from industry as a whole. This is a concept staff may return to in the future as the technology continues to advance.

#### *Response to the attached pictures*

The pictures represent the performance of the coatings exposed to salt spray, which staff illustrated in response to comment 4-2 is not the appropriate test for corrosion of architectural coatings. That test is more appropriate for marine coatings, where the SCAQMD allows for higher VOC limits. In addition, this is not third party testing. The effect of surface preparation and film thickness is critical for the performance of coatings. All of the coatings performed significantly better with the application of two coats, but none of the product datasheets explicitly recommend or require two coats for proper protection. Moreover the

pictures show that the application of two coats of a waterborne coating displayed similar results under the salt spray test and will yield less emissions than using a solvent based product. This is an indication corrosion protection is not the primary purpose of these coatings. Unlike industrial maintenance products, where application instructions are explicit in order for the coatings to perform as intended, RPCs rust preventative coatings are used for a wide variety of applications, not all of which require superior corrosion protection. Again, based on the prohesion results found in the product datasheets, the protection offered from the waterborne alkyd offered by Vista and Rust-Oleum's waterborne acrylic outperform the Stops Rust® product.

***The following are comments from the North American Polymer Company, LTD. – Comment Letter #5.***



September 8, 2015

Ms. Heather Farr (HFarr@aqmd.gov)  
Office of Planning, Rule Development, and Area Sources  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

RE: Proposed SCAQMD Rule 1113 Amendments; Tub and Tile Refinish Coatings

Dear Ms. Farr:

North American Polymer Company, Ltd. (NAPCO) recommends the District retain the Small Container Exemption (SCE) for the Tub and Tile Refinish category since we are struggling with the proposed 420 g/l limit. While we had hoped to have products to meet the 420 g/l limit, we have not been able to get there. While other California Air Districts have adopted the 420 g/l – the critical difference is that other CA Districts have the SCE as a fall back, and many have exempted TBAC. NAPCO recommends retaining the Small Container Exemption for the Tub and Tile Refinish category.

In addition, if over our objection the District does eliminate the Small Container Exemption for Tub and Tile Refinish coatings, a longer compliance date would be needed, since the proposed compliance date of 1/1/2016 is too early, we recommend the 1/1/2019 compliance date (same date as the Flat, Nonflat, Rust Preventatives and Industrial Maintenance categories).

Since the Tub and Tile Refinish category it is a small volume category with limited emissions, this change will have little if any impact on VOC emissions in the District.

Steve Coven



President  
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Fax (847) 779-6465 - [www.napcoltd.com](http://www.napcoltd.com)

*Response to comment letter 5*

Twenty percent of tub and tile coatings sold in the SCAQMD are compliant with the 420 g/L VOC limit. Staff acknowledges that the VOC reductions are small and has agreed to shift the phase in date from 01/01/2016 to 01/01/2018.

*The following are comments from the Tnemec Company Inc. – Comment Letter #6.*

Comment Letter #6



September 8, 2015

Ms. Heather Farr  
Office of Planning, Rule Development, and Area Sources  
South Coast Air Quality Management District  
21865 Copely Drive  
Diamond Bar, CA 91765

RE: Comments for Proposed Amendments to SCAQMD Rule 1113 and Rule 314

Dear Ms. Farr,

Thank you for the opportunity to provide comments on the PAR Rule 1113. Tnemec Company recognizes the need for environmental stewardship and VOC regulations in California. We support VOC limits for architectural and industrial maintenance coatings based on technically feasible field proven coatings technology. We offer the following comments regarding the proposals for revisions to Rule 1113:

Rule Changes Are Not Needed

6-1

The cost of compliance with VOC regulations is extremely high and this is especially true for small and mid-sized companies. The district has surpassed the limit on both technical feasibility and VOC reduction potential. Going after extremely small reductions measured in lbs. per day is not cost effective and only leads to stifling economic growth. The fact that the rule 314 data shows that the emissions are lower than expected and that the district is meeting the 2019 air quality management plan targets must be considered. This data demonstrates that additional VOC reductions are not needed at this time. The district should look to other industries for additional reductions.

Small Container Exemption

6-2

The small container exemption is critical for field touch-up of shop applied IM coatings. Many building construction products are fully coated in a shop environment and then put together in the field. This can encompass products such as window and door frames, metal hand rails, light poles and numerous other metal parts and products. The coatings are touched up from damage that may have occurred during the installation process. Touching up with a different product will lead to significant performance and appearance problems. At 20 lbs. per day the elimination or restriction of the IM exemption is not justified.

6-2  
 cont.

We appreciate staff's recognition that field touch-up of shop applied coatings is a critical piece for the quart exemption by adding the language to allow for these applications. This was part of the original intent of this exemption and it is still valid today. While this addresses our primary concern we don't feel it is necessary change anything with regards to the quart exemption for IM coatings.

The assumption that rust preventative coatings will be relabeled as industrial maintenance coatings is not proven and adding restrictions to the IM quart exemption only adds complexity to an already difficult rule. This complexity will lead to confusion for people trying to understand the rule requirements.

**TBAc Exemption**

6-3

The exemption for TBAc (tertiary butyl acetate) is needed to comply with the stringent 100 g/L VOC limit for industrial maintenance coatings. There are very few products that can comply with a 100 g/L without the use of exempt solvents and the ones that do comply have severe limitations with regards to application properties and require expensive complex equipment. In addition there are certain types of coatings that cannot be made to comply with these stringent requirements without exempt solvents. The district should fully exempt TBAc from the definition of VOC to be consistent with the EPA list of exempt compounds.

We support using chemicals in a manner that protects human health and the environment. Many of the risks of exempt solvents are no different than the risks with existing solvents which are being effectively managed with both engineering controls and/or PPE. The assessment that was done previously determined that TBAc can be safely used for industrial maintenance coatings. Removal of the exemption should only be done after a peer reviewed risk assessment is conducted based on all available scientific data using reasonable risk factors and conclusions are made that it is unsafe for use in industrial maintenance coatings.

The assertion that PPE is not effective at preventing worker exposure is unfounded. While we do recognize that engineering controls are the preferred method for protection it has been recognized by the Occupational Safety and Health Administration (OSHA) that PPE is an effective means for preventing worker exposure. The same PPE that is used to effectively manage exposure to TBAc is being used to manage exposure to other solvents and chemicals currently being used in paint formulations. In addition, worker exposure is outside the scope of the SCAQMD and is a responsibility of OSHA.

Tnemec Company, Inc.  
PAR Rule 1113 and PAR Rule 314 Comments  
9/8/2015

Page 3 of 3

Rule 314 Fees

6-4

Increasing fees is not a good choice in the current economic climate. The California coatings market is already being stifled by the current fees and taxes being imposed and the market cannot support any additional increases. Additional fees will only serve to shrink economic growth of an already mature market.

The proposal to shift the fees in a revenue neutral manner is not something we would necessarily be opposed. There needs to be transparency as to how this "neutrality" was determined. The data and calculations should be made publically available and ample time should be allowed for public review and comment before these changes are adopted.

Thank you for your consideration of these comments. Please feel free to contact me if you have any questions or if you need any additional information.

Regards,

Tnemec Company, Inc.



Kyle R. Frakes  
Manager Environmental, Health, and Safety

*Response to comment 6-1*

The Rule 314 data demonstrates there are more than sufficient technically feasible, commercially available, low-VOC products in the market place to justify VOC reductions. The changes being proposed are not technology forcing changes; the change to the SCE will result in making the manufacturers comply with VOC limits established and proven to be technically feasible back in 2006.

Staff does look to other industries for VOC reductions, but committed in CTS-01 from the 2012 AQMP to achieve 2 – 4 tpd reductions from architectural coatings. Staff acknowledges the current VOC inventory is lower than projected in 2012, but cannot submit the market driven reductions for SIP credit as explained in response to comment 4-2 because they are not permanent, enforceable, or accepted by the USEPA. The proposed amendments are narrow in nature and isare more cost effective than previous amendments. The 2012 CTS-01 included other areas to consider, but we are not including these changes because of the high cost associated with thisthem. This proposed amendment will achieve around 1 tpd, and staff is committed to look into other industries to achieve the other 1 – 3 tpd.

*Response to comment 6-2*

As stated in the staff report, the proposal to eliminate the SCE from IMCs was included to prevent RPCs from simply being re-categorized as IMCs. Staff has seen this type of creative marketing many times in the past. Staff worked with industry to alleviate the concerns of restricting the SCE by creating a higher VOC category for color indicating safety coatings and allowing the continued sale of one liter containers for touch up for IMCs. Based on industry feedback, staff allowed the continued use of the one liter exemption with restrictions that these coatings can only be used for touch up and not be sold at retail outlets to accommodate the larger touch up projects encountered in some industrial settings. Most IMCs are not sold at the retail level, so this should not be a significant burden. Also, an end user attempting to touch up a factory applied coating on a component being installed in an industrial setting is not likely to be going to their local paint store to find the coating. The end user would have to contact the shop that coated the part to determine what coating was originally used. That product is not likely available at the local paint store. The amendment is not intended to restrict touch up for IMC.

*Response to comment 6-3*

As stated in response to comment 1-2, staff is not proposing changes to the tBAC exemption until OEHHA's final peer reviewed assessment has been released. At that time, it is expected the latest CARB architectural coatings survey should be available which will indicate how much tBAC is currently being used in IMCs.

*Response to comment 6-4*

Staff is no longer proposing a tiered sales fee in Rule 314.

*The following are comments from the American Coatings Association. – Comment Letter #7.*



Comment Letter #7

September 9, 2015

Ms. Heather Farr  
Office of Planning, Rule Development, and Area Sources  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

**RE: SCAQMD Rule 1113/Rule 314 Amendments; ACA Comments**

Dear Ms. Farr:

The American Coatings Association (ACA) would like to provide the following comments on the issues discussed at the August 26, 2015 South Coast Air Quality Management District (SCAQMD or the District) Rule 1113/Rule 314 meeting, and VOC Workgroup meeting. We also incorporate by reference previously submitted ACA comments on Rule 1113/Rule 314.<sup>1</sup>

**A. There is No Justification for Sweeping Changes to Rule 1113 Since the District has Already Met its 2012 AQMP Commitments for the Architectural Coatings Source Category**

There is no justification for further regulatory action to reduce VOCs from AIM coatings since the District and industry have already met and exceeded the inventory goals of 2-4 tons per day (tpd) for this source category from a VOC inventory perspective. There is a clear downward trend in VOC emissions from this source category. Notably, VOCs from architectural coatings in the South Coast Air Basin have decreased by over 75% over the course of the last decade from 2002 to 2013.<sup>2</sup>

Past SCAQMD estimates have regularly estimated slight increases in emissions while actual VOC numbers have continued to tumble as Rule 314 data comes out each year. The preliminary 2014 Rule 314 data indicates that the 2014 AIM coatings inventory is nearly five tpd lower than the 2012 AQMP estimate for 2014: approximately 10 tpd instead of the estimated 15.5 tpd.<sup>3</sup> In fact, the 2014 Rule 314 data demonstrates that the District has already achieved, and well exceeded, the CTS-01 2019 targets of 12.2-14.2 tpd by over 2 tpd for the source category. Given this, there is no basis for further VOC reductions, and the District should consider other approaches to reduce VOCs from architectural coatings while also looking to other source categories. We welcome the opportunity to work with the District to consider other options and novel approaches.

<sup>1</sup> ACA's previous comment letters are dated: July 8, 2015; April 30, 2015; March 10, 2015; and January 20, 2015.

<sup>2</sup> The South Coast Air Quality Management District 2007 Air Quality Management Plan, Appendix III; SCAQMD Staff Presentation, August 26, 2015.

<sup>3</sup> SCAQMD Staff Presentation, August 26, 2015.

**B. The District is Correctly Retaining the VOC Limits for Flats, Nonflats, and Primer Sealer Undercoaters Since Lowering the Limits is Not Technically Feasible**

7-2

We strongly support SCAQMD's decision to retain the current VOC limits for Flats, Nonflats, and Primer Sealer Undercoaters (PSU) since the District has determined that lower VOC limits for these categories are not technically feasible. Currently, manufacturers are making Zero-VOC interior Flat and Non-Flat latex products. It is the Exterior Flat, Exterior Non-Flat and the entire Primer Sealer Undercoater categories where it would be technically infeasible to lower the VOC content limits to 25 g/l because of performance issues. SCAQMD would need to look at the sales weighted averages as well, in addition to the technical performance issues, to determine if a category could be lowered. As the District rightly concludes, lowering the limits for these categories would compromise performance for a range of applications and effectively eliminate the use of certain coatings technologies within these categories without an adequate substitute.

Flat, Nonflat, and PSUs are designed for a range of important functions, from painting interior walls to application on a variety of substrates under different exposure conditions. Higher VOC PSUs, for example, are necessary for specific applications on wood, metal, masonry and concrete tilt-up. Also, Primers perform significantly better at higher-VOC levels as concrete block fillers, thin-film elastomeric primers, and higher performing multi-purpose primers that are used on various substrates including metal. For these reasons, we support the District's conclusion.

**C. The Proposed Rule 314 Amended Fee Structure Will Further Encourage Lower-VOC Coatings and Yield Significant VOC Emissions Reductions**

7-3

The amended Rule 314 fee structure concept is designed to encourage lower-VOC products without the need to lower the VOC limits for Flats, Nonflats, and PSU to 25 g/l or eliminate the small container exemption for any categories. The amended fee structure provides coatings manufacturers with formulation flexibility while creating powerful market incentives to further reduce the VOC content of products similar to the U.S. Environmental Protection Agency's (EPA) National AIM Rule. Like the fee in the National AIM Rule, the 314 Rule fee is a market-based option that incentivizes manufacturers to formulate lower-VOC products to reduce its fee burden since manufacturers pay more for higher-VOC products. ACA continues to believe that the SCAQMD can take credit for the significant reductions achieved through the District's incentive fee program.

We are aware that the District is now considering a modification to the proposed fee structure outlined in the August 2015 Draft Staff Report. As we understand it, the new proposed structure would impose a uniform fee on all coatings that comply with the Table of Standards with two caveats: The District would impose an increased fee on products sold under the small container exemption, and would reduce the fees on super-compliant products. ACA believes this proposal, if structured appropriately, would still serve the goal of incentivizing lower-VOC products while ensuring the fees do not disproportionately impact manufacturers that sell products in compliance with the Table of Standards.

7-3  
cont.

Lastly, we appreciate that the District has confirmed that the fees collected under the restructured program as a whole will remain revenue neutral under the new approach. We ask that the District provide supporting data based on 2013 and 2014 Rule 314 reporting.

**D. The Small Container Exemption is a Critical Compliance Option and the District Should Retain it for all Categories**

ACA strongly believes the District should retain the current small container exemption as a compliance option for Flats, Nonflats, Industrial Maintenance (IM) Coatings, and Rust Preventative Coatings. ACA also believes there is no justification for eliminating the small container exemption for the 11 other categories cited in the Proposed Amended Rule 1113, especially the Tub and Tile category. The small container category would not be necessary for these newly created categories in the SCAQMD if the limits for these categories is set based on the current range of product VOCs. However, the small container exemption is the only remaining alternative compliance option, or safety valve, in Rule 1113, and continues to be a critical for the paint and coatings industry. ACA recommends that the District refrain from considering any effort to eliminate the small container exemption until after the revised Rule 314 fees have been implemented since the volume of products sold under the small container exemption will likely decrease due to the increased fees affecting both manufacturers and consumers.

7-4

There is no basis for eliminating the small container exemption. The 2014 AIM VOC inventory indicates that the goals of the 2012 AQMP CTS-01 have already been achieved by a significant margin, and the proposed fee restructuring will further incentivize lower-VOC products so manufacturers can avoid higher fees. In addition, the District historically examined whether the category had an “exponential increase in sales” to determine whether to eliminate a category from the small container exemption. To the contrary, sales of Flats, Nonflats, IM and Rust Preventative coatings have been flat or decreasing over time, so it does not meet this criterion.

The District’s concerns over alleged rule circumvention and noncompliance are unfounded, and do not justify the elimination of the small container exemption for any coatings categories either. Nearly all of the cited incidents in the Staff presentations and Staff Report reflect either blatant violations of Rule 1113 or could easily be addressed through modification of the rule language. None of these examples would be addressed by eliminating the small container exemption, and noncompliance could continue to occur regardless. These problems can only be addressed through targeted enforcement and compliance efforts, and with minor amendments to the rule language where necessary. As previously mentioned, ACA welcomes the opportunity to work with the District to shore up Rule 1113 to prevent true circumvention. As per previous ACA comments, additional changes could be made to Rule 1113 to address potential noncompliance including:

- Restricting any type of marketing or price discounts and grouping for small container sales, including buy three get one free deals, rebates, etc.
- Prohibiting retailers from selling empty prelabeled small container cans, or labels for small containers.

<p>7-4 cont.</p>	<ul style="list-style-type: none"> <li>• Ensuring that Rust Preventative Coatings are properly labeled “For Metal Substrates Only” and enforcement in situations where these products are misapplied.</li> </ul> <p>Lastly, as the District ratcheted down the VOC limits in Rule 1113 in the past, the District has defended lower-VOC limits by arguing that manufacturers can always use the small container exemption as an alternative option. This proposal runs counter to the District’s historical position. If the District eliminates or limits the small container exemption as proposed, companies will be forced to comply with any new limit in a future amendment. This is problematic, and ACA believes the District must consider the lack of any real alternatives during future rulemakings, and provide additional options such as higher-VOC limits and extended compliance dates.</p> <p>We provide the following additional comments with respect to the small container exemption for individual coatings categories:</p>
<p>7-4a</p>	<p>1. <u>Flat Coatings</u></p> <p>We urge the district to retain the small container exemption for flat coatings since the emissions reductions resulting from this change would be negligible (estimated 0.002 tpd or 4 pounds per day), and do not justify reducing necessary flexibility in Rule 1113.</p>
<p>7-4b</p>	<p>2. <u>Non Flat Coatings</u></p> <p>ACA urges the District to establish a “Door, Trim and Cabinet” category so that these products may continue to be sold via the small container exemption, since these higher-VOC products provide greater durability and wear resistance for doors, trim, and cabinets. These same characteristics are not available in lower-VOC products. Further, the emissions reductions resulting from this change would be small (an estimated 0.15 tpd), and do not justify the elimination of the small container option for Nonflat Coatings.</p>
<p>7-4c</p>	<p>3. <u>Industrial Maintenance Coatings</u></p> <p>ACA opposes the elimination of the small container exemption for IM coating. The emissions reductions resulting from the elimination of the small container exemption for IM coatings would be negligible (an estimated 0.01 tpd or 20 pounds per day), and do not justify reducing flexibility in Rule 1113. While we oppose the modification of the small container exemption for IM coatings, we appreciate that the District is retaining the one liter touch-up option. This option is useful for IM coatings intended for touch-up of building construction products that are damaged during shipment. However, ACA recommends that the District clarify that IM and Zinc Rich Primers may be sold at retail outlet if they are restricted to behind the counter or back room sales, as current policy dictates.</p>
<p>7-4d</p>	<p>4. <u>Rust Preventatives</u></p> <p>The small container exemption remains a critical compliance option for Rust Preventative Coatings, and we urge the District to retain this safety valve. Higher-VOC Rust Preventatives</p>

protect substrates better than lower-VOC products. They require less surface preparation, and do not require a primer, which eliminates the need for a second application. Consumers demand traditional coatings formulations that are quick-drying and have high-performance coatings attributes that provide superior flow, leveling, and appearance. Lower-VOC products dry slower, and ultimately, it takes longer before the object can be returned to service. Please refer to ACA's April 30, 2015 comments outlining additional concerns.

From a technical standpoint, the District should not compare certain IM, Direct-to-Metal, and water-based alkyds with Rust Preventatives. ACA is concerned that Staff considers IM, Direct-to-metal, and water-based "alkyd" products Rust Preventatives Coatings. Rust Preventative Coatings have unique corrosion inhibition and rust preventative properties that distinguish them from other products. In addition, IM, water-based alkyds, and direct-to-metal products require surface preparation and application of a primer coat, and tend to cause flash rusting.

ACA supports the comments provided by Rust Oleum at the August 26, 2015 Public Workshop, and subsequent written comments. Here is a summary of the comments: The District has pointed to water-based alkyd enamel technology as a viable option for low-VOC rust preventative coatings. Rust Oleum obtained and tested products given by the District as examples of this technology, and found that these products fail after one freeze thaw cycle, whereas other Rust Preventatives, which rely on mineral spirits as a solvent and are sold under the small container exemption pass 10 freeze thaw cycles. Other water-based alkyd enamel products performed poorly in standardized corrosion tests for surface coatings compared to conventional solvent-based Rust Preventative technologies.

The District has noted some benefits of low-VOC Rust Preventative coatings, including better gloss retention, durability, dry time and cohesion and reduced chalking and yellowing, but provided no evidence to support these claims, and did not claim that low-VOC coatings provide superior corrosion protection, which is the central function of Rust Preventatives.

There were several problems identified with the SCAQMD Rust Preventative Technology Assessment work completed a number of years ago, and referenced on page 22 of the Staff Report. First, the products selected may not be representative "Rust Preventatives." In addition, "rust prevention" was not actually tested, and the "Flash Rusting" results were not included in the report. This Assessment should not form the basis for eliminating the small container exemption for Rust Preventative Coatings. For these reasons, we do not believe the District should eliminate the small container exemption for Rust Preventative Coatings.

#### 5. Tub and Tile Coatings

ACA strongly recommends that the District retain the small container exemption for the Tub and Tile Refinish category since the industry is struggling to meet the 420 g/l limit. While the industry is striving to develop products to meet the 420 g/l limit, it appears that manufacturers have not been able to achieve this limit to date. While other California air districts have adopted the 420 g/l, manufacturers can still rely on the small container exemption as a fallback in those jurisdictions. It is also important to note that the Tub and Tile Refinish category is a small volume category with limited emissions.

7-4d  
cont.

7-4e

7-4f

6. Additional Categories

The District has not provided an adequate justification for eliminating the small container exemption for these additional categories since manufacturers do not utilize the exemption for these categories, and no emission reductions will result from this change. In addition, while the SCE has not been utilized for these categories in the past, manufacturers may look to the small container option to solve a new issue in the field in the future. Further, if for example a company makes a technology breakthrough but the product does not meet the category limit, these technologically superior products could not make it to the marketplace.

Further, if the 11 additional categories cannot be sold via the small container exemption, companies will likely need to review and change their labels and product literature to ensure their products are in conformance with the appropriate definitions. Companies will need more than two months to complete this review and make potential label changes. ACA suggests including a January 1, 2017 compliance date to minimize the burden on manufacturers.

The District should also consider the ozone potential of various categories based on the MIR value of each of the solvents used in coatings. All VOCs are not created equal and do not have the same ozone potential.

E. Colorant Labeling

7-5

ACA suggests the District include a January 1, 2017 implementation date for labeling colorants to minimize the burden and cost of this change. Manufacturers need time to change labels to include the VOC content and date code, and clear all products that are not properly labeled from the distribution pipeline. This abrupt change will also increase fuel usage by forcing manufacturers to collect unlabeled products, and will increase the generation of solid waste if companies are forced to dispose of unlabeled, half-empty products. The District has historically allowed additional time for label changes in past rule amendments, and we urge the District to do the same with colorants.

ACA recommends either:

“Containers for all coatings, and for colorants manufactured on and after January 1, 2017, subject to this rule shall display the date of manufacture of the contents or a code indicating the date of manufacture. The manufacturers of such coatings and colorants shall file with the Executive Officer of the Air Resources Board an explanation of each code.”

OR

“Containers for all coatings and colorants subject to this rule shall display the date of manufacture of the contents or a code indicating the date of manufacture. The manufacturers of such coatings and colorants shall file with the Executive Officer of the Air Resources Board an explanation of each code. The provisions of this paragraph (d)(1) shall not apply to any colorant manufactured prior to January 1, 2017.”

Also a new subparagraph (E) is needed, as follows: (E) For colorants manufactured on and after [effective date], the VOC per liter of colorant (less water and exempt compounds).

**F. Recycled Coatings**

7-6

The District should not lower the VOC limit for Recycled Coatings to 150 g/l since this will increase the cost of recycling, and reduce the use of recycled coatings. The 150 g/l limit will force recyclers to perform additional VOC determinations and spend more time separating higher-VOC products. The lower limit will also force recyclers to dispose of more products, increasing waste disposal costs. In turn, the PaintCare program will incur higher costs, resulting in increased costs to manufacturers and consumers. Given these concerns, ACA believe the District should retain the current limit for recycled coatings.

**G. Building Envelope Coatings**

7-7

ACA does not support lowering the Building Envelope Coating VOC limit to 50 g/l at this time. Building Envelope Coatings represent a new category, and the California Air Resources Board and SCAQMD have not yet gathered accurate sales data on these products. We suggest that the District use the next few years to gather accurate data, and then determine whether to reduce the VOC limits on this category. This is especially important considering the considerable cost of testing Building Envelope Coatings such as air barriers. In addition to reformulation, manufacturers would be forced to retest each product according to the three test methods in the category definition at a cost of approximately \$30,000-40,000 per product.

**H. Exempt Compounds**

7-8

ACA supports the proposed exemption for AMP (2-Amino-2-Methyl-1-Propanol) from VOC status for purposes of Rule 1113. This exemption will help the District achieve critical VOC reductions, and provide paint manufacturers with formulation flexibility to further reduce VOCs. ACA also supports the comments provided by the ANGUS Chemical Company.

The District should also fully exempt TBAC (tertiary butyl acetate) from the definition of VOC to maintain consistency with the U.S. EPA list of exempt compounds. Until TBAC is formally listed as a TAC or carcinogen, air regulatory agencies such as SCAQMD should make no changes to their rules based on OEHHA's unsanctioned risk factors. For the past 11 years, TBAC has been safely used in numerous applications in 49 states and in Canada and has reduced ozone levels by an estimated 660 Million pounds (300 Kilotons). California remains the only State that does not recognize the Federal VOC exemption of TBAC or benefit from its exemption.

The District should also fully exempt DMC (Dimethyl carbonate) from the definition of VOC to maintain consistency with the U.S. EPA list of exempt compounds.

**I. Spray Efficiency**

ACA still believes that the District can obtain additional permanent and enforceable VOC emissions reductions through “Best Practice Guidelines” and mandatory requirements for spray application. The District should include these requirements and work practice standards in Rule 1113 to make these provisions an enforceable part of the AIM coatings regulatory framework. ACA suggests the following in addition to the previous SCAQMD proposal to strengthen the provisions so the District can calculate the resulting emissions reductions:

7-9

- a. Keep spray pressure as low as possible; Use the smallest tip size possible; Coatings must be spray applied according to the product manufacturer’s instructions, including the specified spray pressure, coverage rate, tip size, and any other recommendations for spray application.
- b. Spray gun should be no further than 12 inches from the surface being painted.
- c. Maintain a 90-degree direct angle of the spray gun to the surface being painted; Avoid “fanning” the gun from side to side, and never exceed a 30-degree variance from a 90-degree direct spray application;
- d. Do not over thin paint material; Paint thinners must be compliant with SCAQMD Rule 1143, and thinned products may not exceed the Rule 1113 limits.
- e. Cleaning solvent must be compliant with SCAQMD Rule 1171.
- f. Do not “overreach” when working from a ladder or other lift equipment (where the spray gun or wand is more than 12 inches from the surface being painted).
- g. Always use the gun trigger to begin and end each application stroke.
- h. Adjust the application overlap to fully cover the surface being painted to minimize paint usage.
- i. All architectural coating or colorant containers from which the contents are used by pouring, siphoning, brushing, rolling, padding, ragging or other means shall be covered and closed when not in use; these containers include, but are not limited to drums, buckets, cans, pails, trays or other storage or application containers.
- j. Applicators applying coatings in SCAQMD must successfully complete the SCAQMD’s Architectural and Industrial Maintenance Coatings training program or contractor association equivalent, and hold a certificate issued by the Executive Officer evidencing that such individual is in good standing in this program (similar to Rule 463 and Rule 1178).

**J. Method 313**

**1. Precision and Bias**

7-10

The District should include a precision and bias statement in Method 313. To date, the District has only evaluated the internal precision/bias of Method 313. The evaluation of three operators using the same piece of equipment resulted in an error band of 5 g/l material VOC. While this is useful information, the regulated community must also understand how other labs conducting Method 313 compare to the SCAQMD results. This information is especially critical for coatings manufacturers since they must formulate below the regulatory limit to account for precision differences between their testing equipment and the District’s.

7-10  
cont.

ACA suggested completing a Method 313 “roundrobin,” or as an alternative, that the District include the ASTM D6886 precision statements as guidance for Method 313 (SCAQMD participated in the ASTM D6886 roundrobin). In response, SCAQMD and EPA Region 9 both claim that the results of any future Method 313 roundrobin and the D6886 roundrobin results are not applicable since “industry labs did not follow the ASTM D6886 method and will not follow the Method 313 method.” Now, SCAQMD is preparing to validate Method 313 via EPA Method 301 “Field Validation of Pollutant Measurement Methods from Various Waste Media.” ACA appreciates that the District is trying assess the precision and bias of the SCAQMD Method 313 equipment, but this validation will not help with assessment of external “interlaboratory” precision since the Method 301 is only inward looking.

ACA is also concerned that the three proposed matrices – flat, nonflat and simplified resin only – are not representative of all the categories or coating chemistries in Rule 1113 (e.g., bituminous-based coatings). These categories are also not representative of coatings in the other coatings rules where Method 313 will be incorporated. ACA requests a demonstration that the chosen matrices will be compatible with each different technology covered by Rule 1113 and other coatings rules. Also, it would be more realistic if, for example, EPA developed the Matrices for SCAQMD to analyze instead of SCAQMD knowing the matrices beforehand. This “blind sampling” would result in more meaningful results.

On page 15 of the Draft Staff Report the district mentions that “The SCAQMD has participated in round robin studies M313 versus D6886 with strong correlation between the two methods.” Given this strong correlation between the two methods, ACA suggests SCAQMD simply incorporate the ASTM D6886 precision statements.

Further, on page 15 of the Draft Staff Report, the District mentions that “For compliance purposes, [the District] will provide a guidance document to explain the differences between the two methods such that a manufacturer utilizing ASTM D6886 will be aware of how their results could differ from results obtained by the SCAQMD laboratory.” The District gave a presentation on August 26 which provided the key similarities and key differences between Method 313 and D6886, and the changes to D6886 that would be required to align it with Method 313. However, this qualitative information does not provide quantifiable information on how manufacturers’ test results may differ from the results obtained by the SCAQMD laboratory. The D6886 roundrobin precision statements are the only data that can answer this key compliance question.

2. Scope

7-11

The District should clarify and limit the scope of Method 313. In early discussions with the District, the District indicated that Method 313 was intended to be used for coatings that had a material VOC content of less than 150 g/l. However, language in the draft indicates that Method 313 would be used for any material when EPA M24 does not reach a stable weight, with a demonstrated additional weight loss of greater than 0.2% absolute or 3% relative difference (whichever is greater) after one additional hour of oven heating.

Not all products currently subject to R1113 will reach stable weight using M24 (this includes both higher- and lower-VOC formulations). The main point being the assumption that M24 is

unstable is not exclusively attributed to lower-VOC formulations. In fact, weight loss instability and poor repeatability/reproducibility would be the expected outcome for both aqueous and nonaqueous coatings containing semi-volatile complex hydrocarbon mixtures when tested for volatile content under Method 24. It is recommended the district consider Thermal Gravimetric Analysis (TGA) methods for products with these stated parameters.

While the non-film forming oils used in form release compounds will now be moved to Rule 1161, there are still other non-film forming oils used in Rule 1113 including stains and waterproofing sealers which are problematic with regards to Method 313.

7-11

ACA recommends the following changes to the Scope of Method 313:

Method 313 applies to materials such as paints, coatings, solvents, and other liquid/dispersed solid materials containing less than 150 g/L VOC material as measured by SCAQMD Method 304-91 or Environmental Protection Agency Reference Method 24 (EPA M24). It may also be used for materials which do not reach a stable weight by EPA M24, with a demonstrated additional weight loss of greater than 0.2% absolute or 3% relative difference (whichever is greater) after one additional hour of oven heating. This method is not to be used for two-component coatings or Ultraviolet/Electron Beam (UV/EB)-cured coatings but may be used for samples requiring ASTM D5095 "Determination of the Nonvolatile Content in Silanes, Siloxanes and Silane-Siloxane Blends used in Masonry Water-Repellent Treatments". Coatings containing semi-volatile complex hydrocarbon mixtures should be analyzed by ASTM E1868 "Standard Test Methods for Loss-On-Drying by Thermogravimetry."

3. Exclusion Pathway

ACA appreciates the time and effort that the District has committed to developing an exclusion pathway. ACA once again requests that the Staff Report and Board Resolution mention that the District is receptive to additional pathways including a future pathway for Amines. We specifically request the District include the following footnote in the Exclusion Pathway Flowchart:

7-12

The exclusionary pathway is intended for unreactive compounds and will need to be amended to correctly classify components such as amines that interact with other components when the paint is being formulated.

On page 18 of the Staff Report, the District mentions that "Note: the only compound that has been demonstrated thus far to stay in the film of the coating was pentaethylene glycol (EG5)". ACA requests the District clarify that the District has only tested film retention for Glycerin, Propylene Glycol and Pentaethylene Glycol. Also ACA requests the District state which oils are not considered VOCs (e.g., canola oil).

ACA requests the second box of the exclusion pathway be changed from "The measured or modeled VP of the compound of interest is lower than MP" to "...is equal to or lower than MP".

7-12  
cont.

Since Vapor Pressures vary and are difficult to measure and model at low levels, ACA suggests that the threshold in box 2 be changed to less than or equal to " $<0.01$ ". This change will have little impact since the compounds still need meet the stringent requirement of Box 3, retainment in the film. As an example, the EPI Suite vapor pressure modeling data for methyl palmitate is estimated to be 0.0634 Pa at 25C (log value -1.197). However, in the SCAQMD graph of vapor pressures, the log vapor pressure of methyl palmitate is shown as less than -2 based on a measured value (A log of -2.19 would correspond to a vapor pressure of .00634, which is an order of magnitude lower than the .0634 Pa modeling data). Alternatively, we suggest the vapor pressure of the compound of interest be lower than the upper fall within the error bands of the measured or modeled vapor pressure of Methyl Palmitate. Again, since the third step is so stringent, a slight increase in the vapor pressure in the second box will have little impact. Finally, setting the threshold at less than or equal " $0.01$ " may address ACA concerns over Amines.

Also, ACA suggests that the District's choice of dibutyl phthalate as a surrogate for methyl palmitate in the Exclusionary Pathway Flowchart for Early Eluting Semi-Volatile Organic Compounds (Box 3) is problematic. The purpose of the exclusionary pathway is to determine whether or not a compound or complex hydrocarbon mixture is less volatile than methyl palmitate, not dibutyl phthalate, which appears to have a significantly lower vapor pressure than methyl palmitate. An appropriate surrogate would have the same volatility as methyl palmitate. ACA believes that tetraethylene glycol may be a good surrogate since it has the same vapor pressure as methyl palmitate and behaves almost identically to methyl palmitate as a neat compound in thermal gravimetric analysis. It is also easy to incorporate into waterborne coatings, especially compared to dibutyl phthalate.

Vapor pressure:

Methyl palmitate =  $6.04 \times 10^{-5}$  mmHg@25C (Perry RH, Green D; Perry's Chemical Handbook. Physical and Chemical data. NY, NY: McGraw-Hill 6th ed (1984))

Dibutyl phthalate =  $1 \times 10^{-5}$  mmHg@25C (US EPA Air Toxics Web Site)

$2.01 \times 10^{-5}$  mmHg@25C (Jour. of Chromatography A 749:123-129, (1996))

ACA also requests additional information on the scope and how the exclusion pathway is to be used. For example, now that the District has determined that PEG has met the three exclusion criteria, how will PEG actually be excluded? Could coatings manufacturers exclude PEG from their VOC content determinations, or would the District not consider PEG in an enforcement situation? Also, please clarify whether the exclusion pathway be included with Method 313.

#### K. Unused Coatings

7-13

The SCAQMD currently assumes that 100% of architectural coatings that are sold in the District are applied in the District, and as a result all associated VOC emissions count towards the SCAQMD's VOC inventory. EPA has documented that 10% of architectural coatings remain unused. The architectural coatings inventory should be adjusted to account for unused paint, alleviating further pressure to reduce VOC emissions from this source category. ACA requests an update on the status of the District discussions with EPA.

**L. Architectural Coating Product Database**

7-14

The District should take credit for emission reductions that result from the architectural coating product database. Once it is launched, the database will provide yet another market incentive to drive down AIM VOC emissions in SCAQMD since architects, specifiers, contractors, and consumers can search the database to find low-VOC products.

From a practical perspective, it is important that discontinued products are not included in the database. The District should utilize the current averaging box to identify discontinued products in Rule 314 so they can be excluded.

**M. Additional Changes**

We suggest the following changes in the proposed Rule 1113 language.

1. Applicability

7-15

ACA suggests moving the phrase “in the District” (or “within the District” to be consistent with the second half of the sentence) as follows: “This rule is applicable to any person who supplies, sells, markets, offers for sale, or manufactures any architectural coating that is intended to be field applied to stationary structures or their appurtenances within the District....”.

2. Glazes

7-16

(21)(c) GLAZES: “GLAZES are coatings formulated and recommended to be used (or to be mixed with another coating) for:” etc.

3. Flat Coatings

7-17

(23) FLAT COATINGS: “FLAT COATINGS are coatings that register a gloss of less than 15 on an 85-degree meter or less than 5 on a 60-degree meter according to ASTM Test Method D 523 as specified in paragraph (e)(5).”

4. Wood Coatings

7-18

(81) WOOD COATINGS: “WOOD COATINGS are film-forming coatings formulated and labeled for application only to wood substrates, including floors, decks, and porches. The Wood Coatings category includes all lacquers, varnishes, and sanding sealers, whether clear, semi-transparent or opaque. This category also includes penetrating oils, clear stains, wood conditioners for use as undercoats, and wood sealers for use as topcoats.”

5. Wood Conditioners

7-19

(82) WOOD CONDITIONERS: “WOOD CONDITIONERS are coatings that are formulated and recommended to prepare bare wood for staining, to provide uniform penetration of stain.”

7-20      6. Sell-Through Provision

We suggest deleting the averaging compliance language) -“Any coating that is manufactured prior to the effective date of the applicable limit specified in the Table of Standards 1, and that has a VOC content above that limit (but not above the limit in effect on the date of manufacture), may be sold, supplied, offered for sale, or applied for up to three years after the specified effective date.”

7-21      7. (c) Requirements

(2) No person within the District shall, at the point of sale of any architectural coating subject to paragraph (c)(1), add to such coating any colorant that is listed in the Table of Standards 2 and contains VOC in excess of the corresponding limit specified in the table.

7-22      8. Concrete Form and Concrete Mold Release Compounds

As the District is moving Form Release and Concrete Stamp Mat Release Compounds to Rule 1161, it is important to note that Rule 1113 Form Release compounds and stamped concrete mold releases that are used in an outdoor environment are different than mold release compounds used in a factory setting. Products that are used outside need a higher-VOC limit than release compounds used in a factory setting. In addition, the VOC content for stamped concrete mold release compounds may need to be higher than form release compounds; if the stamped concrete mold release compound does not evaporate and the concrete sticks to a mold, both the mold and the concrete surface could be ruined. Whereas a small amount of concrete sticking to a concrete form may not be as much of an issue.

ACA requests a limit of 100 g/l for both the form release and concrete stamp mat release products, and requests that the District determine if Dodge oil and other oils are VOCs via Method 313. Please see ACA’s comments from April 30, 2015.

Thank you for your consideration of our comments. Please do not hesitate to contact us if you have any questions.

Sincerely,

/s/

/s/

David Darling, P.E.  
Senior Director, Environmental Affairs

Timothy Serie, Esq.  
Counsel, Government Affairs

Cc: Philip Fine, SCAQMD  
Jose Gomez, ARB  
Ravi Ramalingam, ARB  
Stan Tong, EPA  
Wienke Tax, EPA

*\*\*Sent via email\*\**

*Response to comment 7-1*

Please see response to comments 4-2 and 6-1.

*Response to comment 7-2*

Staff did not conclude the lower VOC limits for Fflats, Nonflats, and PSUs were technologically infeasible, but instead decided to take industry's suggestion to lower the fees in Rule 314 instead of lowering the VOC limits at this time (however, this approach is no longer being proposed). Staff presented a significant amount of data early in the process demonstrating that the lower-VOC limits were technically feasible. That said, there could be specialty products within each of these categories that might need to be carved out, especially for the PSU category, but the change in direction was a response to industries' comments and not an indication that the lower-VOC limits were not technically feasible.

*Response to comment 7-3*

Staff appreciates industry's support of the proposed fee structure, which was proposed not only for coatings sold under the SCE but for any coating reported over the VOC limit. Staff is no longer proposing to amend Rule 314 at this time.

*Response to comment 7-4*

Based on the sales volumes and emissions of the SCE, staff feels this exemption is being utilized to a great extent to stifle sales of lower-VOC products for certain categories. For the specialty categories, staff does strive to set the VOC limit at an appropriate level, working with the affected industry. It is somewhat surprising when a small niche category is carved out based on staff's work with industry on the appropriate VOC limit and then to see multiple products being offered for sale above that VOC limit, within the SCE. Staff is proposing to adopt the VOC limit from CARB's 2007 SCM for the tub and tile category, as Rule 1113 cannot be less stringent than the SCM. The SCE is intended to be for small niche applications and for touch up; it is not meant as a means of avoiding safety valve for the VOC limits. Staff is always open to inquiries or requests to carve out niche categories where necessary, so if a new technology is developed that legitimately needs a higher limit, this can be accommodated.

As for delaying the proposed phase out of the SCE until the higher fees go into effect, staff delayed the implementation date of the higher fees (but not the lower fees) based on feedback from industry to wait until the phase out of the SCE went into effect. Staff is no longer proposing to amend the fee rate in Rule 314 at this time.

Staff acknowledges the emissions from architectural coatings have been decreasing but PAR 1113 still must achieve the reductions that were committed to in the 2012 AQMP. In the case of the clear wood finishes, the exponential increase in sales was the basis for eliminating the SCE for that category. In the case of RPCs and Nonflats, the large volume of sales and the currently available compliant coatings is the driver for the change. The SCE makes up 1% of the current coatings sales, but represents 23% (this number increased from 2013 - 2014) of the emissions from coatings.

In regard to rule circumvention, as previously mentioned, enforcement staff cannot be at all job sites at all times. Further, the enforcement staff finds examples of rule circumvention that could not have been foreseen, such as the empty labeled quart containers used with high VOC content gallon containers. A contractor was emptying a high VOC content gallon container into quart containers in order to comply under the SCE.

As for the SCE being available as an alternative option, there is precedent for eliminating the exemption as was done for clear wood finishes in 2006. The proposal is not to eliminate the exemption for all categories at this time, but to restrict the exemption for categories using it for large volume sales, for categories that do not use or need it, and for small niche categories where there is already a high-VOC limit allowed. Staff has proposed further limiting the SCE in the past, (as recently as during the 2011 amendment) so this proposal is not counter to our historical position.

*Response to comment 7-4a*

It is staff's position that since the SCE is only being used for very small quantities for flat coatings, the exemption and flexibility is not needed.

*Response to comment 7-4b*

Staff investigated the coatings reported under the Nonflat high gloss category, including those used as 'Door, Trim, and Cabinet', and found many that 94% of those products meeting the current VOC limit of 50 g/L. ~~Based on the compliance rate,~~ Staff found no justification to carve out a higher VOC category for 'Door, Trim and Cabinet' coatings, because the product could be easily used in a non-compliant manner. Currently, Nonflat high gloss coatings are sold and used for a variety of surfaces such as steel, aluminum, wood, drywall, and brick. There is no explicit way to distinguish a difference between the application on 'Door, Trim and Cabinet' compared to other surfaces. Even if a manufacturer were to document or label the product it is difficult to enforce, because staff cannot be at every job site and verify its application. As for the Nonflat category as a whole, they are second only to RPCs in the sales volume of coatings sold over the VOC limit and third highest in emissions, based on the 2013 Rule 314 sales data. There were over 100,000 gallons of non-compliant Nonflat Coatings sold in 2013. The high sales volume is the reason staff is proposing to phase out the exemption for Nonflat Coatings.

*Response to comment 7-4c*

As indicated in response to comment 6-2, the proposal to restrict the SCE for IMCs is based primarily on potential rule circumvention and ~~not for the as well as for~~ emission reductions. Staff has accommodated the requests from industry to allow for the sales of one liter or small containers above the VOC limit for touch up of factory applied coatings, provided they are not sold at a retail outlet. The question of what it entails to be sold at the retail outlet has come up before in regard to local manufacturers who produce or store coatings over the VOC limit for shipment to other jurisdictions. This practice has been allowed provided evidence can be shown that coatings supplied, sold, offered for sale, marketed for sale, manufactured, blended, repackaged or stored in the SCAQMD are for shipment outside of the SCAQMD. A similar principle can be applied for sales at a retail outlet; the high-VOC IMCs sold under the SCE can be on site and sold at a local retail outlet as long as they are not displayed on the retail shelf or advertised for sale. Staff addressed this comment by rewording the restriction to indicate the products cannot be displayed or advertised for sale at a retail outlet. The coatings cannot be displayed on the shelves but could be made available for touch up use only by storing them behind the counter or as a special order.

*Response to comment 7-4d*

Please see the response to comment 3-12 and 4-2 for further discussion on the performance testing of RPCs.

Feedback from the segment of industry who produces solvent based RPCs indicate the exempt solvent based products work just as well as conventional solvent based products. Feedback from manufactures who produce waterborne RPCs, indicate that their products are as good if not better than solvent based RPCs. Staff can find no technical or performance reason to keep the SCE for RPCs, other than the profit

margin argument. Staff acknowledges the exempt solvent technology will be more expensive to produce; this is an issue that many other segments of industry have faced. Industry pursued the inclusion of exempt solvents in Rule 102 – Definitions, as a tool for lowering the VOC content of coatings, even with the associated higher costs. Parachlorobenzotrifluoride (pCBtF, commercially available as Oxsol-100) is an expensive solvent compared to conventional solvents (around \$2/pound versus less than \$1/pound for mineral spirits). ~~However, there are~~ Another options available, including is one from TBF Environmental Technologies (certified under the Clean Air Solvents (CAS) protocol as less than 25 g/L), as a replacements; ~~however, it is more expensive than~~ for conventional solvents.

Staff already demonstrated ~~that~~ low-VOC RPCs perform as well as their higher-VOC counterparts in the technology assessment conducted in 2005 by UMR (Final Report “Architectural & Industrial Maintenance Coatings Technology Assessment.”, 2006). Industry, academia, a contractor, and other regulatory agencies were included in the design of the test as well as the selection of the coatings. This study was presented and accepted by the Governing Board prior to the 100g/L VOC limit being adopted.

Staff is not confusing IMCs with RPCs. The restriction of the SCE for IMCs is to prevent rule circumvention through “creative marketing”. As for the need for surface preparation, there is nothing in the definition of a RPC that indicates they only include coatings requiring no surface preparation and surface preparation is a reasonable part of a coating operation.

In response to freeze thaw, this is not a major concern in the SCAQMD. In fact, based on feedback from Recycled Coating manufacturers, coatings collected through PaintCare or house hold waste collections that are up to 15 years old are still acceptable raw material for their products. If there were freeze thaw issues, these coatings and the newer low-VOC and near-zero-VOC coatings would not be viable.

ACA states that they support the comments provided by Rust-Oleum, which includes lowering the VOC limit on PSUs. However, the ACA’s letter also indicates that lowering the VOC limit for PSUs is a problem for industry.

*Response to comment 7-4e*

Please see the response to comment letter 5.

*Response to comment 7-4f*

Please see the response to comment 3-11.

*Response to comment 7-5*

Staff included a phase in date of January 1, 2017 for the colorant labeling requirement,

*Response to comment 7-6*

Please see the response to comment 3-7. Staff extended the effective date to January 1, 2019 to allow for more time for any remaining high-VOC coatings to be recycled. ~~work their way through the system.~~ During this time, more lower and zero-VOC coatings will become available for recycling to offset the occasional high-VOC product. Staff does not believe that there will be an increase in waste or cost associated with the manufacture of Recycled Coatings and received overall agreement from the local Recycled Coating manufacturers on the proposed change.

*Response to comment 7-7*

## Final Staff Report Proposed Amended Rule 1113

The 50 g/L VOC limit that is in proposed amended Rule 1113 was based on feedback received from the building envelope manufacturers. In addition, staff evaluated the building envelope coatings that are currently being offered for sale in the SCAQMD. Staff found that all but three meet the future limit; of those three two do not meet the current limit and therefore are not legal to sell in our jurisdiction. Those three coatings need to be reformulated to be compliant with the future VOC limit effective January 1, 2019, and two of the three need to be removed from our jurisdiction until they are reformulated to meet the current 100 g/L limit.

### *Response to comment 7-8*

Please see the response to comment letters 1 and 2.

*Response to comment 7-9*

Staff supports the concept of transfer efficiency in the form of a Best Practice Guidelines and a training/certification program to further reduce the emissions inventory from architectural coatings, but it is not a substitute for lowering VOC content. Staff will commit in the resolution to develop a Best Practices Guideline and training opportunities to improve transfer efficiency. As this program matures, staff will work on including enforceable provisions in Rule 1113 in the future.

*Response to comment 7-10*

SCAQMD laboratory staff is working with the USEPA to validate M313 and determine an acceptable precision and bias statement for the method. Staff will continue to keep industry involved during this process by holding quarterly meetings with interested stakeholders. The precision and bias study will meet the USEPA requirements, which may or may not ~~include~~ require a round robin study. SCAQMD laboratory staff is not in favor of using the M6886 round robin results as the equivalent of M313, although, a strong correlation has been shown between the two methods, as M313 differs because it contains significantly more quality control requirements. Staff has concerns about conducting another round robin specifically for M313 as no laboratories are currently performing the method. Staff is not confident that laboratories will significantly change their analytical procedures to reflect the extensive quality control requirements in M313. The USEPA and the SCAQMD laboratory intend to conduct a small scale, blind, round robin in order to evaluate laboratory to laboratory precision and will work with industry on selecting the laboratories and the coatings that will be tested.

Based on subsequent conversations regarding the suggested matrices for the exclusionary method, staff concluded that there was a misunderstanding regarding the suggested matrices. The Flat, Nonflat, and resin matrix concepts were intended for the exclusionary spiking study and not the precision and bias study.

Upon USEPA approval, staff commits to using the ASTM D 6886 round robin study until the validation of Method 313 is completed.

*Response to comment 7-11*

M313 has historically been used for a variety of samples, including the CAS samples, which do not reach a stable weight in the oven during a M24 analysis. The majority of work that has been conducted thus far is to address the largest deficiency in M24, which is the lack of precision for high-water, low-VOC samples. That is what the work has focused on. Staff agrees there is a small subset of coatings that may benefit with a TGA method. A TGA method would be easier than the GC method. That said, ASTM E1868 was developed for metal working fluids, which have a limited service life. The time and temperature parameters (110 minutes versus 60 minutes, but at 81°C instead of 110°C) are much less stringent than M24 and will not result in equivalent results. Staff will commit to working with industry and the USEPA on these non-film forming coatings to develop an appropriate test method. Staff is open to the concept of a TGA method with equivalent parameters and results to M24.

*Response to comment 7-12*

Staff will include a resolution to continue to work with industry and the USEPA to consider if certain amines should be excluded in the VOC calculation. Staff agrees the current exclusionary method is only meant for ~~non~~ non-reactive compounds.

Staff agrees only a limited number of compounds have been tested in the proposed spiking method. Those results agree with the previously conducted film extraction testing that found few if any compounds were

retained in the film. For the spiking method, staff focused on those compounds that were slightly retained or not retained in the previous studies. The concept behind the exclusionary method is industry will conduct the test of the compounds of interest and present their results to the SCAQMD and USEPA for consideration and validation. The oils that are not measured as VOCs, include non-methoxylated bio-based fats and oils such as linseed, canola, soy, olive, grapeseed, tung, and safflower oils as well as fats such as beef tallow and pig lard. Essentially, if these oils are injected into a GC, they never elute. Staff will dedicate a webpage on the SCAQMD website on this work and the conclusions of the work, including references to excluded compounds and the methods used to demonstrate a compound should be excluded.

Staff agrees to change the screening step to less than or equal to the vapor pressure of MP.

Staff disagrees with the suggestion that tetraethylene glycol (EG4) should be used as a surrogate for MP in the spiking method. Although staff agrees the neat properties of EG4 are closer to MP than DBP, all the work conducted during this method development has shown compounds behave very differently neat than when in a fully formulated coating. The original goal of all this work was to demonstrate equivalency between M24 and M6886. Equivalency can be demonstrated by showing the compound does not leave the film during a M24 analysis. The work thus far, shows that EG4 does leave a paint film while DBP does not leave to a significant extent. Of all the compounds studies so far, EG5 stays in the film to the greatest extent and would serve as a better surrogate than EG4. EG5 is 95% non-volatile, hence, it is not recommended to be considered as a VOC. Therefore, using EG5 as a surrogate demonstrates a compound is not a VOC if it is retained in the paint film when spiked at 1%, 3%, and 5% in a coating under M24.

Staff will include the excluded compounds on the SCAQMD website once the USEPA has approved the procedure and results. For compliance purposes, when EG5 is detected in the sample during a M313 analysis, it will not be included in the VOC calculation.

*Response to comment 7-13*

Staff is in discussions with the USEPA on this concept of reducing the emission inventory for architectural coatings to account for un-used coatings. Any data provided by the ACA would be helpful; thus far this has only been a concept with no data to back-up the claims of 10% in un-used coatings. Any coatings that are not recycled by PaintCare are assumed to end up at a landfill. Emissions from coatings in landfills are assumed to have evaporated and volatilized. Although the coatings may be “un-used”, the emissions are still being released.

*Response to comment 7-14*

Staff agrees the publically searchable database will be a great resource for end users, contractors and specifiers to find compliant and super-compliant coatings sold in the SCAQMD, but does not think it will lead to permanent and enforceable emission reductions. Staff is working on a mechanism to allow manufacturers to flag products that are being discontinued, such that they are not displayed.

*Response to comment 7-15*

Please see the response to comment 3-1.

*Response to comment 7-16, 7-17, 7-19, 7-20, 7-21,*

Staff concurs with these comments.

*Response to comment 7-22*

This comment will be considered in the rule making process for Rule 1161.

*The following are comments from Sherwin Williams – Comment Letter #8.*



Comment Letter #8

**SHERWIN-WILLIAMS.**

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Corporate Headquarters  
101 Prospect Avenue NW  
Cleveland, Ohio 44115-1075

Wednesday, September 09, 2015

SCAQMD HEADQUARTERS  
21865 Copley Drive - Diamond Bar, CA 91765  
SCAQMD PAR 1113 VOC Test Method Comments

The Sherwin-Williams Company (Sherwin-Williams) appreciates the opportunity to comment on Rule 1113. Sherwin-Williams supports the comments filed by the American Coatings Association. Sherwin-Williams would also like to address issues regarding use of Method 313 as the analytical method for volatile organic compounds (VOC) compliance used by the SCAQMD for Architectural and Industrial Maintenance (AIM) coatings. Sherwin Williams believes that the SCAQMD is generally applying Method 313 for the correct reasons. However, there are important facts that clearly indicate the method is not appropriate for use when measuring VOC from certain coating technologies employed in AIM coatings regulated by Rule 1113.

It is widely recognized that EPA Method 24 (M24) is increasingly antiquated and unreliable for determining the VOC content of products containing: 1) significant amounts of semi-volatile materials when tested for volatile content under ASTM D 2369 Standard Test Method for Volatile Content of Coatings and 2) increasing amounts of water in lower VOC formulations (i.e., <150 g/L material).

The SCAQMD has developed Method 313 Determination of Volatile Organic Compounds (VOC) by Gas Chromatography/ Mass Spectrometry/ Flame Ionization Detection (GC/MS/FID) to address shortcomings related to M24. Method 313 (M313) is similar to ASTM method D 6886; however, we understand that M313 is considered more robust for enforcement purposes by the SCAQMD.

Sherwin-Williams agrees that M313 is an appropriate analytical method for most AIM formulations containing water and having a material VOC of 150 g/L or less. However, the District has neglected to address certain materials that are subject to Rule 1113, which do not achieve reproducible and defensible analytical results sufficient to support an enforcement action using M313. The problematic materials are semi-volatile, complex hydrocarbon mixtures containing a wide range of relatively high carbon number compounds (e.g., C15 – C50) that straddle the endpoint quantitation marker of M313 (methyl palmitate), itself a semi-volatile compound.

### **When will Method 313 be used?**

Here is an excerpt from the Draft M313 version 2013.

*"Method 313 applies to materials such as paints, coatings, solvents, and other liquid/dispersed-solid materials containing less than 150 g/L VOC material as measured by SCAQMD Method 304-91 or Environmental Protection Agency Reference Method 24 (EPA M24). It may also be used for materials which do not reach a stable weight by EPA M24, with a demonstrated additional weight loss of greater than 0.2% absolute or 3% relative difference (whichever is greater) after one additional hour of oven heating. "*

Please note the assumption that Method M313 is intended to be used on coatings that are 150g/L or less VOC. Under the above referenced scenario, M313 may be used anytime a stable weight under M24 is not achieved, even if the VOC is not 150 g/L or less. There is no basis for this application of M313, and it ignores the District's own actions to the contrary. In fact, instability of weight loss for certain coatings using M24 is a good indication that a different method should be used, but the use of M313 is not appropriate, accurate or even reproducible for certain coatings technologies.

The following examples are designed to highlight the shortcomings of using M313 as the only other method to be employed besides M24, as described in the M313 preamble.

#### **Example 1**

Efforts by South Coast to develop an appropriate protocol for measurement of VOC content of semi-volatile, complex hydrocarbon mixtures during the rulemaking to amend SCAQMD Rule 1144 Metalworking Fluids and Direct Contact Lubricants resulted in development, validation and approval of ASTM E 1868 Standard Test Method for Loss-On-Drying by Thermogravimetry, which was selected by District Staff for inclusion in Rule 1144, along with ASTM D 4017 for water content and SCAQMD Method 303 for exempt solvent content. Although work was also done to develop a chromatographic method, SCAQMD Method 313-L Determination of VOC Hydrocarbon Compounds in Lubricants (a modified version of Method 313), Method 313 did not achieve the agreed upon validation criteria and was not included in Rule 1144.

#### **Example 2**

The District's proposal for the aforementioned revisions to Method 313 (released 8/14/13) includes a provision in Section 1.0 Scope and Application that makes Method 313 applicable to materials containing less than 150 g/L VOC material as measured by Method 304, including materials that do not reach a stable weight by ASTM D 2369, behavior that is typical of semi-volatile compounds and mixtures used in architectural coatings. Some of these products are similar to the complex hydrocarbon mixtures found in metalworking fluids and direct contact lubricants and are in a carbon number range that will elute numerous compounds both prior to and after the quantitation endpoint marker (methyl palmitate), making valid results using Method 313 difficult, if not impossible, to achieve (please see example 1).

### Example 3

The District has indicated that form release compounds will be removed from Rule 1113 and regulated under a new rule 1161. Although early in the process, the information provided at the first workgroup meeting indicated that the District is removing these materials from Rule 1113 due to the difficulty in analyzing components commonly found in the form-release agents using M313. Of note, materials used in many form-release compounds are similar or identical to the previously mentioned semi-volatile, complex hydrocarbon mixtures containing a wide range of relatively high carbon number compounds (e.g., C15 - C50).

### Example 4

The District has proposed the inclusion of Method 313 into Rule 1113. Unfortunately Rule 1113 does not address or include the critical issue of when it is appropriate to use Method 313. This approach is flawed since the criteria for appropriate use of Method 313 should be subject to the rulemaking process. By simply referring to Method 313 but not addressing the appropriate use issue in Rule 1113, the District is circumventing due process and avoiding the discussion in a public forum.

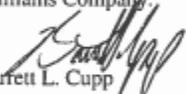
### Example 5

The District has proposed an exclusion pathway concept that is incomplete and not comprehensive. For enforcement purposes, the SCAQMD is required to provide a fair and reproducible method to determine VOC content for its enforcement activities. The exclusionary pathway has not been tested for each different coating technology covered under Rule 1113. Instead, the District is proposing using its exclusionary pathway concept with only a scant three matrices. The District currently does not know if this concept will work until each of the different coating technologies covered by the rule is tested.

### Conclusions

Test methodology that has been validated and is capable of meeting data quality requirements is critical for determination of compliance status and for enforceability of Rule 1113. The District has an obligation to provide manufacturers with appropriate test methods for determining compliance of products with the District's VOC rules. The methodology(ies) must be robust and reproducible. Accordingly, we strongly recommend that the District establish ASTM E 1868 as the method for determination of volatile content when an architectural coating or associated raw material does not reach stable weight as defined in draft Method 313 and the individual compounds contained in semi-volatile mixtures elute both before and after methyl palmitate. Run conditions for ASTM E 1868 should remain the same as those required by Rule 1144 (81°C for 110 minutes) since results of the District's research on non-volatile, semi-volatile and volatile organic compounds at 81°C for 110 minutes most closely replicates ambient evaporation under extreme conditions (40°C for six months).

Thank you in advance for your attention to this matter as it is very important to The Sherwin-Williams Company.

  
Barrett L. Cupp  
Director of Product Compliance

*Response to comment letter 8*

Staff appreciates the support from Sherwin Williams for including M313 and M6886 in Rule 1113 for low-VOC coatings containing high water content. Those coatings represent the largest volume of coatings where M24 loses precision. There is a much smaller volume of coatings that have issues with SVOCs. The vast majority of coatings samples received by the SCAQMD laboratory reach a stable weight when analyzed by M24, most exceptions are outside of the architectural coatings world, such as the CAS Certification Program where many bio-based oils are submitted for testing. Staff has come across form release compounds, some of which are also formulated with almost 100% bio-based oils. The laboratory staff has a long history performing M313 on CAS samples and this is the most accurate method for their analysis.

The analysis of very complex hydrocarbon mixtures by ~~GCgas chromatography~~ is a time-tested procedure, as exemplified by:

- **ASTM D2887 Standard Test Method for Boiling Range Distribution of Petroleum Fractions by ~~GCas Chromatography~~ (55°C to 538°C) ASTM D 6352 Standard Test Method for Boiling Range Distribution of Petroleum Distillates in Boiling Range from 174 °C to 700 °C by ~~GC Gas Chromatography~~.**
- **EPA SW-846 Method 8015B Non-Halogenated Hydrocarbons by ~~GCas Chromatography~~, applicable to gasoline range organics (GRO) and diesel range organics (DRO).**

These and similar methods are routinely used by the petroleum industry, regulatory bodies, and consulting laboratories for analyzing complex hydrocarbon mixtures over large carbon-number ranges, with good repeatability. There is no technical reason why complex hydrocarbon mixtures cannot be analyzed by ~~GC Gas Chromatography~~ with reproducible and defensible results, since similar methods are used regularly for enforcement and commercial purposes. In reality, the highest carbon numbers addressed by M313 is between C19 and about C20, since that is where the chromatographic cutoff point exists.

Example 1: Not including M313 in Rule 1144 – Metalworking Fluids and Direct-Contact Lubricants. This was not due to issues with the validation criteria, but because of the lack of participation by industry laboratories. In fact, there is no way to determine if M313 meets the criteria or not, due to the lack of completion by several laboratories which had expressed an interest in participating and received samples. The inter-laboratory was designed using ASTM protocol and without a sufficient number of participating laboratories, a final ASTM-type statement of repeatability and reproducibility could not be determined.

Example 2: Please see response to Example 1. Also, please note the range of hydrocarbons that will be encountered in M313 is not the overly broad characterization, but is limited from C6 to no more than C20.

Example 3: The proposal to remove form release compounds from Rule 1113 has nothing to do with the VOC test method; staff would not propose to remove a category because a test method was inadequate. Staff is developing Rule 1161 – Release Agents to address multiple release agents that are currently

unregulated. Because Form Release Compounds and Bond Breakers serve a purpose that is more in line with proposed Rule 1161, staff is proposing to remove them from Rule 1113. Staff is open to finding a faster and simpler test for evaluating certain form release compounds, but M313 works for these complex matrices. During the method development in 2011, laboratory staff evaluated a form release compound that was a petroleum oil with less than 2% water by M313, M24 and the less stringent ASTM E1868 and found the following:

	VOC (g/L)		
	M313	M24	E1868
<b>Oily Form Release Compound</b>	200	230	60

The relative agreement between M313 and M24 and significantly lower results for ASTM E1868 demonstrates staff’s concern over using this method, which was developed for metal working fluids and lubricants.

Sherwin Williams repeatedly alleges, without evidence, M313 is irreproducible for SVOCs. And yet clearly, many gas chromatographic methods are employed today to analyze even more challenging carbon ranges than those under M313’s applicability. For example, the ASTM “simulated distillation” GC methods, used to characterize boiling range and other crude oil and product properties, applies to boiling ranges from 55 to 538 degrees Celsius (ASTM D2887) and carbon numbers from C10 to C90 (ASTM D6352), which is far beyond the range of M313.

Example 4: The statement of the range of samples which can be reasonably analyzed by the subject method is found in the “applicability” section of all methods, including USEPA and ASTM procedures. The “applicability” section of M313 is being developed with the full review and participation of interested parties, including Sherwin Williams. The SCAQMD welcomes their comments to improve the method.

Example 5: The SCAQMD is providing a reproducible method for enforcement of VOC content, which is Method 313. Any exceptions to the method are for industry to petition to the District and the USEPA. The District is simply trying to provide a reliable procedure which will generate sufficient data, of reasonable quality, by which exceptions can be petitioned and evaluated by regulatory bodies.

The work on the exclusionary method began because industry had concerns M313 was not equivalent to M24. All of the work conducted thus far has shown that M313 is consistent with M24 and all, but maybe one of the 100 compounds industry cited as compounds of concern have been shown to leave the paint film, e.g. what is measured as a VOC in M24 is measured as a VOC in M313. The SCAQMD and the USEPA will continue to work with industry as the last remaining details are worked out and both Methods 313 and 319 (the exclusionary method) are validated. The SCAQMD does not intend to test every possible matrix or coating to demonstrate if a compound should be excluded. The concept of the exclusionary principle is to test several representative matrices that are recommended by industry and approved by the SCAQMD and USEPA, and make a determination if the compound leaves or stays in the paint film. The concept was never intended to exempt specific compounds from specific coating formulations as this would be extremely complicated and burdensome on both the regulated community as well as the regulating agencies. As stated above, the concept was for the SCAQMD to develop a protocol for industry to use to validate if a compound should be excluded, the SCAQMD never intended or committed to test every possible matrix; this would be an endless task. In fact, throughout this process, the SCAQMD tried to put the burden of developing a test method on industry but very little work was produced, other than the extensive work conducted at Cal Poly SLO. From the point of view of the SCAQMD, setting the endpoint at MP resolved the analytical uncertainty with M313 and solved the issue of equivalency. The SCAQMD was open to

addressing industry's concerns about SVOCs and has spent at least two years intensely studying this issue. Methods 313 and 319 will address the vast majority of the volume of coatings sold where M24 loses precision. No analytical method is going to resolve every possible scenario, but what has been developed is a great improvement over the status quo. Using ASTM published repeatability and reproducibility values attached to the competing methods, there is a point where M24 becomes less accurate than the M6886 GC method for water-reducible coatings. This has been studied and calculated many times by the ASTM committee. Therefore, ~~and it is time to~~ staff advocates moving forward and adopting these test methods.

Lastly, ASTM E1868 has been seen to be far less stringent than M24 (the national standard) when determining VOC of semi-volatiles. The USEPA does not allow method changes that significantly reduce stringency of enforcement. The differences in results between the ~~ASTM-method~~ E1868 and M24 are dramatic; a point which staff will bring to the USEPA. Laboratory staff has run several samples by all three methods (M24, M313, and ASTM d1868), which showed that, for samples containing SVOCs, ASTM D1868 has produced significantly lower VOC results than the other two methods.

Unlike ASTM E1868, M313 was evaluated against M24. In addition, the cutoff embedded in M313 is consistent with the dividing line used by modelers to distinguish VOC from SVOCs. In addition, the proposed method ASTM E1868 itself is subject to another flaw which is that it cannot reliably analyze the VOC content of samples which contain water in anything other than trace levels. Upon USEPA approval, staff is open to the development of a TGA method that is equivalent to M24 as this could serve as simpler method for the analysis of a small sub-set of architectural coatings (non-film forming samples containing trace amounts of water). This would serve as a time and cost saver for both industry and regulatory agencies, but not because M313 is not an appropriate VOC test method.

*The following are comments from the Roof Coatings Manufacturers Association – Comment Letter #9.*



www.roofcoatings.org

Comment Letter #9

September 11, 2015

Ms. Heather Farr  
Office of Planning, Rule Development, and Area Sources  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

**RE: SCAQMD Proposed Amended Rules 1113 and Rule 314 on Architectural Coatings and Fees**

Dear Ms. Farr:

The Roof Coatings Manufacturers Association (RCMA) and its member companies appreciate the opportunity to provide the following comments on the issues discussed at the August 26, 2015 South Coast Air Quality Management District (SCAQMD or the District) Rules 1113 and 314 meeting, and VOC Workgroup meeting. RCMA wishes to convey to SCAQMD Staff our position, in order to find a reasonable solution on the proposed regulations and the clean air benefit.

RCMA appreciates SCAQMD Staff's willingness to explore regulatory and non-regulatory options to achieve VOC emissions reductions to satisfy its commitments from the 2012 Air Quality Management Plan (2012 AQMP) for the South Coast Air Basin. Furthermore, we support these efforts and welcome the opportunity to continue discussions with the District.

**Background on the Roof Coatings Manufacturers Association**

For over 30 years, RCMA has served as the national trade association representing a large majority of the manufacturers of asphaltic and solar reflective roof coatings and the suppliers to the roof coatings industry. Roof coatings protect commercial and residential roofs against water, chemicals, and physical damage. This can extend the life of the roof system, reducing building-owner costs and tear-off waste. Roof coatings have numerous benefits to energy use and the environment. Reflective roof coatings lead to lower roof temperatures, which in turn reduce the Urban Heat Island Effect, air conditioning costs, and peak energy use. The vast majority of RCMA member companies are family-or employee-owned, privately held small businesses. One of RCMA's primary roles is to translate complex regulatory language into actionable easy to understand directives and information pieces for its members that improve compliance with these regulations.

Over the last few decades, ninety percent of VOC content has been eliminated from roof coatings. Of significant concern to RCMA members are the ever-increasing regulations governing volatile organic compounds (VOC) in coatings. VOCs are contained in roof coatings for several reasons. Solvent-based coatings can be used as an alternative to waterborne technologies; especially where freeze/thaw resistance and product application and storage in cooler climates or in winter months is required. VOCs are used to dissolve solids to keep coatings in a liquid phase, allowing for them to be applied prior to the solvent flashing out and the product curing to form a solid layer. Furthermore, coatings may be formulated with VOCs because of the solvents' ability to soften the substrate that the coating is being

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applied to, improving the application and ultimate performance of the coating. As VOC content limits are lowered in different roof coating architectural and industrial categories, the effectiveness of the product is compromised.

**Proposed Definitions**

RCMA appreciates the proposed revisions and edits made by SCAQMD during the working group meetings. Below are suggested revisions for further clarification and to minimize confusion:

9-1

**A. Roof Coatings**

RCMA and its members know of the variety of uses and benefits to roof coatings. We suggest *adding* the various uses of roof coatings to round out the definition. Similar to the definition of Driveway Sealers (18), revising the definition of roof coatings to read:

“Roof Coatings are coatings formulated for application to exterior roofs for the primary purpose of preventing water penetration into the underlying surface; or reflecting heat and ultraviolet radiation, or sealing and protecting the substrate or restoring or preserving the surface appearance.”

**B. Mastic Coatings**

RCMA recommends clarifying that the mastic coatings definition excludes roof coatings products. Highly used are references of flashing cement as mastics in the roofing industry, which can lead to regulatory confusion. RCMA suggests adding “excluding roof coatings” to this definition to clarify the difference in products. We recognize that “flashing cement” is regulated under Rule 1168 for adhesive and sealant applications, but feel it’s important to clarify for purposes of the rule definition. Revised, the definition would read:

“Mastic Coatings are coatings formulated to cover holes and minor cracks and to conceal surface irregularities, excluding roof coatings, and applied in a thickness of at least 10 mils (dry, single coat).”

**Industry Considerations**

9-2

**A. Limited Justification for Extensive Changes to Rule 1113**

As mentioned during the Workshop, the District has already met its 2012 AQMP Commitments for the Architectural Coatings Source Category. RCMA commends the District for making reductions that exceed the inventory goals of 2 to 4 tons per day (tpd) for this source category. We believe these efforts, as demonstrated through the downward trend summary from 2008 until 2014, should be celebrated and not to enforce further regulatory action to reduce VOCs from AIM coatings. Preliminary Rule 314 data from 2014 demonstrates that the District has already achieved, and well exceeded, the CTS-01 2019 targets of 12.2-14.2 tpd by over 2 tpd for the source category. Therefore, the District should consider other source categories to reduce VOCs.

9-3

**B. Incorporation of Rule 314 Fee Rate in SCAQMD State Implementation Plan**

RCMA supports the SCAQMD's efforts to include Rule 314 in the District's State Implementation Plan (SIP) to validate and track volatile organic compound (VOC) emissions from architectural and industrial maintenance (AIM) coatings and demonstrate attainment with the South Coast Air Quality Management Plan's VOC emissions reductions targets.

As mentioned above, SCAQMD is exceeding tpd goals for the AIM source category. To ensure the District is accurately tracking Rule 314 data and meeting its SIP commitments, we recommend good faith measures to assist the timely manner that manufacturers report VOC product emissions. These good faith measures or incentives could be to waive the application fee of \$187.85 for low-VOC products, or the standard evaluation fee for the following year.

9-4

**C. Exempt Compounds**

The District should fully exempt tertiary butyl acetate (TBAC) and di-methyl carbonate (DMC) to be consistent with the Environmental Protection Agency. TBAC was exempted for industrial maintenance coatings after SCAQMD staff conducted a very conservative risk assessment and found that TBAC-based coatings would not pose a health threat. DMC has successfully been used in a number of coatings formulations. An exemption for DMC would provide another useful tool for formulators. DMC is VOC exempt in almost all areas of the US except the South Coast. We suggest that the District exempt both compounds for industrial and architectural coatings.

9-5

**D. Building Envelope Coatings**

RCMA does not support lowering the Building Envelope Coating limit. This is a new category with lack of accurate sales data by CARB and SCAQMD. In a similar fashion to the product sale data, SCAQMD should spend a few years gathering accurate data to determine if this category should be reduced.

Considering the substantial cost associated with the testing of air barriers, or building envelope coatings, the District should reconsider this category. Industry estimates show that reformulation and retested by the three test methods defined in the category definition will cost of approximately 30-40¢ per product.

**Test Methodology**

9-6

**A. Method 313 and Incorporation of ASTM D6886 Precision Statements**

RCMA is concerned by the unfamiliarity of other labs in conducting Method 313. To date, the District has only evaluated the internal precision of Method 313. This evaluation of three operators using the same piece of equipment resulted in an error band of 5 g/l material VOC. While RCMA believes the District has made great progress with Method 313, we are concerned with how other labs conducting Method 313 will compare to the SCAQMD results. This information is especially critical for coatings manufacturers since they need to know how far below the regulatory limit they need to formulate to account for precision differences between their testing equipment and the District.

Additionally, the preparation of "validation" of Method 313 by EPA Method 301 "Field Validation of Pollutant Measurement Methods from Various Waste Media" is a concern.

9-6  
cont.

Especially, when the assessment of validation is derived via external "interlaboratory" (from lab to lab) precision.

During the workshop, SCAQMD staff spoke highly of ASTM D6886 as reliable and that they understood that it's more widely used in laboratories for manufactures. However, the District will not consider a suggestion by the American Coatings Association (ACA) to use ASTM D6886 precision statements for measuring volatility compared to Method 313. This is highly confusing to RCMA and we agree with ACA on this issue. We understand that for reporting purposes ASTM D6886 is an accepted test method - however, should a product be pulled from the shelf and tested, it will be via Method 313. There is no uniform measurement if the results between a manufacturer utilizing D6886 and the results from Method 313 differ, especially if obtained by the SCAQMD laboratory. Furthermore, there are no other third-party laboratories that the manufacturer can test a product for volatility via Method 313. Without some concession on the incorporation of precision statements from the more universally accepted method ASTM D6886, we fear there will be a comparison of apples to oranges during the regulatory enforcement and lead to more complications of compliance.

Further on page 15 of the Staff report, the District cites, "for compliance purposes, [the District] will provide a guidance document to explain the differences between the two methods such that a manufacturer utilizing D6886 will be aware of how their results could differ from results obtained by the SCAQMD laboratory". And, the presentation on August 26 provided the key similarities, key differences, and required changes to D6886 that would need to be made to make D6886 similar to Method 313. However, this does not solve the concern if manufactures are allowed to report of VOC emissions via D6886, but not accepted if submitting a rebuttal to a Notice of Compliance – cited by SCAQMD laboratory results via Method 313. RCMA once again, agreed with ACA and suggests that the D6886 round robin precision statements be accepted, and they are the only data we have that can answer this key compliance question.

9-7

**B. Exclusion Pathway**

RCMA appreciates the time and effort that the District has committed to developing an exclusion pathway. And, we suggest that the District's choose an appropriate surrogate that would have the same volatility as methyl palmitate, not dibutyl phthalatae. The purpose of the exclusionary pathway is to determine whether or not a compound or complex hydrocarbon mixture is less volatile than methyl palmitate. Dibutyl phthalate appears to have a significantly lower vapor pressure than methyl palmitate. Therefore, we suggest selecting a surrogate with the same volatility as methyl palmitate.

**Conclusion**

RCMA and its member companies are dedicated to developing products that minimize negative impacts on air quality while offering coatings with performance characteristics consumers require. We are pleased with the progress that SCAQMD has made to exceed VOC emissions goals, but would like to continue the progress in a feasible manner that does not impact quality of the end-product. RCMA suggests considerations are made for Rules 1113 and 314 on the definitions, test methodology, and based on the industry's observations in the field.

The Association appreciates the positive relationships we have built with the South Coast Air Quality Management District and looks forward to continuing collaboration to work toward improved air quality and achievable regulatory activities.

Sincerely,



John Ferraro  
Executive Director  
Roof Coatings Manufacturers Association (RCMA)  
750 National Press Building  
529 Fourteenth Street, NW  
Washington, D.C. 20045

*Response to comment 9-1*

This is the first time staff has heard of this confusion from industry but does not see an issue with the proposed change to the definition of ‘Mastic Coatings’.

*Response to comment 9-2*

Please see the response to comment 4-2 and 7-1.

*Response to comment 9-3*

Staff will continue to work with the USEPA to determine if submitting Rule 314 to the SIP could result in creditable reductions. At this time, staff’s understanding is this will not result in SIP creditable reductions.

*Response to comment 9-4*

Staff will not propose any change to the tBAC exemption until the final, peer reviewed analysis is released in early 2016. Staff is not considering an exemption for DMC primarily due to toxicity concerns, but also because no case was made for the need to exempt DMC. During the year and a half long process, DMC was never a serious topic of concern. Staff is not proposing major reductions to the VOC limits such that DMC is needed.

*Response to comment 9-5*

Staff has evaluated the coatings that are currently being supplied into and within the SCAQMD and all but one of the compliant coatings meet the future VOC limit. Staff does not want to allow time for higher-VOC coatings to enter the market to justify a higher VOC limit. The current sales weighted average of 22 g/L supports the proposed 50 g/L to go into effect January 1, 2019. Further, the manufacturers of these products initially supported the proposed 50 g/L limit.

*Response to comment 9-6*

Please see the response to comment 7-10. As for formulating below the VOC limit to account for the test method, the error bands in place provide a large buffer such that this should not be a concern. It is not uncommon to formulate below the VOC limit to account for batch to batch differences, but switching to a more accurate test method should not be the cause for reformulation. M313 is far more accurate than M24 for low-VOC coatings so, if anything, the coatings can be formulated closer to the VOC limit without the risk of faulty results from the test method. If both methods are performed with proper attention to quality control, the results should be very similar. In staff's participation in the M6886 inter-laboratory (when running our own method), our results were very much in line with the M6886 results. Some reordering of some compounds may occur near the endpoint; however, this is a theoretical possibility not yet demonstrated.

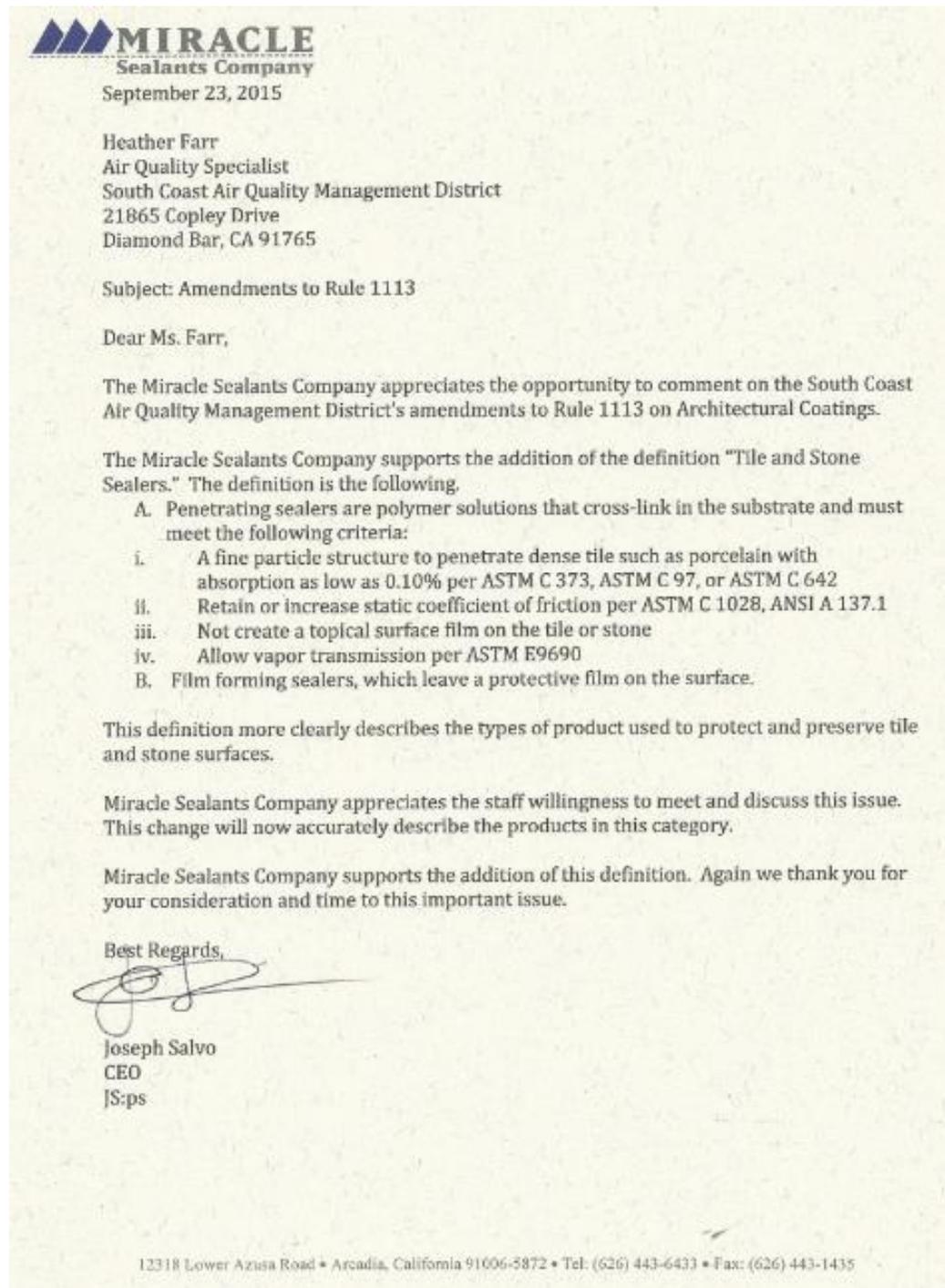
Staff included M6886 in Rule 1113 so manufacturers could rely on those test results for labeling and reporting their VOCs. This is no different than the current rule language that allows for manufacturers to rely on formulation data to report their VOCs. That does not preclude the SCAQMD from using a more similar method with more quality control standards for compliance purposes. It is additional quality control standards that make staff reluctant to adopt the round robin results for M6886. While the SCAQMD laboratory participated in the ASTM round robin for M6886 and their results were close to the median of all the laboratories, the results were not included in the statistical analysis of the error bands because the method was different. During an inter-laboratory study, it is very important the participants all use the same method, otherwise there is not an "apples to apples" comparison, thus our results were merely advisory (to the District) and could not be included in the final ASTM repeatability and reproducibility calculations. Also, since our method includes a tremendous amount of performance checks to minimize critical errors and demonstrate proper operation, M313 should achieve and document superior repeatability and reproducibility. Therefore, the M6886 repeatability and reproducibility results may not apply to M313. The same logic applies to the SCAQMD not wanting to adopt the results of the ASTM round robin.

Differences between laboratory results in the case of an NOV is not a new situation brought on by the inclusion of M6886 and M313. The SCAQMD has had to address these issues in the past either between two laboratories using the same test method (e.g. M24) or between formulation data and laboratory results. Staff will address these situations on a case-by-case basis with the manufacturers and/or the laboratory that analyzes the samples.

*Response to comment 9-7*

Please see the response to comment 7-12. Comparative results depend on how well each method is performed. Without any control over method performance, it is impossible to predict how well the results would compare. This is why we continue to handle comparisons on a case-by-case basis. If both methods are performed accurately, there are two potential sources of difference: 1) M313 uses triglyme to quantify unidentified compounds, which will yield higher results than Texanol (the compound of choice) for M6886. However, since M313 limits the total number of unidentified compounds to 5 g/L or less, the discrepancy should be in the realm of 1 to 2 g/L or less; 2) There is the possibility that some compounds near the endpoint may elute in somewhat different order on the M313 column than on the M6886 column. If compounds are eluting within approximately 10% of the endpoint marker, formulators may wish to confirm comparative compound retention times, which is a one-time test.

*The following are comments from the Miracle Sealants – Comment Letter #10.*



Response to comment letter 10

Staff appreciates the input from Miracle Sealants in crafting the definition and the support letter. Staff has adopted their definition in the rule language.

*The following are comments from Raymond Regulatory Resources – Comment Letter #11.*

Comment Letter #11



**Raymond Regulatory Resources (3R) LLC**

Doug Raymond 5857 Trumbull Rd. Geneva, OH 44041  
[diraymond@req-resources.com](mailto:dிரaymond@req-resources.com) 440-474-4999

September 23, 2015

Heather Farr  
Air Quality Specialist  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

Subject: Zinc Rich Coatings

Dear Ms. Farr,

Raymond Regulatory Resources (3R), on behalf of its clients appreciate the opportunity to comment on the South Coast Air Quality Management Districts amendments to Rule 1113.

First and foremost 3R appreciates the staffs willingness to meet and discuss the issues of the amendments, these meetings are invaluable to being able to work out issues between workgroup meetings.

11-1

There are two issues that 3R will comment on. 3R supports the addition of the Tile and Stone Sealer category. This new definition more appropriately describes products used for protection of these surfaces.

11-2

Next, 3R opposes the inclusion of the Zinc Rich Coating category in the prohibition of sales from retail outlets that is included in the small container amendments for the following reasons:

- Zinc Rich Coating has a specific definition, which is difficult to circumvent.
- Staff has stated that IM and Zinc Rich categories were added to prevent crossover from Rust preventative coatings. Due to the specific definition of Zinc Rich it is unlikely this switch can happen.
- The district never discussed the Zinc Rich category inclusion into the IM prohibition until August 19. This is very late in the process.

11-2  
cont.

- Staffs own calculations show less than 0.01 TPD of emissions reduction from all IM coatings. This emission reductions will be even less for Zinc Rich Coating category.
- There is absolutely no history of the Zinc Rich Coating category being used instead of Rust Preventative Coatings.
- Staff acknowledges that using a small container of IM or Zinc Rich Coatings for touch up is better than recoating the entire surface.
- Zinc Rich Coatings are needed in small containers for touch up and should not be subject to a retail sales prohibition.

Thus, 3R opposes the Zinc Rich Coating inclusion into the prohibition for retail sales. Small containers of Zinc Rich Coatings are used for touchup.

Thank you for your consideration to these issues. If you need further information please do not hesitate to contact me.

Sincerely,



Douglas Raymond

*Response to comment 11-1*

Staff appreciates the comment in support of the proposed definition.

*Response to comment 11-2*

Staff concurs there will not be crossover between RPCs and Zzinc-Rrich Pprimers. ~~This restriction would fit better amongst coating categories not using the SCE.~~ An average of 100 gallons of Zzinc-Rrich Pprimer was sold annually under the SCE since 2008. These are not coatings offered for sale at retail outlets. These products are used for large projects involving structural steel, such as bridge projects, where corrosion is critical. ~~This is not an application where one liter or smaller containers would be useful.~~ Therefore, staff included the Zzinc-Rrich Pprimers in subparagraph (f)(1)(E) to allow the use of small for greater than one liter sized containers for touch up purposes, and as long as they are not displayed or advertised for sale at a retail outlet..

*The following are comments from Cal Poly San Luis Obispo – Comment Letter #12.*

Comment Letter #12



September 23, 2015

Heather Farr  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

Dear Ms. Farr:

I'm writing in support of the inclusion of AQMD Method 313 and ASTM Method D6886-14 as approved VOC measurement methods to be included in the revision of Rule 1113.

Our lab has been at the forefront of VOC method development in the US for nearly twenty years. We developed ASTM Method D6886 and related direct VOC methods.

The addition of these direct methods will at last codify what has been a *de facto* situation for the past several years, mainly the use of direct, gas chromatographic-based methods for analysis of low VOC waterborne coatings. These coatings cannot be reliably analyzed using indirect methods based on EPA Method 24.

I am also writing to support the inclusion of your proposed exclusionary pathway method for semi-volatile materials. This approach will allow for the exclusion of semi-volatile compounds which have been shown to be less volatile than your VOC marker, methyl palmitate. I also support the use of tetraethylene glycol as the surrogate for methyl palmitate in these tests, based on the experimental work I sent you earlier.

Please let me know if you have any questions.

Regards ,

Dane Jones, Ph.D.  
Professor Emeritus

*Response to comment letter 12*

Staff appreciates all the contributions and support to the test method development from Cal Poly SLO. Their contributions have been invaluable to this process and staff is encouraged that all the hard work is coming to fruition as Methods 313 and M6886 are being proposed for inclusion in Rule 1113. There will be further development on the exclusionary principle and the precision and bias analysis. Staff looks forward to further discussions and working group meetings, including discussions on the appropriate surrogate compound for the film spiking method. For further discussion, please see staff's response to comment 7-12.

*The following are comments from the American Coatings Association received after the September 17, 2015 Public Consultation Meeting – Comment Letter #13.*

Comment Letter #13



September 25, 2015

Ms. Heather Farr  
Office of Planning, Rule Development, and Area Sources  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

**RE: SCAQMD Rule 1113/Rule 314 Amendments; ACA Comments**

Dear Ms. Farr:

The American Coatings Association (ACA) would like to provide the following comments on the issues discussed at the September 17, 2015 South Coast Air Quality Management District (SCAQMD or the District) Rule 1113/Rule 314 meeting. We are only addressing specific issues discussed at the September 17, 2015 meeting and incorporate by reference all previously submitted ACA comments on Rule 1113/Rule 314.<sup>1</sup>

Zinc Rich Primers

13-1

ACA requests that the Small Container Exemption be retained for Zinc Rich Primers since for the following reasons:

- a. The District did not propose this change until the very last moment on August 19, so we have not had an opportunity to discuss this issue in depth.
- b. The zinc rich primer category is very specific, so circumvention via this category is highly unlikely.
- c. Zinc Rich Primers are very useful and their sale should not be limited.
- d. District Staff have acknowledged that using Zinc Rich Primers for touch-up applications is preferable to recoating an entire surface.
- e. The District will achieve negligible emission reductions through this change – less than 0.01 tons per day – while imposing a significant burden on manufacturers.

Tub and Tile Coatings

13-2

ACA strongly recommends that the District retain the small container exemption for the Tub and Tile Refinish category since the industry is struggling to meet the 420 g/l limit. As mentioned at the September 17 2015 meeting, during the California Air Resources Board's 2007 Suggested Control Measures negotiations, the industry believed that the 420 g/l limit was achievable, especially since it appeared at the time that TBAC would to be exempted in all California Air

<sup>1</sup> ACA's previous comment letters are dated: July 8, 2015; April 30, 2015; March 10, 2015; January 20, 2015 and September 10, 2015.

13-2 cont. Districts. Unfortunately, TBAC was not exempted throughout California, and several companies are now struggling to meet the 420 g/l limit. Fortunately, these companies can utilize the small container exemption. However, this option will no longer be available in the SCAQMD. While we appreciate the extended compliance deadline of January 1, 2017, we request that the District retain the small container exemption for Tub and Tile coatings, or include a January 1, 2019 compliance date.

Industrial Maintenance Coatings “Not for Retail”

13-3 The District should clarify in its Staff Report and Q/A memo that “not for retail” means that IM coatings may be sold at retail outlet if they are restricted to behind the counter or back room sales, as current policy dictates.

Recycled Coatings

13-4 The District should not lower the VOC limit for Recycled Coatings to 150 g/L since ensuring compliance with this limit would drastically raise the costs of recycling, and reduce the use of recycled coatings by pricing them out of the market. A 150 g/L VOC limit would force paint recyclers to attempt to sort incoming recycled paints by VOC content, which is labor intensive, time-consuming, and not always possible when labels are torn, missing, or obscured by paint. In this case, recyclers would be forced to dispose of more product, thus increasing waste disposal costs. Recyclers would also be forced to submit a sample from every batch for VOC content testing at an independent laboratory, further adding to recycling costs.

A market for recycled paint exists only when the price to consumers is substantially less than virgin paint; every increase in the price of recycled paint reduces its potential market. Finally, the PaintCare program will incur higher costs, resulting in increased costs to manufacturers and consumers. Given these concerns, ACA believe the District should retain the current limit of 250 g/L, which was endorsed by the paint recycling industry specifically because it would not require unnecessary and expensive sorting and testing to ensure compliance, since all latex paints manufactured in the past 30 years have met this limit.

Method 313 and Method 319

13-5a ACA appreciates all the work that staff has done with respect to Method 313 and the Exclusion Pathway. We have the following additional comments:

- A. As discussed at the September 17, 2015 meeting, we are concerned that the internal instrument precision that SCAQMD is considering is different than the external instrument precision we have requested. While the internal precision may be helpful to determine how precise one instrument at SCAQMD may be, stakeholders also need to understand how precise outside lab instruments are compared to SCAQMD instruments. Coatings manufacturers need this information as they formulate products to meet the VOC limits. For example, if the precision between labs was plus or minus 10%, then manufacturers would formulate their coatings slightly less than 10% below the limit to ensure the coating will still meet the limit, including the precision “buffer.”

- 13-5b [ B. We are encouraged that the District is considering referencing the ASTM D6886 precision until EPA approves “internal” precision and bias for Method 313. A simpler path forward would be to designate the current “error band” as internal precision, and permanently designate the D6886 precision as “external” precision.
- 13-5c [ C. We are also encouraged that the District is considering completing a Method 313 round robin with external certified laboratories. We are concerned that the District is only using three laboratories, since ASTM recommends a minimum of six laboratories for a round robin to be representative. If the District decides to use industry laboratories, we can provide industry contacts. Finally, ACA urges the District to use blind samples.
- 13-5d [ D. We appreciate the District’s willingness to specify that the exclusion pathway – new Method 319 – is for unreactive compounds. However, we request that the Staff Report and Board Resolution mention that the District is receptive to additional pathways including a future pathway for Amines.

We specifically request that Exclusion Pathway Flowchart or the scope of Method 319 include the following footnote:

“The exclusionary pathway is intended for unreactive compounds and will need to be amended to correctly classify components such as amines that interact with other components when the paint is being formulated.”
- 13-5e [ E. To clarify “the use of the upper bound of error bar,” we suggest that the District include an error band for methyl palmitate (measured versus modeled) such that compounds with a vapor pressure (either measured or modeled) that resides within this range pass Step 2.
- 13-5f [ F. The compounds that have already been excluded through the method development should be included in the Rule 1113 Staff Report and on the SCAQMD website so that stakeholders can reference this information.
- 13-5g [ G. The District should use tetraethylene glycol instead of dibutyl phthalate as a surrogate for methyl palmitate in the Exclusionary Pathway Flowchart for Early Eluting Semi-Volatile Organic Compounds (Box 3). Dibutyl phthalate appears to have a significantly lower vapor pressure than methyl palmitate, whereas tetraethylene glycol has the same vapor pressure as methyl palmitate and behaves almost identically to methyl palmitate as a neat compound. Tetraethylene glycol is also easier to incorporate into waterborne coatings, especially compared to dibutyl phthalate. Furthermore, tetraethylene glycol is greater than 95% nonvolatile via EPA Method 24. This material should not be considered a VOC. And based on its vapor pressure and volatility, it represents a much better choice for a VOC cutoff marker compound for Method 313 than methyl palmitate, which is not easily incorporated into low VOC waterborne paint. This conclusion is supported by Dane Jones from Cal Poly, and we believe the District should embrace this approach.

13-5h

H. Semi-volatile complex hydrocarbon mixtures, including paraffinic or naphthenic oils, that are used in some non-film forming architectural coatings often do not reach a stable weight via Method 24. Therefore, these compounds should be analyzed by Method 313 even though they may have a VOC content greater than 150 g/l. Unfortunately, as illustrated on slide #8 of the attached SCAQMD presentation from 2012, there are difficulties with applying Method 313 to these architectural coatings since they have a broad molecular weight distribution. The chromatogram on the left side of slide #8 demonstrates how these oils straddle the end point marker of methyl palmitate, which elutes at about 30 minutes. Given this large number of unresolved and, arguably, unresolvable peaks under Method 313 run conditions, valid results are difficult to achieve.

The following procedure should be included in Method 313 to address semi-volatile complex hydrocarbon mixtures such as paraffinic or naphthenic oils that are used in some non-film forming architectural coatings:

“Semi-volatile complex hydrocarbon mixtures (including paraffinic or naphthenic oils) that are used in some non-film forming architectural coatings that (a) do not reach a stable weight via Method 24, and (b) Elute a very large number of unresolved peaks via Method 313 both prior to and after the quantitation Methyl Palmitate endpoint marker, should be tested via TGA utilizing conditions similar to Method 24 (temperature and time).”

Thank you for your consideration of our comments. Please do not hesitate to contact us if you have any questions.

Sincerely,

/s/

/s/

David Darling, P.E.  
Senior Director, Environmental Affairs

Timothy Serie, Esq.  
Counsel, Government Affairs

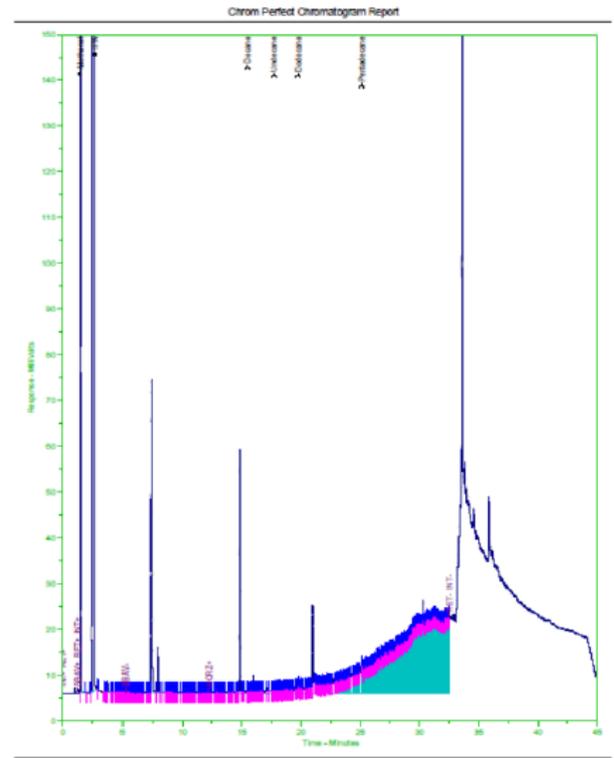
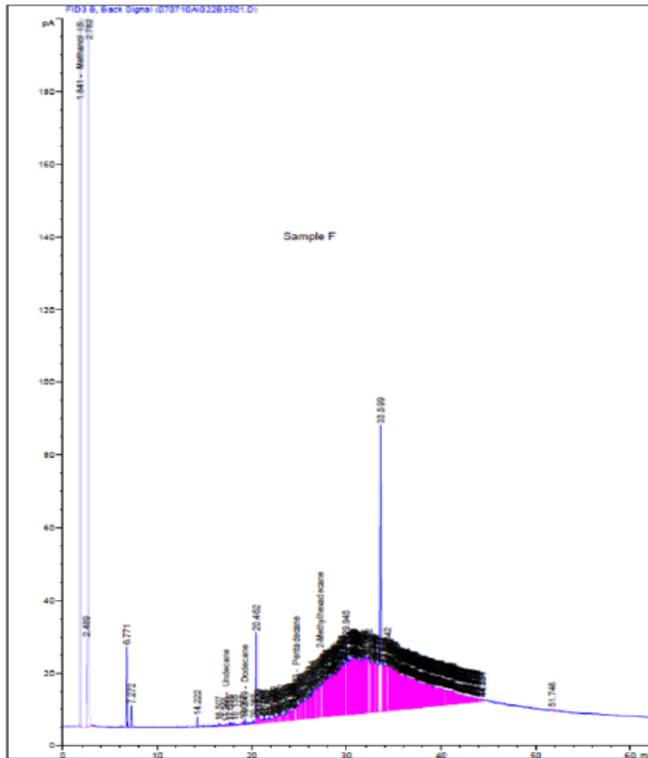
Cc: Philip Fine, SCAQMD  
Jose Gomez, ARB  
Ravi Ramalingam, ARB  
Stan Tong, EPA  
Wienke Tax, EPA

*\*\*Sent via email\*\**

Slide referenced in comment letter 13.

# Test Method Development

## SCAQMD Method 313-L (cont.)



### Response to comment 13-1

Please see the response to comment 11-2.

### Response to comment 13-2

Staff extended the effective date of the change to January 1, 2018 to allow time to reformulate the tub and tile VOC limit that was agreed upon back in 2007.

### Response to comment 13-3

Please see the response to comment 7-4c.

### Response to comment 13-4

Please see the response to comment 3-7 and 7-6.

### Response to comment 13-5a

Please see the response to comment 9-6 and 9-7. Paint formulators should not use the inherent error in any test method to guide their coatings formulation. The manufacturer knows what is added they are adding to

the coatings and should formulate at or below the VOC limit, relying on formulation software. Product formulation data is accepted by the rule for VOC content. Laboratory testing serves as a confirmation of the formulation calculations and as a compliance tool for regulatory agencies. The intent of the establishment of a precision and bias statement is not to allow for formulators to ~~game the system and~~ formulate a certain percentage above the required VOC limits. There is no easy way to ensure laboratory reliability. However, there is actually a tremendous amount of helpful information in M6886, which will screen out serious errors. For example, relative response factors obtained in the implementing lab should be compared to the published table of relative response factors; a significant difference between published and obtained values would indicate instrument problems. The currently accepted test method M24, can vary +/- 100% for coatings that approach zero-VOC; therefore, M313 is included in the proposed amended rule. ~~but this is not a justification for manufacturers to formulate 100% over the VOC limits.~~

*Response to comment 13-5b and 13-5c*

Staff continues to believe that the precision and bias of M313, both internal and external precision, is superior to M6886 due to the increase quality control, and will continue to work with industry and the USEPA to validate the method. This validation may or may not include some sort of round robin, depending on what is required for the validation.

*Response to comment 13-5d*

Staff will incorporate a statement in the Method 319 that the exclusionary method, as written, is for non-reactive compounds, and that reactive compounds such as amines, are still being evaluated. As previously stated, staff is open to reviewing data presented by industry to validate that certain amines react and become part of the paint film. That said, if no compelling evidence is presented, there will be no need to amend the exclusionary pathway; therefore, including a statement the method will be amended is premature.

*Response to comment 13-5e*

Staff has agreed to change Step 2 of the exclusion pathway to less than or equal to MP as previously suggested by industry.

*Response to comment 13-5f*

Staff will include excluded compounds on the SCAQMD website once the write up of the exclusionary method is completed and approved by the USEPA.

*Response to comment 13-5g*

Please see the response to comment 7-12. In addition, the SCAQMD laboratory results do not indicate that EG4 is 95% non-volatiles by M24. EG5 is 95% non-volatiles but EG4 is around 60% non-volatile. The third step for the exclusionary method is whether the compound of interest leaves the paint film and early testing shows that it does. Once the matrices have been selected and EG4 can be tested by the officially accepted test method, staff will issue a conclusion on the status of EG4. At this time, it is premature to state that EG4 should not be measured as a VOC. Initial testing using film extraction performed at Cal Poly SLO showed EG4 leaving the paint film and initial work using the spiking method also showed it leaving the paint film.

*Response to comment 13-5h*

The SCAQMD presentation referenced in the letter discusses the relative merits and difficulties of M24, proposed SCAQMD M313L (a proposed GC method for lubricants and metal working fluids), and ASTM

E1868-10 (the approved TGA VOC method for lubricants and metal working fluids) when applied to lubricants. TGA is not approved by the EPA for paints and coatings. It specifically mentions integration parameters, baseline placement, and endpoint retention times as M313L problem areas, which would also apply to M313 analysis of non-film-formers.

During the technical evaluation of M313L, staff discovered lubricant samples do indeed require special attention to integration parameters, baseline placement, and endpoint retention. The issues arise from - and are resolved- as follows:

- 1) Integration parameters: Lubricants usually elute as nearly-featureless “humps” which are challenging for the automated integration software used with GCs. This is solved by setting integration parameters to be very sensitive to small changes in slope.
- 2) Baseline setting: Lubricants elute over minutes, which obscures the underlying baseline. In order to integrate “to baseline”, a baseline from a previous (blank) run must be applied. This means that baselines must be repeatable, so instruments must be cleaned between injections, and blanks must be injected between samples to monitor baseline drift.
- 3) Endpoint: A few lubricants straddle the MP endpoint at their peak. (Most do not, and some are even bimodal.) Small changes in endpoint retention time could potentially change the final result. Methyl Palmitate is injected with each batch to monitor the endpoint retention time. However, this problem appears to be more theoretical than actual, since retention times rarely shift by more than 0.05 minutes and the estimated VOC changes associated with such a shift would be small. This is a different argument than re-defining the endpoint, which was also a goal of the lubricant representatives.

Proposed SCAQMD M313 addresses all of the issues that were encountered during M313L evaluation. However, SCAQMD laboratory staff has never seen this kind of peak distributions in paints and coating samples, this issue was specific to the lubricant and metal working fluid samples. The heavier hydrocarbons mixtures found in lubricant and metal working fluids would likely never leave the paint film, leaving the films too soft and tacky. The petroleum-distillate fractions in paints and coatings disappear well before the endpoint and are relatively restricted in carbon number.

Other materials which are non-film-forming include methoxylated soy oils, ethoxylated surfactant alcohols (SAEs), dibasic esters (DBEs), phthalates, and various glycol ethers/esters. These materials are analytically straightforward in molecular weights applicable to VOC testing and therefore, can accurately be measured by M313.

As far as TGA is concerned, it has the disadvantage of not being able to directly measure VOCs in samples containing water or exempts. For those samples, determining VOC would once again rely on analyzing for water and/or exempts and subtracting the results from the total volatiles. That approach reintroduces the same M24 problems.

For solvent based samples, TGA has the potential to be a repeatable, low(er) cost method. However, TGA (in its implementation for VOCs of lubricants) produces results that are dramatically lower than either M24 or M313, leading to the conclusion that ASTM E1868, with the specific parameters required by R1144, is far less stringent than either the national standard or the SCAQMD proposed GC alternative.

If TGA is developed as a method for measuring VOCs of non-water-containing samples that do not reach a stable weight under M24 conditions, the results would have to be evaluated to ensure that the test method is at least as stringent as M24. If a TGA method can be developed that is acceptable to the USEPA and provides comparable results to M24, the SCAQMD laboratory would be open to including this method. Staff looks forward to continuing to work with industry on the VOC test methods.

*The following are comments from Hao Jiang, P.E. of Disneyland Resort – Comment Letter #14.*

**From:** Jiang, Hao <Hao.Jiang@disney.com>  
**Sent:** Thursday, September 17, 2015 12:01 PM  
**To:** Heather Farr; David De Boer  
**Subject:** PAR1113 & 314

**Importance:** High

Heather and David,

I was planning to attend your work group meeting this am but something urgent happened that kept me here. I hope you don't mind to read my comments below.

- (1) Japans definition R1113(b)(21)(D). Please consider to make it consistence with the Japans definition in R1136(b)(28). If cannot, please consider to delete the words "... used by Motion Picture and Television Production Studios...." Or change it to "... used by Motion Picture, **theme parks** and Television Production Studios...."
- (2) Are the words "pure concentrated pigment" in R1113b)(21)(D) and the words "pure pigment" in R1136(b)(28) Japans definitions the same as the "colorant"? Paint industry actually uses these words interchangeably.
- (3) Table 1. Please consider to use the "definition number" instead of "category code". All the paints in Table 1 are defined in subsection (b), so it would be easier for end-users to reference them to definition number.
- (4) Graphic Arts (Sign) coating. Please consider to change the VOC standard to 250 g/l instead of 200 g/l as current proposed. We have difficulty to land a sign coating with less than 200 g/l VOC.
- (5) Table 2. Please consider to add a new colorant VOC standard at 350 g/l for "colorant used in Faux finishing coating". This is consistence with 350 g/l VOC for Japans. See my #2 comment above as well.
- (6) SCE R1113(f)(1). Please move "non-sacrificial Anti-graffiti coatings" from subsection (B) to (C). Table 1 SCE column has a note number 4 for this category.
- (7) SCE R1113(f)(1)(D)(i) is unnecessary
- (8) SCE R1113(f)(1). please consider to change the word "any quantity" in (C)(ii) and (D)(ii) to "any size container"
- (9) SCE R1113(f)(2). Please consider to change the subparagraph references from (f)(1)(B) to (f)(1)(C)(i) in R1113(f)(2)(B) and (C).

Thank you so much!

Hao Jiang, P.E.  
Environmental Affairs  
Disneyland Resort  
PO Box 3232  
TDA 224C  
Anaheim, Ca 92802  
714-781-4504, hao.jiang@disney.com

*Response to comment 14-1*

Japan Coatings are a high-VOC, specialty coating strictly used in the television and motion picture industry. Staff does not want to open the usage of these specialty, artistic coatings for further usage. The reason staff retained this category exclusively for the television and motion picture industry is the short timeframes available to create a production set. Staff did a demonstration with lower-VOC waterborne products that works just as well, but could involve considerable more time to apply. If there was an issue with an effect create by the solvent based Japan Coatings, the artist could just wipe off the substrate and instantly start again. With the waterborne products, the artist would have to allow the coatings to dry, re-prime the substrate and begin the work again. Staff felt the tight schedules involved with television and movie production was a justification to allow for this very small usage of these products, but does not want to open this up for theme parks, which are not under the same time constraints. Staff worked with Disney on their specific need for Japan Coatings and have resolved this issue.

*Response to comment 14-2*

The phrase ‘pure concentrated pigment’ used in the Japan definition is not the same as the term colorant used in Rule 1113. Japan Faux Coatings are thick, concentrated coatings, which are usually thinned or finely ground in a slow drying vehicle, and applied to create artistic effects on or used by television and movie production sets. For the purposes of Rule 1113, colorants are used to tint coatings to a desired color. Colorants are solutions of dyes or suspensions of pigments. These are two very different terms for the purposes of Rule 1113.

*Response to comment 14-3*

The use of category codes in the TOS Table of Standards is to assist the manufacturer in their Rule 314 reporting as these category codes are not found in the rule. The categories are listed alphanumerically in the definition section, thus making it relatively easy to find.

*Response to comment 14-4*

One of the major manufacturers of Graphic Arts coatings is reformulating their waterborne line to 200 g/L, so these coatings should be available in the market place if the rule is adopted.

*Response to comment 14-5*

Japan Coatings are not tinted; they are supplied as concentrated pigments that are sometimes thinned prior to use. There is no need to add colorant to a ~~faux~~ Japan Faux Coating.

*Response to comment 14-6*

This was an oversight, staff intended to include all of the subcategories under the IMC umbrella in subparagraph (f)(1)(E). It will be easier to remember the restrictions if they are the same for all IM coatings and it will allow for one liter touch up to continue for all the subcategories.

*Response to comment 14-7*

Clause (f)(1)(D)(i) in the pre-Public Hearing version of the rule, (f)(1)(E)(i) in the Set Hearing Package version is necessary. Paragraph (f)(1) now says the VOC limits do not apply to one liter containers exempt in the cases listed in the following subparagraphs. Clause (f)(1)(E)(i) – (iii) states that the VOC limits for IMC do not apply to one liter containers, used for touch up that are not displayed for sale at a retail outlet.

*Response to comment 14-8*

Clauses (f)(1)(D)(ii) and (f)(1)(E)(ii) state that the VOC limit applies for coating sold for purposes other than touch up. The statement “any quantity” or “any size container” is not necessary and staff removed the reference to quantity.

*Response to comment 14-9*

Staff appreciates the feedback and corrected the references.

**The following are comments from David Darling, P.E. of American Coatings Association – Comment Letter #15.**



October 9, 2015

Ms. Heather Farr  
Office of Planning, Rule Development, and Area Sources  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

Ms. Cynthia Carter  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

**RE: SCAQMD Rule 1113/Rule 314 Amendments; Supplemental ACA Comments and CEQA Comments**

Dear Ms. Farr and Ms. Carter:

The American Coatings Association (ACA) would like to supplement the comments that we submitted on September 25, 2015 with regards to eliminating 11 categories from the Small Container Exemption (SCE), especially with regards to Stone Consolidants and Reactive Penetrating Sealers. Also there appears to be several typos in the proposed Rule 1113 Table of Standards. We have also included CEQA comments as well. Finally, we incorporate by reference previously submitted ACA comments on Rule 1113/Rule 314.<sup>1</sup>

As ACA mentioned in our September 25 comments, ACA believes that the District has not provided an adequate justification for eliminating the small container exemption for these additional categories since manufacturers do not utilize the exemption for these categories, and no emission reductions will result from this change. In addition, while the SCE has not been utilized for these categories in the past, manufacturers may look to the small container option to solve a new issue in the field in the future. Further, if for example a company makes a technology breakthrough but the product does not meet the category limit, these technologically superior products could not make it to the marketplace. Therefore we do not support eliminating the SCE for these or any categories.

These comments supplement our September 25, 2015 comments specifically with respect to Stone Consolidants and Reactive Penetrating Sealers and have included supplementary information regarding ongoing modern building preservation research in the District.

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<sup>1</sup> ACA's previous comment letters are dated: September 25, 2015; September 10, 2015; July 8, 2015; April 30, 2015; March 10, 2015; January 20, 2015.

**Stone Consolidants**

15-1

We again appreciate the District adding the Stone Consolidants category to Rule 1113 in the 2013 amendments. ACA recommends not eliminating this category from the Small Container Exemption. The category definition as written is extraordinarily narrow with regards to allowable project use. While many registered historic landmarks incorporate natural stone substrates, the technology has been successfully utilized in the repair of otherwise irreparable architectural materials including concrete and adobe.

Stone Consolidants represent a niche subcategory of materials designed to repair historic structures that have been damaged by weathering or other surface decay mechanisms. As building inventory ages, the mix of architectural substrates with identified preservation problems shifts. ACA recommends the small container exemption be maintained.

**Table of Standards and Small Container Exemption**

15-2

There seems to be several discrepancies between the August 19, 2015 PAR Rule 1113 Table of Standards and the Small Container Exemption (SCE) provision. The Table of Standards includes a check and Footnote 3 designation for Reactive Penetrating Sealers, Wood preservatives (below ground and others) and Recycled Coatings, however these categories are not listed in the Small Container Exemption provision, nor are these categories listed in the Staff report (page 19) or the Staff slide number 35 from the August 26, 2015 meeting. ACA assumes (and supports) that there is a typo in the Table of Standards and that the District is not going to eliminate the SCE for these categories. In addition, the Table of Standards has a Footnote 4 designation indicating that the Color Indicating Safety Paint category is to be eliminated from the SCE on 1/1/2019, however the Staff Report and the August 26, 2015 slide 35 indicate a 1/1/2016 date. ACA does not support eliminating this or any categories from the SCE, however if over our objection the District proceeds forward, the 1/1/2019 date is preferred.

**Reactive Penetrating Sealers**

15-3

We again appreciate the District adding the Reactive Penetrating Sealer category to Rule 1113 in the 2013 amendments. Just in case the typo mentioned earlier is not a typo, ACA recommends not eliminating the Small Container Exemption for Reactive Penetrating Sealers since these sealers allow a narrow range of high-performance water and chloride ion screening technologies used in commercial, institutional and highway and bridge deck applications. While the Small Container Exemption may not have been used extensively, there could be a need for higher VOC products to solve emerging architectural substrate protection problems in the future.

**South Coast AQMD Area Modern Building Preservation**

15-4

Los Angeles and surrounding areas are in the midst of an emerging modern building preservation crisis. Multiple task forces and working groups have been formed under the umbrella of the Los Angeles Conservancy Modern Committee and through The Getty Conservation Institute. A

15-4  
cont.

substantial number of modern structures feature concrete façades and exposed structural elements subject to the same intragranular decay mechanisms as natural stone.

The National Park Service listed ten case study homes in the National Register of Historic Places as part of a pilot project. <https://www.laconservancy.org/issues/case-study-houses>  
Many structures of similar age exist outside of this protected status. The Getty's Conserving Modern Architecture Initiative is focused on a number of identified decay and preservation issues. [http://www.getty.edu/conservation/our\\_projects/field\\_projects/cmait/](http://www.getty.edu/conservation/our_projects/field_projects/cmait/)

The Initiative recently convened a meeting of experts to study the conservation of concrete heritage with the modern building preservation problem in mind.  
[http://www.getty.edu/conservation/our\\_projects/field\\_projects/cmait/cmait\\_experts.html](http://www.getty.edu/conservation/our_projects/field_projects/cmait/cmait_experts.html)

The resulting report pointed to a number of unresolved technology issues yet to be fully researched. Coatings designed to protect substrates without visible changes in appearance will be part of the solution. That may or may not include existing Stone Consolidant and Reactive Penetrating Sealer technologies – either would be outside the scope of current restrictive category definitions. The solution could include new technologies that do not fit the 50 g/L Default limit. Either path points to a need for ongoing regulatory flexibility provided by the Small Container Exemption.

15-5

**CEQA Considerations**

ACA suggests that the California Environmental Quality Act (CEQA) requires that projects potentially affecting historical resources weigh the costs and benefits in the project Environmental Impact Assessment (EIA). ACA believes there is a direct link between the lack of availability of specialty coatings for historical structures (since the District is eliminating the Small Container Exemption Stone Consolidants and Reactive Penetrating Sealers) and potential for permanent and negative impairment of same in the currently proposed SCM revisions. For your convenience, a section from CEQA follows:

**§ 21084.1. Historical resource; substantial adverse change**

A project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. For purposes of this section, an historical resource is a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources. Historical resources included in a local register of historical resources, as defined in subdivision (k) of Section 5020.1, or deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1, are presumed to be historically or culturally significant for purposes of this section, unless the preponderance of the evidence demonstrates that the resource is not historically or culturally significant. The fact that a resource is not listed in, or determined to be eligible for listing in, the California Register of Historical Resources, not included in a local register of historical resources, or not deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1 shall not

ACA Comments on SCAQMD Rule 1113 & Rule 314 Amendments

September 9, 2015

preclude a lead agency from determining whether the resource may be an historical resource for purposes of this section.

Thank you for your consideration of our comments. Please do not hesitate to contact us if you have any questions.

Sincerely,

/s/

David Darling, P.E.  
Senior Director, Environmental Affairs

/s/

Timothy Serie, Esq.  
Counsel, Government Affairs

Cc: Philip Fine

*\*\*Sent via email\*\**

*Response to comment 15-1*

As mentioned, staff worked with the manufacturers during the 2010/2011 rule amendment and agreed to allow the higher-VOC category for stone consolidants to address the needs of historic preservation. At the time, the manufacturers requested a 450 g/L VOC limit and did not indicate their products needed a higher VOC limit. These products could have been legally sold prior to that amendment under the SCE, but staff carved out a higher VOC limit to allow for sales in gallon sized containers. The following is from the 2011 staff report:

*“Usage for this category is expected to be very small, approximately 142 gallons per year. The proposed VOC limit for this category is 450 g/L; the estimated foregone emissions are 0.001 tpd. Staff intends to monitor this category through the Rule 314 Annual Quantity and Emissions Reports to ensure that the sales do not exceed the estimated usage, and may consider sales caps for this category if actual sales are well above the estimated usage.”*

The usage estimate has been exceeded every year other than the most recent year. The sales volumes are protected as there are fewer than three manufacturers who produce stone consolidants, but the averages sales volume is over 200 gallons annually. The sales weighted VOC for 2014 is 100 g/L and there has never been a product reported over the 450 g/L VOC limit. When staff estimated the foregone emissions, sales of higher-VOC non-compliant product in small containers was not considered. Staff created a category for this niche product which eliminates the need for the SCE.

*Response to comment 15-2*

Staff appreciates the ACA pointing out this discrepancy and staff did intend to restrict the flagged categories in the SCE. Staff will address reactive penetrating sealers in our response to 15-3. In regard to Wood Preservatives, this is another category where there has never been a coating reported as sold under the SCE;

therefore, staff intends to remove the SCE ~~upon date of rule adoption as of January 1, 2016~~. The manufacturers clearly have no need for a higher VOC limit product sold in one liter containers or smaller; therefore, to avoid backsliding staff is proposing to restrict the exemption. As for ~~Recycled Coatings~~, staff will remove the flag in the ~~TOS table of standards~~ as there is also a proposal to reduce the VOC limit for this category. This is another category where there has never been a coating reported over the VOC limit and is also a category that is not usually supplied in one liter or smaller containers.

*Response to comment 15-3*

The reactive penetrating sealer category is another high-VOC carve out included in the 2011 rule amendment. The following is the discussion from the 2011 staff report:

*“Staff is proposing to add a category for Reactive Penetrating Sealers in response to comments from the California Department of Transportation and the California Office of Historical Preservation. The definition will mirror the CARB SCM with an additional restriction that these coatings are only for use on reinforced concrete bridge structures for transportation projects within 5 miles of the coast or above 4,000 feet elevation or restoration and/or preservation projects on registered historical buildings that are under the purview of a restoration architect. With the added restriction, usage for this category is expected to be very small, approximately 290 gallons per year. The proposed VOC limit for this category is 350 g/L; the estimated foregone emissions are 0.001 tpd. Staff intends to monitor this category through the Rule 314 Annual Quantity and Emissions Reports to ensure that sales do not exceed the estimated usage, and may consider sales caps for this category if actual sales are well above the estimated usage.”*

The following represent the sales volumes reported under Rule 314:

Category	Sales per year (gallons)			
	2011	2012	2013	2014
<b>Reactive Penetrating Sealers</b>	PD	PD	2,117	1,402

PD = protected data, less than three companies reported sales.

The sales from the initial year far exceeded staff’s assumptions when this category was allowed to be sold under Rule 1113. In addition, CalTrans released a study of reactive penetrating sealers indicating that all the products they tested could not meet the stringent requirements set forth in the current Rule 1113 definition. Staff has concerns whether any of the products being sold can meet the definition; ~~and therefore, the criterion is being proposed to be changed in the rule. qualify for the 350 g/L VOC limit.~~ The Rule 314 data indicates that there is only one product sold slightly over the 350 g/L VOC limit. The same company also sells several compliant versions of this product, one at a significantly higher sales volume. The sales weighted average VOC for reactive penetrating sealers is 329 g/L for the 2014 sales. Staff does not see any justification for allowing higher-VOC coatings. Staff committed to considering sales caps if the sales volume exceeded the projections, which it has. At the minimum, staff would like to cap the VOC to the previously agreed upon VOC limit. In addition, staff intends to conduct independent testing to confirm if the products being sold under this category actually meet the stringent requirements in the definition.

*Response to comment 15-4*

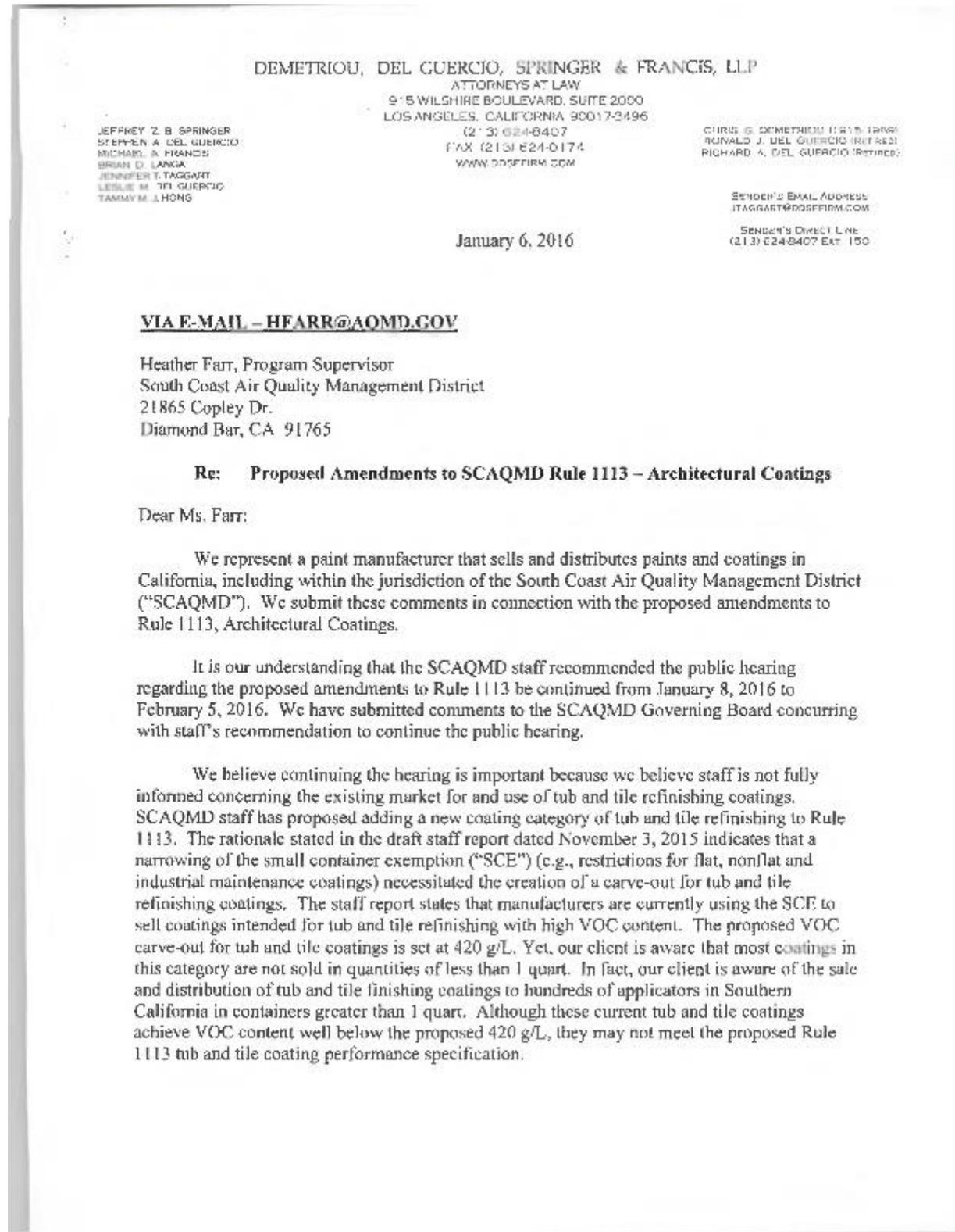
If a new technology emerged that fell under the Rule 1113 default category and is above the 50 g/L VOC limit, that product can be sold using over the VOC limit under the SCE ~~as staff is not proposing a complete~~

restriction of the SCE. The SCE is not being eliminated for the default category. In addition, compliant coatings exist and are being used for historic preservation.

Response to comment 15-5

Refer to the CEQA Final Environmental Assessment.

**The following are comments from Jennifer T. Taggart of Demetriou, Del Guercio, Springer & Francis, LLP (DDS) – Comment Letter #16.**



Heather Farr, Program Supervisor  
South Coast Air Quality Management District  
January 6, 2016  
Page 2

That is, these coatings may not achieve the abrasion performance requirement specified in the proposed amendment for tub and tile refinishing coatings. However, these larger containers are sold as tub and tile refinishing coatings. Therefore, we believe that the carve-out for such products at 420 g/L may not make sense, the proposed rule does not reflect the tub and tile refinishing marketplace and it may be inconsistent with the Air Quality Management Plan and Health and Safety Code.

We can submit additional information if desired or can meet with staff to discuss in more detail. We look forward to your response.

Very truly yours,



Jennifer K. Faggart

JTF/p

Response to comment 16

Staff was in contact with DDS and requested more information on the details of the tub and tile coatings manufactured by their client. Staff was informed by DDS that their client's product meets the VOC limit of 100 g/L, but does not meet the current abrasion/hardness standards as defined under the proposed category. DDS stated that their client would be able to reformulate to meet the hardness standard and there would be no increase in VOCs. The proposed definition for tub and tile refinishing coatings is consistent with CARB's SCM. Staff worked with other tub and tile refinishing coating manufacturers and did not receive any negative feedback on the hardness standards. If the manufacturer does not meet the Tub and Tile definition, they can still sell their product under the IMC category because they meet the 100 g/L limit. Staff has not received the additional information requested.

**The following is a comment from Doug Raymond of Raymond Regulatory Resources (3R), LLC – Comment Letter #17.**

From: Doug Raymond [<mailto:djraymond@me.com>]  
Sent: Monday, January 4, 2016 12:52 PM  
To: Diana Thai  
Subject: Re: Save the Date PAR1113 - Special Meeting of the Stationary Source Committee - January 5, 2016

Diana,

I will not be at the Stationary Source Meeting on January 5. I have a previous commitment. I believe we made some progress with the new categories and other changes. My only concern left is the restrictions on IM coatings, in particular Zinc Rich primers. These coatings are used very little in small containers but are necessary in some applications. The current inventory shows that SCAQMD is achieving the emission reduction needed in the SIP. Thus, the restrictions on IM, i.e. Zinc Rich primer is unnecessary. The Zinc Rich primer can be manufactured legally in small containers, shipped legally for use in the district in small containers, and used legally in the district in small containers. BUT the Zinc Rich coating cannot be displayed or advertised for sale in small containers. How is a person supposed to sell the product?

I will be at the Board meeting in February. See you then. Let me know how the Stationary Source Meeting goes.

Thank you.

*Doug Raymond*  
*Raymond Regulatory Resources (3R), LLC*  
*Home office: 440-474-4999*  
*Mobile: 440-339-4539*  
[djraymond@req-resources.com](mailto:djraymond@req-resources.com)

Response to comment 17

Please see response to comment 11-2. As written in the proposed rule, effective January 1, 2019 the TOS 1 would apply to Zince Rich IM Primers sold in containers having capacities greater than one liter, for purposes other than touch up. The idea is not to have the Zinc-Rich Primers on the display shelf for sale at a retail outlet, but be made available for touch up use only by storing the coatings behind the counter or as special order.

**The following are comments from John H. Long of Vista Paint Corporation– Comment Letter #18.**



2020 E. Orangethorpe Ave. Fullerton, CA 92631 714.630.3000

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- WISCONSIN
- WYOMING

January 19, 2016

16.002

Diann Thai  
 SCAQMD  
 21865 Copley Drive  
 Diamond Bar, CA 91765

**RE: Rule 1113 – Small Container Exemptions**

Dear Diann:

I am writing you in follow up to the recent Stationary Sources Board Meeting. Vista Paint is against any exemption for small container sales of flat, non-flat, and Rust Preventative Coatings past January 1, 2019. We do not believe that a sell through provision should be allowed on these coatings past that date.

We are asking that you deny those companies that have argued for either an extension for the small container or allowing for a sell through after the end date. They have yet to show or state in any of the working group meetings to date legitimate reasons that we need a quart container of a solvent based paint for touch up. If a major surface can be painted with a compliant surface, why can't it be touched up with a compliant coating?

One of the major problems with the alkyd high VOC rust preventative coatings that are being sold through this exemption is that they can be used on a large variety of surfaces even though the label may state for METAL SURFACES ONLY (read: wink wink). Consumers and contractors are aware that these coatings are the same coatings that used to be allowed for all surfaces.

If the real purpose of the small container exemption is for touch up, why does the container have to be so large (quart) so that you can paint 75-100 square feet of surface. Why not make the container a 1/2 pint container capacity.

Vista Paint, as well as many other coating manufacturers, currently make compliant coatings that meet today's standards and perform well in the field. Vista Paint has been selling a hybrid water based alkyd emulsion since 2007 and has not had a corrosion failure since it was introduced. Touch up is done with the same coating without difficulty.

Cordially,

John H. Long  
 Director Corporate Environmental, Health, & Safety  
 Vista Paint Corporation

Response to comment 18

Please see response to comments to 4-2. Staff is aware of compliant technology. Staff concurs with the comments and proposes in the amended rule to have an effective implementation date of January 1, 2019. However, based on all the comments received and past rule amendments, a two-year sell-through provision is being included for the SCE phase out. The two year sell-through will only allow products or coatings manufactured prior to the January 1, 2019 implementation date. Staff expects a two year sell-through will allow existing inventory to be removed from retail outlets. Staff does not expect the products to have a long shelf life, because most big box retailers move products after a designated time based on inventory policies. The comment regarding half pint small containers is noted and the idea may be proposed in future amendments.

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

**Final Environmental Assessment for:**

**Proposed Amended Rule 1113 – Architectural Coatings**

**February 2016**

**SCAQMD No. 150915CC**

**SCH No. 2015091040**

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## Preface

This document constitutes the Final Environmental Assessment (EA) for Proposed Amended Rule (PAR) 1113 – Architectural Coatings. The Draft EA was released for a 30-day public review and comment period from September 15, 2015 to October 15, 2015. One comment letter was received on the Draft EA. The comment letter and responses to comments are included in Appendix C.

In addition, subsequent to release of the Draft EA, minor modifications were made to the proposed project, including clarification of the Small Container Exemption (SCE) categories and the addition of a two year sell-through provision for the phase-out of the SCE. These minor clarifications do not change or affect any of the analysis in the Final EA. The sell-through provision allows coating products currently being sold under the SCE that are being eliminated and/or restricted to be sold for up to two more years, if the products were manufactured prior to the effective compliance date. No additional impacts are expected to occur beyond the current environmental analysis because the affected coating products do not have a long shelf life, and retailers are expected to be able to sell products manufactured prior to the effective compliance date within the two year timeframe. Amendments to Rule 314 were also originally proposed, which included changes to the fee structure for architectural coatings. These amendments to Rule 314 are no longer being proposed. To facilitate identification, modifications to the document are included as underlined text and text removed from the document is indicated by ~~strike through~~.

SCAQMD staff has reviewed the modifications to PAR 1113 and the removal of PAR 314 and concluded that none of the revisions constitute: 1) significant new information; 2) a substantial increase in the severity of an environmental impact; or, 3) provide new information of substantial importance relative to the draft document. In addition, revisions to the proposed project would not create new, avoidable significant effects. As a result, these revisions do not require recirculation of the document pursuant to CEQA Guidelines §15073.5. Therefore, this document now constitutes the Final EA for PAR 1113.

# **CHAPTER 1**

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## **PROJECT DESCRIPTION**

**Introduction**

**California Environmental Quality Act**

**Project Location**

**Project Background**

**Description of Affected Architectural Coating Categories**

**Project Description**

## INTRODUCTION

Rule 1113 - Architectural Coatings, was originally adopted by the SCAQMD on September 2, 1977, to regulate the Volatile Organic Compound (VOC) emissions from the application of architectural coatings, and has since undergone numerous amendments. The 2012 Air Quality Management Plan (AQMP) included Control Measure CM#2012 CTS-01 – Further VOC Reductions from Architectural Coatings which anticipated achieving < 10 tons of VOC emissions reductions per day by 2019. The proposed project will achieve 0.89 tons per day of VOC reductions by 2019 to be consistent with the AQMP requirements with new VOC limits and reducing the VOC limits for specified categories. ~~Rule 314—Fees for Architectural Coatings was adopted on June 6, 2008, requiring manufacturers to pay fees, as well as report sales and emissions of architectural coatings into the SCAQMD.~~ Based on the sales data collected, ~~from Rule 314,~~ numerous site visits, technical research, and working group meetings, staff has developed PAR 1113 and PAR 314, which are is described below.

*PAR 1113 will:*

- Limit the Small Container Exemption (SCE) for certain categories;
- Propose new categories with VOC limits and eliminate categories once they are regulated under a different rule;
- Clarify existing definitions and requirements;
- Reduce the VOC limit of some architectural coating categories to reflect currently available inventory;
- Include colorants in the labeling requirements;
- Include several new test methods; and
- Remove and update outdated provisions

*PAR 314 will:*

- ~~Amend definitions;~~
- ~~Include a tiered sales fee structure;~~
- ~~Require architectural coating manufacturers to pay outstanding fees of any acquired architectural coating manufacturer; and~~
- ~~Require reporting of any change or acquisition of the facility/business to the Executive Officer.~~

## CALIFORNIA ENVIRONMENTAL QUALITY ACT

Amending Rules 1113 and 314 is a discretionary action, which has the potential to result in direct or indirect changes to the environment and, therefore, is considered a “project” as defined by the California Environmental Quality Act (CEQA). SCAQMD is the lead agency for the proposed project and has prepared this ~~Draft~~ Final Environmental Assessment (EA) pursuant to its Certified Regulatory Program (CEQA Guidelines § 15251). California Public Resources Code § 21080.5 allows public agencies with regulatory programs to prepare a plan or other written document in

lieu of an environmental impact report or negative declaration once the Secretary of the Resources Agency has certified the regulatory program. SCAQMD's regulatory program was certified by the Secretary of the Resources Agency on March 1, 1989, and is codified as SCAQMD Rule 110.

CEQA and SCAQMD Rule 110 require that potential adverse environmental impacts of proposed projects be evaluated and feasible methods to reduce or avoid significant adverse environmental impacts of these projects be identified. To fulfill the purpose and intent of CEQA, this ~~Draft~~ Final EA addresses the potential adverse environmental impacts associated with the proposed project according to CEQA Guidelines § 15252. It states that the lead agency has an obligation to identify and evaluate the environmental effects of the project. The ~~Draft~~ Final EA is an informational document intended to: (a) provide the lead agency, responsible agencies, decision makers, and the general public with information on the environmental effects of the proposed project; and (b) identify possible ways to minimize the significant effects.

SCAQMD staff's review of the proposed project shows that the proposed project is not expected to generate significant adverse effects on the environment. Pursuant to CEQA Guidelines §§ 15126.4(a)(3) and 15126.6, mitigation measures and alternatives are not required for effects which that are found not to be significant; thus, no mitigation measures or alternatives to the project are included in the ~~Draft~~ Final EA. In addition, because SCAQMD has a certified regulatory program, the Environmental Assessment is an appropriate substitute for an EIR or Negative Declaration. Pursuant to CEQA Guidelines § 15252(a)(2)(B) and supported by the environmental checklist (in Chapter 2), if the project would not have any significant or potentially significant effects on the environment, "no alternatives or mitigation measures are proposed to avoid or reduce any significant effects on the environment." ~~Comments received on the Draft EA during the 30-day public review period will be addressed and included in the Final EA.~~ The Draft EA was released for a 30-day public review and comment period from September 15, 2015 to October 15, 2015. One comment letter was received on the Draft EA during the comment period, which is included with responses in Appendix C.

## PROJECT LOCATION

PAR 1113 ~~and PAR 314~~ affects all architectural coating manufacturing facilities who sell architectural coating into or within the SCAQMD. The SCAQMD has jurisdiction over an area of 10,473 square miles, consisting of the four-county South Coast Air Basin (Basin) and the Riverside County portions of the Salton Sea Air Basin (SSAB) and the Mojave Desert Air Basin (MDAB). The Basin, which is a subarea of the SCAQMD's jurisdiction, is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The 6,745 square-mile Basin includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino counties. The Riverside County portion of the SSAB and MDAB is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley (see Figure 1-1).

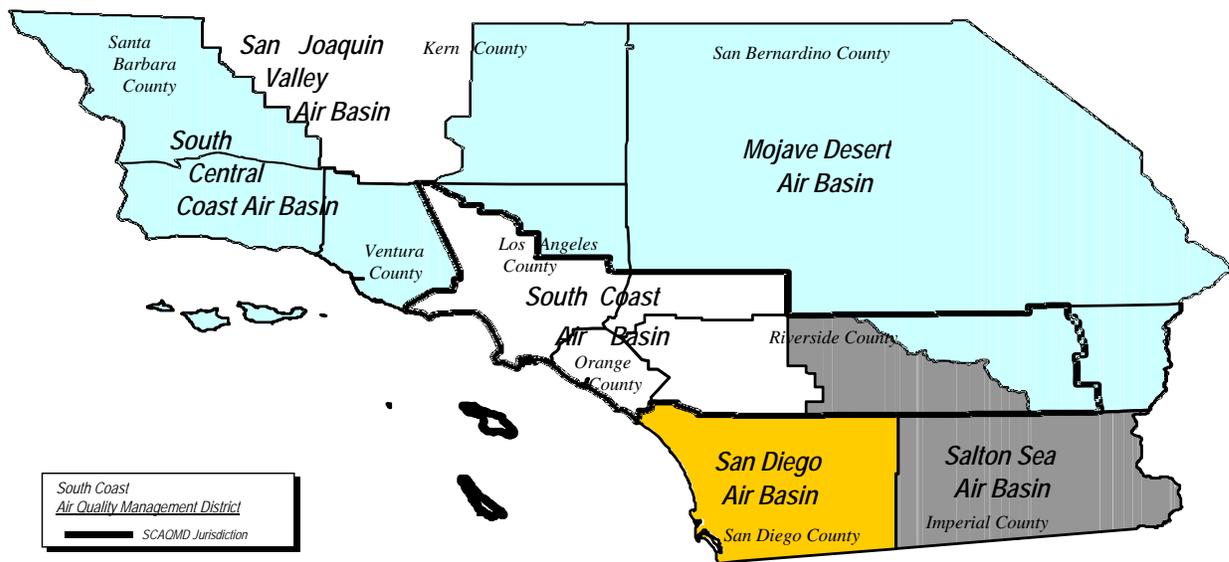


Figure 1-1 Boundaries of the South Coast Air Quality Management District

## **PROJECT BACKGROUND**

Architectural and industrial maintenance (AIM) coatings are used to beautify and protect homes, office buildings, factories, and their appurtenances on a variety of surfaces - metal, wood, plastic, concrete, wallboard, etc. For example, AIM coatings are applied to the interior and exterior of homes and offices, factory floors, bridges, stop signs, roofs, swimming pools, driveways, etc. AIM coatings may be applied by brush, roller, or spray gun; by residents, painting contractors, or maintenance personnel.

AIM and other coatings are composed of: pigments, which give the paint its color and ability to hide the underlying surface, and are generally in the form of finely ground powders; binders (resins), in which the pigment particles are dispersed and which bind the pigment to the painted surface; carriers (solvents), used to keep the paint in a liquid state during application and to otherwise aid in the application of the paint; and specialty chemicals (additives), necessary for other coating characteristics. The carriers and some specialty chemicals evaporate, leaving behind the film-forming components of the coating. The resins used in AIM coatings include acrylics, vinyls, alkyds, cellulose, epoxies, urethanes, polyurethanes, and several others. The carriers in solvent-based coatings are organic solvents such as alcohols, ketones, esters, glycols, glycol ethers, and aromatic or aliphatic hydrocarbons, and are usually VOCs. The carrier in a waterborne coating is water, although most waterborne coatings contain some VOCs, primarily glycols or texanol.

AIM coatings are usually purchased ready-to-use, although some come in two components that must be mixed prior to application. They are available in a wide range of colors, gloss, and performance characteristics. One important criterion for selecting coatings is durability. Coatings are expected to last from two to ten years with the average expectation of five to seven years. Failure of coatings to stand up to the elements such as sunlight, weather, and cleaning can shorten the life of the coating and require more frequent recoating.

A solvent may sometimes be used to thin a coating if it is too thick to spray or brush. Application problems caused by low temperature and high humidity can also be overcome by the addition of solvent to the coating. Waterborne coatings are thinned with water only, whereas solvent-based coatings can only be thinned with organic solvents. Similarly, brushes, rollers, and spray guns used with waterborne coatings are cleaned with water, while such equipment used with solvent-based coatings use organic solvents for cleanup. Generally, coatings are sold as 'ready-to-use' to eliminate the need for thinning in the field.

VOC emissions from architectural coating operations are regulated by SCAQMD Rule 1113. Under this rule, emissions are controlled by limiting the VOC content, measured in grams per liter, of the architectural coatings sold and applied in the District. Architectural coatings are defined by their application and use and include coatings which are applied to stationary structures including residential and commercial buildings, billboards, curbs and roads, and mobile homes. VOCs are emitted to the atmosphere from the evaporation of organic solvents used in industrial maintenance coatings, nonflats, flats, primers/sealers/undercoaters, waterproofing wood sealers, varnishes, wood preservatives, lacquers, fire retardant coatings, etc. The existing rule and PAR 1113 apply

to those persons who supply, sell, markets, offers for sale, or manufacture any architectural coating.

### **Regulatory History**

Architectural Coatings have been subject to environmental air quality regulations for more than three decades. Below is a reverse chronology of Rule 1113 regulatory activities:

- **September 6, 2013** - This Rule 1113 amendment provided regulatory relief in the form of an exception from the recently adopted labeling requirements for small containers. The amendment exempted containers containing two ounces or less from the labeling requirements. Rule 1113 added and amended definitions to clarify the rule. This amendment clarified that open container requirements and Group II exemption prohibitions apply to colorants in addition to architectural coatings. This amendment also included minor changes to improve clarity, but does not change the intent of existing requirements.
- **June 3, 2011** - These amendments to Rule 1113 further reduced VOC emissions from architectural coatings by limiting the allowable VOC content of previously unregulated colorants used to tint coatings at the point of sale, establishing VOC limits for certain new coating categories, and reducing the allowable VOC content for several existing coating categories. The amendments also included a sunset date for the Averaging Compliance Option and restrictions on the Small Container Exemption, removed outdated language, and provided rule clarification to improve its enforceability.
- **July 13, 2007** - These amendments to Rule 1113 amended the definition of metallic pigmented coatings to remove reference to mica to be consistent with the federal architectural coating rule, updated the test method used to determine the weight percent of elemental metal in metallic coatings to reflect current practice, and deleted obsolete language.
- **June 9, 2006** - These amendments to Rule 1113 implemented the recommendation of the most recent technology assessment for this rule. The rule reduced the VOC limits for specific coating categories; established a separate category for high-gloss nonflat coatings, set interim limits and postponed the final limits for high gloss nonflats, quick-dry enamels, and specialty primers; provided a limited exemption for Tertiary-Butyl Acetate from the VOC definition; and included other minor modifications to improve clarity and enforceability of the rule.
- **December 5, 2003** - In December of 2003, the SCAQMD Governing Board lowered VOC content limits for the following coating categories: clear wood finishes (varnish and sanding sealers), waterproofing sealers, waterproofing concrete/masonry sealers, stains, and roof coatings. The proposed amendments required reporting with a sunset date to phase-out the one quart or less usage exemption for clear wood finishes and expanded the scope of the averaging compliance option to include the categories where the VOC content limits were proposed to be lowered.

These amendments and the CEQA document (EA) were subject to litigation and the SCAQMD prevailed.

- **July 9, 2004** - These amendments addressed the State Implementation Plan (SIP) approvability issues identified by the USEPA relative to the alternative compliance option of the rule, the Averaging Compliance Option (ACO), specifically the averaging compliance option. Amendments included requiring specific records be kept by manufacturers choosing to use the ACO to comply with VOC limits, establishing additional criteria for violations of the ACO program, and making other changes to the rule to enhance clarity and enforceability. The SCAQMD committed to periodically evaluating the ACO program to determine if emission reductions commitments are met as specified in the SIP.
- **December 6, 2002** - In December of 2002, the SCAQMD Governing Board readopted amendments to Rule 1113 which were originally adopted in May 1999, but vacated by the Court of Appeal on June 24, 2002. In response to the Court's decision, the SCAQMD staff proposed to readopt these amendments, incorporating the modifications to the amendments that were made after the notice of public hearing was published. In connection with readopting the 1999 amendments to Rule 1113 plus the modifications, the SCAQMD staff prepared a Draft Subsequent Environmental Assessment (SEA) to evaluate potential adverse environmental impacts of the 1999 amendments as revised. Rule 1113 was originally amended in 1999 to implement, in part, both the 1994 and the 1997 AQMP control measure CTS-07 – Further Emission Reductions from Architectural Coatings, which called for a reduction of the allowable VOC content limit per liter of coating from the following coating categories: industrial maintenance (IM); nonflats/nonflats; primers, sealers, and undercoaters; quick-dry enamels; quick-dry primers, sealers, and undercoaters; roof coatings; stains; and waterproofing wood sealers. The 1999 amendments to Rule 1113 also added several new coating categories: bituminous roof primers; floor coatings; high temperature IM coatings; nonflats; recycled coatings; rust preventative coatings; specialty primers; zinc-rich IM primers, and waterproofing concrete/masonry sealers. The proposal also expanded and clarified the averaging provision to provide additional flexibility to manufacturers.

These amendments and the CEQA document (SEA) were subject to litigation and the SCAQMD prevailed.

- **July 20, 2001** - In July 2001, the SCAQMD Governing Board adopted amendments to Rule 1113. The amendments included the creation of a new coating category for clear wood finish brushing lacquers with an allowable VOC content of 680 grams per liter until January 1, 2005, when the VOC limit would be reduced to 275 grams per liter. The rule amendments also established labeling and reporting requirements for brushing lacquers to ensure their proper use and thus minimize emissions. By postponing compliance with the existing VOC content limit requirement for lacquers in general, the EA prepared for this amendment concluded that 162 pounds of anticipated VOC emission reductions per day would be foregone until the clear brushing lacquers were required to comply with the final VOC content limit in 2005.
- **May 14, 1999** - In May 1999, the SCAQMD Board adopted amendments to Rule 1113. The amendments called for a reduction of the allowable VOC content limit per liter of coating from the following coating categories: industrial maintenance; nonflats; quick-dry

enamels; primers, sealers, and undercoaters; quick-dry primers, sealers, and undercoaters; stains; roof coatings; and waterproofing wood sealers. The proposed amendments to Rule 1113 also added several new coating categories: high temperature IM coatings, rust preventative coatings, bituminous roof coatings, recycled flats and nonflats, essential public service coatings, floor coatings, and waterproofing concrete/masonry sealers. The proposal also expanded and clarified the averaging provision to provide additional flexibility to manufacturers. At full implementation of the amendments, the overall VOC emission reductions were anticipated to be approximately 21.8 tons per day by the year 2010. On June 24, 2002, the Court of Appeal vacated the SCAQMD's adoption of the 1999 amendments.

- **November 8, 1996** - In November 1996, the SCAQMD Board adopted amendments to Rule 1113. These amendments reduced the VOC content limits of four coating categories: lacquers, flats (interior and exterior), traffic coatings, and multi-color coatings, resulting in an overall net reduction of 10.3 tons per day of VOC emissions from this source category. In addition, the amendments temporarily increased the VOC content limits for four coating categories. Other components of the proposed amendments included adding new definitions, modifying definitions, updating the analytical test methods, and establishing an averaging methodology for flats to provide flexibility for complying with future VOC content limits.

Subsequent to the adoption of the amendments to Rule 1113, industry filed three separate lawsuits questioning the validity of the proposed future limits for the lacquer and flat coating categories. The SCAQMD prevailed in all three cases.

These amendments also incorporated an exemption from the VOC limits for coatings sold in containers one-quart size or less. The analysis in the Final Environmental Assessment concluded that adopting a small container exemption would result in significant adverse air quality impacts.

- **February 2, 1990** - In February of 1990, the SCAQMD Governing Board adopted amendments to Rule 1113 that were based on the California Air Resources Board (CARB) and California Air Pollution Control Officers Association (CAPCOA) Suggested Control Measure (SCM). The 1990 amendments included the following provisions: exemptions for 11 categories of specialty coatings were eliminated, leaving only exemptions for quart or smaller containers and emulsion type bituminous pavement sealers; lower VOC content limits for 15 new coating categories; technology-forcing lower VOC limits for ten existing coating categories effective December 1, 1993; consolidation of the industrial maintenance coating categories from ten to three; and reorganization of the subdivisions of the rule.
- **March 8, 1996** - These amendments established a definition for aerosol coatings consistent with the CARB definition, revised the definition of exempt compounds by referencing Rule 102 - Definition of Terms, and created an exemption for aerosol coatings.
- **September 6, 1991** - These amendments created a new coating category, low-solids stain, and incorporated a calculation method for determining VOC content on a materials basis.

The amendment also prohibited use of Group II exempt compounds, including ozone-depleting chlorofluorocarbons (CFCs) and several toxic solvents.

- **December 7, 1990** - These amendments incorporated new definitions for specialty coatings and established a specific VOC content limit in the table of standards for specialty coatings.
- **November 2, 1990** - These amendments incorporated new definitions for specialty coatings and established a specific VOC content limit in the table of standards for specialty coatings.
- **February 2, 1990** - These amendments incorporated new definitions for specialty coatings and established a specific VOC content limit in the table of standards for specialty coatings.

~~Architectural Coatings have been subject to Rule 314—Architectural Coating Fees since 2008. Below is a reverse chronology of Rule 314 regulatory activities:~~

- ~~• **September 6, 2013**—These amendments clarified certain reporting requirements, including exempting small manufacturers and certain coatings from fees provided the reports are submitted by the deadline, removing the ability to use “grouping” in the reporting, clarifying existing definitions and reporting requirements, and removing outdated phased-in fee rates.~~
- ~~• **January 9, 2009**—The proposed amendment clarified the applicability and reporting requirement sections of the rule to include architectural coatings sold through big box retailers, as well as adding a fee exemption for recycled coatings.~~
- ~~• **June 6, 2008**—Rule 314 was adopted in June 2008 to recover the program costs to the SCAQMD for establishing and implementing Rule 1113, including that program’s fair share of SCAQMD costs that are apportioned among all SCAQMD programs, such as personnel, payroll, etc., as well as costs supported by emissions fees, such as emissions inventory and air monitoring. The rule provided staff with information on architectural coating quantity used and related emissions for planning, compliance, and rule development.~~

~~The other previous amendments for Rule 314 updated the fee schedule per the Consumer Price Index.~~

## DESCRIPTION OF AFFECTED ARCHITECTURAL COATING CATEGORIES

Installation of air pollution control equipment is not feasible due to the application of these coatings on a temporary basis at locations outside of facilities with control equipment for reducing AIM coatings emissions; thereby leaving coating reformulation as the only possible means to achieve the required reductions. The current proposal seeks to reduce the quantity of high-VOC coatings that are sold under the small container exemption, specifically flat, nonflat, industrial maintenance and rust preventative coatings.

Additionally, there are some coatings that are already compliant with PAR 1113 and these amendments reflect their actual emissions. Thus, there is no need for a reformulation of these coatings (*i.e.* recycled coatings).

### PROJECT DESCRIPTION

The following is a summary of the proposed amendments to PAR 1113 – Architectural Coatings and ~~PAR 314 – Fees for Architectural Coatings~~. A copy of PAR 1113 and ~~PAR 314~~ with the specific details of the amendments can be found in Appendix A. ~~and B, respectively~~. The following and Appendix A ~~and Appendix B~~ constitute the project description. Key changes proposed for PAR 1113 ~~and 314~~ are described below.

#### PAR 1113

- Remove all references to the averaging provision which sunset on January 1, 2015.
- Add seven definitions, amend five definitions, and phase out two definitions:
  - Add: Building Envelope, Building Envelope Coatings, Color Indicating Safety Coatings, Default Coatings, Tile and Stone Sealers, Tub and Tile Refinishing Coatings, and Wood Conditioners.
  - Amend: Faux Glazes, Nonflat Coatings, Reactive Penetrating Sealers, Volatile Organic Compound, and Clear Wood Finish (re-named Wood Coatings).
  - Phase out: Bond Breakers and Form Release Compounds.
- Clarify the requirements in paragraph (c)(1).
- Create new coating categories and establish a VOC limit for the following:
  - Building Envelope Coatings, Color Indicating Safety Coatings, Tile and Stone Sealers, Tub and Tile Refinishing Coatings, and Wood Conditioners.
- Upon rule adoption, reduce the VOC limit on the following categories:
  - Building Envelope Coatings (2019) and Recycled Coatings (2016).
- Eliminate categories once they are regulated under a different rule.
- Amend and update the Table of Standards 1 for clarifications.
- Include colorants in the labeling requirements for the date of manufacture and the VOC content.

- Include the following test methods:
  - VOC content:
    - SCAQMD Method 313 - Determination of Volatile Organic Compounds VOC by Gas Chromatography-Mass Spectrometry.
    - ASTM Test Method 6886 - Standard Test Method for Determination of the Weight Percent Individual Volatile Organic Compounds in Waterborne Air-Dry Coatings by Gas Chromatography.
  - Building Envelope Coatings:
    - ASTM E2178 - Standard Test Method for Air Permeance of Building Materials.
    - ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
  - Tub and Tile Refinishing Coating:
    - ASTM D3363 - Standard Test Method for Film Hardness by Pencil Test.
    - ASTM D4060 - Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser.
    - ASTM D4585 - Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation.
    - ASTM D714 - Standard Test Method for Evaluating Degree of Blistering of Paints.
    - ASTM D3359 - Standard Test Methods for Measuring Adhesion by Tape Test.
- Amend the Small Container Exemption such that:
  - The exemption is eliminated for high-VOC specialty coatings (Reactive Penetrating Sealers, Shellacs, Tub and Tile Refinishing Coatings), and coating categories not currently using the exemption;
  - Restrict the exemption for Flat Coatings, Nonflat Coatings, Rust Preventative Coatings, and Industrial Maintenance Coatings; and
- Clarify the language.

**PAR 314**

- ~~• Amend two definitions: Big box retailer and product.~~
- ~~• Modify the fee structure such that a higher fee is imposed on higher VOC coatings to reflect the increased cost of rule implementation.~~
- ~~• Include requirements for architectural coating manufacturers who acquire another architectural coating manufacturer.~~
- ~~• Require reporting of any change or acquisition of the facility/business to the Executive Officer.~~

## **CHAPTER 2**

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**Introduction**

**General Information**

**Environmental Factors Potentially Affected**

**Determination**

**Discussion and Evaluation of Environmental Checklist**

## INTRODUCTION

The environmental checklist provides a standard evaluation tool to identify a project's adverse environmental impacts. This checklist identifies and evaluates potential adverse environmental impacts that may be created by the proposed project.

## GENERAL INFORMATION

Project Title:	Proposed Amended Rule 1113 <del>and PAR-314</del>
Lead Agency Name:	South Coast Air Quality Management District
Lead Agency Address:	21865 Copley Drive, Diamond Bar, CA 91765
Rule Contact Person:	Heather Farr, (909) 396-3672
CEQA Contact Person:	Cynthia Carter, (909) 396-2431
Project Sponsor's Name:	South Coast Air Quality Management District
Project Sponsor's Address:	21865 Copley Drive, Diamond Bar, CA 91765
General Plan Designation:	Not applicable
Zoning:	Not applicable
Description of Project:	<p>The purpose of PAR 1113 is to Implement, in part, Control Measure CM#2012 CTS-01 – Further VOC Reductions from Architectural Coatings, limit the small container exemption for certain categories, propose new categories with VOC limits, eliminate categories once they are regulated under a different rule, reduce the VOC limit of some architectural coating categories to reflect currently available inventory, clarify rule language, strengthen the enforceability of the rule, and remove and update outdated provisions.</p> <p><del>The purpose of PAR-314 is to make changes to the rule's definitions, requirements, and exclusions. Specifically, PAR-314 would add a tiered sales fee structure and require architectural coating manufacturers to pay outstanding fees of any acquired architectural coating manufacturer.</del></p>
Surrounding Land Uses and Setting:	Not applicable
Other Public Agencies Whose Approval is Required:	None

**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED**

The following environmental impact issues have been assessed to determine their potential to be affected by the proposed project. As indicated by the checklist on the following pages, environmental topics marked with an "✓" may be adversely affected by the proposed project. An explanation relative to the determination of the significance of the impacts can be found following the checklist for each area.

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Aesthetics  | <input type="checkbox"/> Geology and Soils                          | <input type="checkbox"/> Population and Housing             |
| <input type="checkbox"/> Agricultural and Forest Resources                   | <input checked="" type="checkbox"/> Hazards and Hazardous Materials | <input checked="" type="checkbox"/> Public Services         |
| <input checked="" type="checkbox"/> Air Quality and Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hydrology and Water Quality     | <input type="checkbox"/> Recreation                         |
| <input type="checkbox"/> Biological Resources                                | <input type="checkbox"/> Land Use and Planning                      | <input type="checkbox"/> Solid/Hazardous Waste              |
| <input type="checkbox"/> Cultural Resources                                  | <input type="checkbox"/> Mineral Resources                          | <input type="checkbox"/> Transportation/Traffic             |
| <input type="checkbox"/> Energy  | <input type="checkbox"/> Noise                                      | <input type="checkbox"/> Mandatory Findings of Significance |

**DETERMINATION**

On the basis of this initial evaluation:

- I find the proposed project, in accordance with those findings made pursuant to CEQA Guideline § 15252, COULD NOT have a significant effect on the environment, and that an ENVIRONMENTAL ASSESSMENT with no significant impacts has been prepared.
- I find that although the proposed project could have a significant effect on the environment, there will NOT be significant effects in this case because revisions in the project have been made by or agreed to by the project proponent. An ENVIRONMENTAL ASSESSMENT with no significant impacts will be prepared.
- I find that the proposed project MAY have a significant effect(s) on the environment, and an ENVIRONMENTAL ASSESSMENT will be prepared.
- I find that the proposed project MAY have a "potentially significant impact" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL ASSESSMENT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL ASSESSMENT pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL ASSESSMENT, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

**Date:** September 11, 2015

**Signature:**



Jillian Wong, Ph.D.  
Program Supervisor, CEQA Section  
Planning, Rules, and Area Sources

## **DISCUSSION AND EVALUATION OF ENVIRONMENTAL IMPACTS**

The environmental impacts associated with the current requirements in Rule 1113 ~~and Rule 314~~ ~~has~~ have already been analyzed in previous CEQA documents prepared for the rule. As discussed in Chapter 1, implementation of the proposed project would reduce VOC emissions from the application of architectural coatings and address the imbalance of increasing costs of compliance. This amendment is necessary to meet commitments in the 2012 AQMP and will be incorporated into the SIP. No new physical changes requiring construction are involved with the proposed project.

Coating operations can be categorized into three procedures: manufacturing, distribution and sales, and use of coating. Manufacturing comprises of raw material storage (silos, storage tanks, drums, etc.), process operations (storage tanks, mixers, mills, high-speed dispersion tanks, canners, etc.) and product storage (drums, cans, etc.). Distribution and sales comprises of transporting coatings to warehouses and retail and commercial facilities for sale or resale. Coatings are used (applied) by spraying, rolling, or brushing of the coatings on to architectural structures.

~~Rule 314—Fees for Architectural Coatings requires manufacturers to report and pay fees related to sales and emissions of architectural coatings into the SCAQMD. PAR 314 would include revised definitions, a tiered sales fee structure, and a requirement that architectural coating manufacturers pay outstanding fees of any acquired architectural coating manufacturer. PAR 314 would only affect definitions, fees, and reporting requirements.~~

For the aforementioned reasons, the following analysis will focus on the effects of PAR 1113 ~~and PAR 314~~. This ~~Draft~~ Final EA analyzes the VOC limit changes, changes to some coating categories, and restrictions on the small container exemption.

### **Reformulation of Affected Architectural Coatings**

The primary result of PAR 1113 would be the reformulation of coatings to comply with the new or lower VOC content limits. It is assumed that PAR 1113 noncompliant coatings would be reformulated to be similar to existing PAR 1113 compliant coatings. Therefore, impacts from reformulation were evaluated by comparing PAR 1113 compliant coatings to coatings that would not be compliant under PAR 1113.

Additionally, based on manufacturer feedback, the majority of the manufacturers already have a compliant product line.

Other rule language changes are administrative in nature and no environmental impacts would be expected.

**ENVIRONMENTAL CHECKLIST AND DISCUSSION**

**I. AESTHETICS.**

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Significance Criteria**

The proposed project impacts on aesthetics will be considered significant if:

- The project will block views from a scenic highway or corridor.
- The project will adversely affect the visual continuity of the surrounding area.
- The impacts on light and glare will be considered significant if the project adds lighting which would add glare to residential areas or sensitive receptors.

**Discussion**

PAR 1113 would require lowering VOC limits for some categories, changing some coating categories, and restricting the small container exemption for some categories. ~~PAR 314 would include revised definitions, a tiered fee structure, and requirements on acquisitions of architectural coating manufacturers.~~ No major changes to existing architectural operations or stockpiling of additional materials or products outside of existing facilities are expected.

**I. a) & b)** The proposed amendments do not require any changes in the physical environment that would obstruct any scenic vistas or views of interest to the public. In addition, no major changes to existing architectural operations or stockpiling of additional materials or products outside of existing facilities are expected. The reason for this determination is that any physical changes would occur at existing industrial or commercial sites. Therefore, no significant impacts adversely affecting existing visual resources such as scenic views or vistas, etc. are anticipated to occur.

**I. b) & c)** No new construction of buildings or other structures will result from the lowering of the VOC content in coatings so scenic resources will not be obstructed and the existing visual character of any site in the vicinity of affected operations will not be degraded. The purpose of AIM coatings is to improve the visual character and protect the surface of the product upon which the coating is applied. Defects in the appearance of the low-VOC coating after application, which could be

argued as less aesthetically pleasing, is not anticipated because the rule contains a compliance schedule sufficient for coating formulators to produce acceptable quality low-VOC products that exhibit the desired performance characteristics. In addition, compliant low-VOC coatings are currently available, being sold, used and proven to be just as durable as coatings formulated with conventional solvents.

**I. d)** There are no components in PAR 1113 ~~or PAR 314~~ that would alter existing work practice, or require working at construction activities at night, and therefore, the proposed project is not expected to create a new source of substantial light or glare that would adversely affect day or nighttime views in an area.

~~PAR 314 would only affect definitions, fees, and reporting requirements and would not have physical effects on existing affected facilities. Therefore, PAR 314 would have no impact on aesthetics.~~

Based upon these considerations, significant adverse aesthetics impacts are not anticipated from PAR 1113 ~~and PAR 314~~. Since no significant aesthetics impacts were identified, no mitigation measures are necessary or required.

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**II. AGRICULTURE AND FOREST RESOURCES.**

	<b>Potentially Significant Impact</b>	<b>Less Than Significant With Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland mapping and Monitoring Program of the California Resources Agency, to non- agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined by Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code §51104 (g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Significance Criteria**

Project-related impacts on agriculture and forest resources will be considered significant if any of the following conditions are met:

- The proposed project conflicts with existing zoning or agricultural use or Williamson Act contracts.
- The proposed project will convert prime farmland, unique farmland or farmland of statewide importance as shown on the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, to non-agricultural use.
- The proposed project conflicts with existing zoning for, or causes rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined in Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code § 51104 (g)).
- The proposed project would involve changes in the existing environment, which due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

**Discussion**

PAR 1113 would require lower VOC limits for some categories, change some coating categories, and restrict the small container exemption for some categories. ~~PAR 314 would include revised definitions, a tiered fee structure, and requirements on acquisitions of architectural coating manufacturers.~~ No major changes to existing architectural operations or stockpiling of additional materials or products outside of existing facilities are expected.

**II. a), b), c), & d)** As previously discussed, no major construction is associated with the lowering of the VOC content of affected coating categories. The manufacture of compliant architectural coatings would not require converting farmland to non-agricultural uses because the manufacture of compliant architectural coatings is expected to occur completely within the confines of existing affected industrial facilities. The use of architectural coatings that would be required to comply with the proposed VOC content limits is expected to be similar to the use of existing architectural coatings, which typically do not affect farm or agricultural practices, as such coatings are typically used in urban, commercial or industrial areas. For the same reasons, PAR 1113 would not result in the loss of forest land or conversion of forest land to non-forest use.

Therefore, the proposed project would not result in any construction of new buildings or other structures that would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland mapping and Monitoring Program of the California Resources Agency farmland to non-agricultural use or conflict with zoning for agricultural use or a Williamson Act contract. Since the proposed project would not substantially change the equipment or process in which the coatings are applied, there are no provisions in the proposed amended rule that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no land use or planning requirements will be altered by the proposed project.

The proposed project is not expected to conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined by Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code §51104 (g)) or result in the loss of forest land or conversion of forest land to non-forest use.

~~PAR 314 would only affect definitions, fees, and reporting requirements and would not have physical effects on existing affected facilities. Therefore, PAR 314 would have no impact on agriculture and forest resources.~~

Based on the above considerations, significant adverse impacts to agriculture resources are not expected from PARs 1113 ~~and 314~~. Since there are no significant adverse impacts, no mitigation measures are required.

**III. AIR QUALITY AND GREENHOUSE GAS EMISSIONS**

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Diminish an existing air quality rule or future compliance requirement resulting in a significant increase in air pollutant(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Significance Criteria**

To determine whether or not air quality impacts from adopting and implementing the proposed project are significant, impacts will be evaluated and compared to the criteria in Table 2-1. The project will be considered to have significant adverse air quality impacts if any one of the thresholds in Table 2-1 are equaled or exceeded.

To determine whether or not greenhouse gas emissions from the proposed project may be significant, impacts will be evaluated and compared to the 10,000 MT CO<sub>2</sub>/year threshold for industrial sources for SCAQMD lead agency projects.

Table 2-1 SCAQMD Air Quality Significance Thresholds

<b>Mass Daily Thresholds <sup>a</sup></b>		
<b>Pollutant</b>	<b>Construction <sup>b</sup></b>	<b>Operation <sup>c</sup></b>
<b>NOx</b>	100 lbs/day	55 lbs/day
<b>VOC</b>	75 lbs/day	55 lbs/day
<b>PM10</b>	150 lbs/day	150 lbs/day
<b>PM2.5</b>	55 lbs/day	55 lbs/day
<b>SOx</b>	150 lbs/day	150 lbs/day
<b>CO</b>	550 lbs/day	550 lbs/day
<b>Lead</b>	3 lbs/day	3 lbs/day
<b>Toxic Air Contaminants (TACs), Odor, and GHG Thresholds</b>		
<b>TACs</b> (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk $\geq$ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas $\geq$ 1 in 1 million) Chronic & Acute Hazard Index $\geq$ 1.0 (project increment)	
<b>Odor</b>	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
<b>GHG</b>	10,000 MT/yr CO <sub>2</sub> eq for industrial facilities	
<b>Ambient Air Quality Standards for Criteria Pollutants <sup>d</sup></b>		
<b>NO<sub>2</sub></b> 1-hour average annual arithmetic mean	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.03 ppm (state) and 0.0534 ppm (federal)	
<b>PM10</b> 24-hour average annual average	10.4 $\mu\text{g}/\text{m}^3$ (construction) <sup>e</sup> & 2.5 $\mu\text{g}/\text{m}^3$ (operation) 1.0 $\mu\text{g}/\text{m}^3$	
<b>PM2.5</b> 24-hour average	10.4 $\mu\text{g}/\text{m}^3$ (construction) <sup>e</sup> & 2.5 $\mu\text{g}/\text{m}^3$ (operation)	
<b>SO<sub>2</sub></b> 1-hour average 24-hour average	0.25 ppm (state) & 0.075 ppm (federal – 99 <sup>th</sup> percentile) 0.04 ppm (state)	
<b>Sulfate</b> 24-hour average	25 $\mu\text{g}/\text{m}^3$ (state)	
<b>CO</b> 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)	
<b>Lead</b> 30-day Average Rolling 3-month average	1.5 $\mu\text{g}/\text{m}^3$ (state) 0.15 $\mu\text{g}/\text{m}^3$ (federal)	

<sup>a</sup> Source: SCAQMD CEQA Handbook (SCAQMD, 1993)

<sup>b</sup> Construction thresholds apply to both the South Coast Air Basin and Coachella Valley (Salton Sea and Mojave Desert Air Basins).

<sup>c</sup> For Coachella Valley, the mass daily thresholds for operation are the same as the construction thresholds.

<sup>d</sup> Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.

<sup>e</sup> Ambient air quality threshold based on SCAQMD Rule 403.

KEY: lbs/day = pounds per day    ppm = parts per million     $\mu\text{g}/\text{m}^3$  = microgram per cubic meter     $\geq$  = greater than or equal to  
 MT/yr CO<sub>2</sub>eq = metric tons per year of CO<sub>2</sub> equivalents     $>$  = greater than

## **Discussion**

PAR 1113 would require lower VOC limits for some categories, change some coating categories, and restrict the small container exemption for some categories. ~~PAR 314 would include revised definitions, a tiered fee structure, and requirements on acquisitions of architectural coating manufacturers.~~ No major changes to existing architectural operations or stockpiling of additional materials or products outside of existing facilities are expected.

**III. a)** The SCAQMD is required by law to prepare a comprehensive district-wide Air Quality Management Plan (AQMP) which includes strategies (e.g., control measures) to reduce emission levels to achieve and maintain state and federal ambient air quality standards, and to ensure that new sources of emissions are planned and operated to be consistent with the SCAQMD's air quality goals. The air pollution reduction strategies in the AQMP include control measures which target stationary, area, mobile and indirect sources. These control measures are based on feasible methods of attaining ambient air quality standards. Pursuant to the provisions of both the state and federal Clean Air Acts (CAA)s, the SCAQMD is required to attain the state and federal ambient air quality standards for all criteria pollutants, including lead.

PAR 1113 would not conflict with or obstruct air quality plan implementation, but rather would implement, in part, control measure CM#2012 CTS-01 – Further VOC Reductions from Architectural Coatings from the 2012 AQMP, which was developed for the primary purpose of controlling emissions to attain and maintain all federal and state ambient air quality standards for the district. The 2012 AQMP concluded that major reductions in emissions of VOC and NO<sub>x</sub> are necessary to attain the air quality standards for ozone and PM<sub>10</sub>. VOC emissions cause the formation of ozone and PM<sub>10</sub> (particulate matter less than 10 microns in size), two pollutants that exceed the state and national ambient air quality standards. VOCs react photochemically with oxides of nitrogen (NO<sub>x</sub>) to form ozone. Ozone is a strong oxidizer that irritates the human respiratory system and damages plant life and property. VOCs also react in the atmosphere to form PM<sub>10</sub>, a pollutant that adversely affects human health and limits visibility. Because these small particulates penetrate into the deepest regions of the lung, they affect pulmonary function and have even been linked to increased deaths. The VOC emissions from this industry will be reduced 0.89 tons per day by 2019 as a result of implementing the proposed project, thus providing a direct air quality benefit. This VOC emission reduction will assist the SCAQMD's progress in attaining and maintaining the ambient air quality standards for ozone.

PAR 1113 would reduce VOC emissions and therefore, be consistent with the goals of the AQMP. Therefore, implementing PAR 1113, which would further reduce VOC emissions, would not conflict or obstruct implementation of the AQMP.

~~PAR 314 would only affect definitions, fees, and reporting requirements and would not have physical effects on existing affected facilities. Therefore, PAR 314 would have no impact on air quality and greenhouse gases.~~

### **III. b) and f) *Criteria Pollutants***

#### ***Construction Impacts***

The proposed project would only affect the future formulation of architectural coatings, which is not expected to require physical changes or modifications involving construction activities. Thus, no construction air quality impacts will result from the proposed project.

#### ***Operational Impacts***

PAR 1113 is only expected to have a direct and beneficial effect on VOC emissions; thereby reducing some criteria pollutants (secondary formation of Ozone and PM). Because of the narrow regulatory focus of Rule 1113, no other criteria pollutants are expected to be directly affected by PAR 1113.

#### ***Changes to Coating Categories***

Carving out new coating categories with the same VOC content limit as the categories they are currently identified with under the existing Rule 1113 is not expected to generate any air quality impacts. Coating categories that have been separated to form new categories are presented in Table 2-2. Under these scenarios, some categories would not have any changes to the VOC content limit or there would not be any changes in manufacturing or applying the affected coatings because there are no changes to the VOC content limit. New VOC limits will be placed on the new categories: Color Indicating Safety Coatings and Tub and Tile Coatings. No physical changes or increase in emissions will occur from these new categories because it is currently is what is occurring.

Table 2-2 Changes to Coating Categories

Existing Rule 1113 Coating Category	PAR 1113 Additional/New Coating Category	VOC Emissions Change
Waterproofing Sealer Category	New Building Envelope Coatings category	Propose same VOC content limit (100 grams per liter), then by 1/1/2019, lower to 50 g/L
Industrial Maintenance	Color Indicating Safety Coatings	Higher VOC limit (480 g/L), these coatings were previously sold under the SCE
Waterproofing Concrete/Masonry Sealers	New Tile and Stone Sealers	Same VOC content limit (100 grams per liter), so no change in VOC emissions
Industrial Maintenance	Tub and Tile Coatings	Higher VOC limit (420 g/L), these coatings were previously sold under the SCE
<u>Primer, Sealer, and Undercoater</u>	<u>Wood Conditioner</u>	<u>Same VOC limit (100 g/L) so no change in VOC emissions</u>

***Architectural Coatings Affected by PAR 1113 Where the VOC Content Limit Has Been Increased, but VOC Emissions will not Increase***

*Graphic Arts Coatings*

During the 2011 amendment to Rule 1113, the VOC limit was reduced for graphic arts coatings from 500 g/L to 150 g/L based on the coatings that were available at that time. Staff projected an emission reduction of 0.003 tpd when the lower limit was adopted. Since that amendment, the manufacturer who was producing the graphic arts coatings that were less than 150 g/L went out of business. The only graphic arts coatings currently available are being sold under the SCE (Small Container Exemption). The largest manufacturer of these coatings has stated that they will not reformulate to 150 g/L, but the coatings can be formulated to 200 g/L in order to accommodate customers with large projects who prefer to purchase the coatings in one gallon containers instead of multiple quart containers. As there currently are no compliant sales of these coatings, staff is not projecting any emissions increase from this change. Even though the proposed VOC limit is being increased, it is actually resulting in reformulation to a lower-

VOC product line. Graphic arts coatings will continue to be sold under the SCE at a high-VOC than the proposed 200 g/L, but this rule change will result in the availability of a lower-VOC option supplied in one-gallon or small containers.

**Architectural Coatings Affected by PAR 1113 Where the VOC Content Limit Has Been Reduced**

PAR 1113 would reduce the VOC content limits for Building Envelope Coatings and Recycled Coatings, and reduce the number of coatings eligible for the Small Container Exemption. Table 2-3 presents the existing and the proposed VOC content limits.

Table 2-3 Architectural Coatings New VOC Limits

Category	Existing Limit (g/L)	PAR 1113 New Limit (g/L)
Building Envelope Coatings	100	50
Recycled Coatings	250	150
Nonflat Coatings	150	100
Flat Coatings	250	50
Industrial Maintenance Coatings	420	100
Rust Preventative Coatings	400	100
Reactive Penetrating Sealers (SCE)	Unlimited	350
Shellacs (SCE)		100
Clear	Unlimited	730
Pigmented	Unlimited	550
Tub and Tile (SCE)	Unlimited	420

Table 2-3A Architectural Coatings New VOC Limits

Category	Existing Limit (g/L)	PAR 1113 New Limit (g/L)	Effective Date
Building Envelope Coating	100	50	01/01/19
Recycled Coatings	250	150	01/01/19

Table 2-3B Architectural Coatings Affected by Elimination of SCE

<u>Category</u>	<u>Change</u>	<u>Effective Date</u>	<u>Reason</u>	<u>Emission Reduction (tpd)</u>
<u>Concrete-Curing Compounds For Roadways and Bridges</u>	<u>Eliminating Exemption</u>	<u>01/01/16</u> <u>Upon rule adoption</u>	<u>Exemption not used</u>	<u>N/A</u>
<u>Magnesite Cement Coatings</u>	<u>Eliminating Exemption</u>	<u>01/01/16</u> <u>Upon rule adoption</u>	<u>Exemption not used</u>	<u>N/A</u>
<u>Multi-Color Coatings</u>	<u>Eliminating Exemption</u>	<u>01/01/16</u> <u>Upon rule adoption</u>	<u>Exemption not used</u>	<u>N/A</u>
<u>Pre-Treatment Wash Primers</u>	<u>Eliminating Exemption</u>	<u>01/01/16</u> <u>Upon rule adoption</u>	<u>Exemption not used</u>	<u>N/A</u>
<u>Roof Primers, Bituminous</u>	<u>Eliminating Exemption</u>	<u>01/01/16</u> <u>Upon rule adoption</u>	<u>Exemption not used</u>	<u>N/A</u>
<u>Sacrificial Anti-Graffiti Coatings</u>	<u>Eliminating Exemption</u>	<u>01/01/16</u> <u>Upon rule adoption</u>	<u>Exemption not used</u>	<u>N/A</u>
<u>Stone Consolidants</u>	<u>Eliminating Exemption</u>	<u>01/01/16</u> <u>Upon rule adoption</u>	<u>Exemption not used</u>	<u>N/A</u>
<u>Repair and Other Swimming Pool Coatings</u>	<u>Eliminating Exemption</u>	<u>01/01/16</u> <u>Upon rule adoption</u>	<u>Exemption not used</u>	<u>N/A</u>
<u>Wood Preservatives</u>	<u>Eliminating Exemption</u>	<u>01/01/16</u> <u>Upon rule adoption</u>	<u>Exemption not used</u>	<u>N/A</u>
<u>Clear and Pigmented Shellacs</u>	<u>Eliminating Exemption</u>	<u>01/01/18</u>	<u>High-VOC specialty Category (730g/L/550g/L)</u>	<u>0.0007</u>

Table 2-3B Architectural Coatings Affected by Elimination of SCE (concluded)

<u>Category</u>	<u>Change</u>	<u>Effective Date</u>	<u>Reason</u>	<u>Emission Reduction (tpd)</u>
<u>Reactive Penetrating Sealers</u>	<u>Eliminating Exemption</u>	<u>01/01/18</u>	<u>High-VOC specialty Category (350g/L)</u>	<u>0.0001</u>
<u>Tub and Tile Coatings</u>	<u>Eliminating Exemption</u>	<u>01/01/18</u>	<u>High-VOC specialty Category (420g/L)</u>	<u>0.01</u>
<u>Flat Coatings</u>	<u>Restricted to 8 ounce touch-up</u>	<u>01/01/19</u>	<u>Large volume category – insignificant SCE sales</u>	<u>0.002</u>
<u>Nonflat Coatings</u>	<u>Restricted to 8 ounce touch-up</u>	<u>01/01/19</u>	<u>Large volume of SCE sales</u>	<u>0.15</u>
<u>Rust Preventative Coatings</u>	<u>Restricted to 8 ounce touch-up</u>	<u>01/01/19</u>	<u>Large volume of SCE sales</u>	<u>0.63</u>
<u>Industrial Maintenance Coatings</u>	<u>Restricted to 1 liter touch up – no retail sales</u>	<u>01/01/19</u>	<u>Potential rule circumvention – RPC re-categorized as IMC.</u>	<u>0.01</u>
<u>Color Indicating Safety Coatings</u>	<u>Restricted to 1 liter touch up – no retail sales</u>	<u>01/01/19</u>	<u>High-VOC specialty Category (480g/L)</u>	<u>N/A</u>
<u>High Temperature IM</u>	<u>Restricted to 1 liter touch up – no retail sales</u>	<u>01/01/19</u>	<u>High-VOC specialty Category – Exemption not used (420g/L)</u>	<u>N/A</u>
<u>Non-Sacrificial Anti-Graffiti Coatings</u>	<u>Restricted to 1 liter touch up – no retail sales</u>	<u>01/01/19</u>	<u>Exemption not used</u>	<u>N/A</u>
<u>Zinc Rich Primers</u>	<u>Restricted to 1 liter touch up – no retail sales</u>	<u>01/01/19</u>	<u>Insignificant use of exemption</u>	<u>0.03</u>

*Building Envelope Coatings*

Building Envelope coatings are currently included in the waterproofing sealer primary category with a VOC content limit of 100 grams per liter. PAR 1113 would establish a new category for Building Envelope Coatings with a VOC content limit of 50 grams per liter

effective January 1, 2019. Most of what is sold in SCAQMD jurisdiction currently meets the 50 g/L limit. Staff believes this compliance threshold is achievable through reformulation or cessation of the sale of any remaining non-compliant products. There will be a total of 0.005 tpd of VOC reductions from this restriction (see Table 2-4 for details).

Therefore, no adverse air quality impacts are expected.

#### *Recycled Coatings*

The maximum VOC content of currently available recycled coatings sold in SCAQMD jurisdiction is 130 g/L, despite a current limit of 250 g/L. Staff is proposing to lower the VOC limit to just above the level of currently available coatings to 150 g/L effective upon rule adoption on 1/1/2016. This change is not to seek emission reductions, but to have the VOC limits reflect what is being offered for sale. Since all recycled coatings currently comply with PAR 1113, no changes in manufacturing or application of these products is anticipated. There will be a total of 0.09 tpd of VOC reductions from this restriction (see Table 2-4 for details).

Therefore, no adverse air quality impacts are expected.

#### *Changes to the Small Container Exemption (SCE)*

Under PAR 1113, there will be ~~two~~ four major changes to the SCE:

1. Disallowing the exemption for specialty coating categories not using the exemption and limiting their VOC limit for the following categories, effective upon rule adoption on 1/1/2016:
  - Concrete-Curing Compounds For Roadways and Bridges
  - ~~Color Indicating Safety Paint~~
  - Magnesite Cement Coatings
  - Multi-Color Coatings
  - Non-Sacrificial Anti-Graffiti Coatings
  - Pre-Treatment Wash Primers
  - Roof Primers, Bituminous
  - Sacrificial Anti-Graffiti Coatings
  - ~~Clear and Pigmented Shellacs~~
  - Stone Consolidants
  - Repair and Other Swimming Pool Coatings
  - Wood Preservatives
  - ~~Tub and Tile Coatings~~

This will not result in VOC reductions as this is currently what is occurring. Therefore, no adverse air quality impacts are expected.

2. ~~The SCE will no longer be available~~ Restricting the exemption for the following categories: flat, nonflat, some industrial maintenance, color indicating safety and rust preventative coatings because of their high volume of sales.
  - Flat
  - Nonflat

- Industrial Maintenance (IM) Coatings including: Color Indicating Safety Coatings, High Temperature IM Coatings, Non-Sacrificial Anti-Graffiti Coatings and Zinc-Rich IM Primers
  - Rust Preventative Coatings.
3. For the SCE restrictions, the lower VOC products are already available by most, if not all manufacturers. There will be some higher-VOC product lines that will no longer be available in the SCAQMD, but in all instances, considerable quantities of compliant coatings are currently being sold. Some Rust Preventative Coatings (RPC) would have to be reformulated with water-based or exempt compounds. The other manufacturers already contain a large number of product compliant line coatings. There will be a total of ~~0.792~~ 0.827 tpd of VOC reductions from this restriction (see Table 2-4 for details):
4. Disallowing the exemption for specialty categories, effective on 1/1/2018: and limiting their VOC limit for the following categories
- Clear and Pigmented Shellacs
  - Reactive Penetrating Sealers
  - Tub and Tile Coatings

#### ***Secondary Criteria Pollutant Emissions from Operation***

Manufacturing and operating practices for PAR 1113 compliant coatings would be similar to existing manufacturing and operating practices (i.e., no equipment or operational changes are expected to occur). Coatings are expected to be manufactured at the same facilities with the same types of equipment as existing coatings. Transportation of coating components and coatings is also expected to be similar or less. Low-VOC coatings typically use less solvent, which would require less raw material trips. Products are still expected to be sent to the same retailer, repackaging facilities, and end users. Therefore, impacts are less than significant.

#### ***Summary of Operational VOC Emissions and Emission Reductions***

The total operational effects on VOC emissions as a result of adopting and implementing PAR 1113 are presented in Table 2-4 (See Appendix C for detailed calculations). PAR 1113 would result in VOC emissions reductions once fully implemented. As a result, PAR 1113 is expected to result in an operational air quality benefit. Therefore, PAR 1113 is not expected to create significant adverse operational air quality impacts.

Table 2-4 Total VOC Emissions Reductions from PAR 1113

Description	VOC Emission Reductions (tpd)			
	2016	2018	2019	Totals
Building Envelope Coatings	--	--	<del>0.005</del> 0.01	<del>0.0105</del>
Recycled Coating	<del>0.09</del>	--	<u>0.06</u>	<u>0.069</u>
SCE Restrictions:				
Nonflat Coatings			0.15	0.15
Flat Coatings			0.002	0.002
Industrial Maintenance Coatings			0.01	0.01
Rust Preventative Coatings	--		0.63	0.63
Zinc Rich Primers			<u>0.03</u>	<u>0.03</u>
Reactive Penetrating Sealers		<u>0.0001</u>		<u>0.0001</u>
Clear and Pigmented Shellacs		<u>0.0007</u>		<u>0.0007</u>
Tub and Tile Coatings		<u>0.01</u>		<u>0.01</u>
Total VOC Emission Reductions	<del>0.09</del>	<u>0.0108</u>	<u>0.87</u>	<u>0.88</u>

~~PAR 314 would only affect definitions, fees, and reporting requirements and would not have physical effects on existing affected facilities. Therefore, PAR 314 would have no impact on air quality and greenhouse gases.~~

**III. c) Cumulatively Considerable Impacts**

The thresholds for cumulative impacts are the same as project-specific thresholds. Based on the foregoing analysis, criteria pollutant project-specific air quality impacts from implementing PAR 1113 would not exceed air quality significance thresholds (Table 2-1) and cumulative impacts are not expected to be significant for air quality. Potential adverse impacts from implementing PAR 1113 would not be "cumulatively considerable" as defined by CEQA Guidelines §15064(h)(1) for air quality impacts. Per CEQA Guidelines §15064(h)(3), the proposed project’s incremental contribution to a cumulative effect is also not cumulatively considerable because the proposed project complies with the requirements of a previously approved air quality attainment or maintenance plan (SCAQMD’s 2012 Air Quality Management Plan), as analyzed in Section III. a) above. Under that plan, sources of VOC emissions are reduced so as to meet air quality standards. Per CEQA Guidelines §15064(h)(4), the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project’s incremental effects are cumulative considerable.

The SCAQMD guidance on addressing cumulative impacts for air quality is as follows: “As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR.” “Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance

thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.”<sup>1</sup>

This approach was upheld by the Court in *Citizens for Responsible Equitable Environmental Development v. City of Chula Vista* (2011) 197 Cal. App. 4th 327, 334. The Court determined that where it can be found that a project did not exceed the SCAQMD’s established air quality significance thresholds, the City of Chula Vista properly concluded that the project would not cause a significant environmental effect, nor result in a cumulatively considerable increase in these pollutants. The court found this determination to be consistent with CEQA Guidelines §15064.7, stating: “The lead agency may rely on a threshold of significance standard to determine whether a project will cause a significant environmental effect.” The court found that, “[a]lthough the project will contribute additional air pollutants to an existing nonattainment area, these increases are below the significance criteria . . . . Thus, we conclude that no fair argument exists that the Project will cause a significant unavoidable cumulative contribution to an air quality impact.” As in *Chula Vista*, here the District has demonstrated that, when using accurate and appropriate data and assumptions, the project will not exceed the established SCAQMD significance thresholds. See also *Rialto Citizens for Responsible Growth v. City of Rialto* (2012) 208 Cal. App. 4th 899. Here again the court upheld the SCAQMD’s approach to utilizing the established air quality significance thresholds to determine whether the impacts of a project would be cumulatively considerable. Thus, it may be concluded that the Project will not cause a significant unavoidable cumulative contribution to an air quality impact.

Based on the foregoing analysis, project-specific air quality impacts from implementing the proposed project would not exceed air quality significance thresholds (Table 2-1); therefore, cumulative impacts are not expected to be significant for air quality. Per CEQA Guidelines § 15064(h)(4), the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project’s incremental effects are “cumulative considerable.” Thus, potential adverse impacts from the proposed project would not be cumulatively considerable for air quality impacts.

### **III. d) Toxic Air Contaminants (TAC)**

#### ***Construction***

The proposed project would only affect the future formulation of architectural coatings, which is not expected to require physical changes or modifications involving construction activities. Thus, no construction air quality impacts will result from the proposed project.

#### ***Operation***

##### ***Reformulation of Coatings***

To comply with PAR 1113, some coatings manufacturers may need to reformulate existing coatings. Since a majority of the manufacturers have an existing compliant line, with lower levels of VOCs (and in general lower levels of toxics) it is expected for there to be an overall reduction in toxics use with the implementation of PAR 1113. Although not likely, it is possible that

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<sup>1</sup> SCAQMD Cumulative Impacts Working Group White Paper on Potential Control Strategies to Address Cumulative Impacts From Air Pollution, August 2003, Appendix D, Cumulative Impact Analysis Requirements Pursuant to CEQA, at D-3, <http://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper-appendix.pdf?sfvrsn=4>.

reformulated materials could be formulated with toxic products. The following analysis demonstrates that PAR 1113 would not expose sensitive receptors to substantial exposures to air toxics.

Coatings affected by PAR 1113 may need to be reformulated to meet proposed VOC content limits or to meet current limits due to the phase out of the small container exemption. Coating components may have differing toxicity characteristics. To evaluate the potential adverse toxics impacts from PAR 1113, SCAQMD staff used Rule 314 data for products sold in 2014. Based on discussions with coating manufacturers, the types of solids in affected coatings are not expected to change as a result of implementing PAR 1113, only either low-VOC colorant formulation or water-based formulation.

Assuming that coatings reformulated to comply with PAR 1113 would be similar to existing coatings that already comply with Rule 1113, architectural coatings in the Rule 314 data that had VOC contents that are equal or less than those proposed for PAR 1113 were used as surrogates to evaluate health impacts from reformulated coatings. Information from new architectural coatings that had VOC contents that are equal or less than those proposed for PAR 1113, but were not included in Rule 314 data were also added. Based on the above analysis, there would be no additional health impacts from these reformulated coatings.

#### *Toxic Air Contaminant Reformulated Coatings Conclusion*

Many higher VOC-containing coatings also contain toxic air contaminants, so by reducing the VOC content limit, the amount of these air toxics is generally reduced or replaced to comply with the lower VOC content limit. Based on the preceding evaluation, no increase in air toxics is expected from coating reformulation that may be required by PAR 1113. Affected toxic air contaminants (i.e., toxic air contaminants that would be affected by changes to VOC content limits) found in PAR 1113 compliant coatings are expected to be reduced by the proposed project. Therefore, PAR 1113 is not expected to be significant for adverse air toxic impacts from reformulation of architectural coatings to meet the proposed lower VOC content limits.

~~PAR 314 would only affect definitions, fees, and reporting requirements and would not have physical effects on existing affected facilities. Therefore, PAR 314 would have no impact on air quality and greenhouse gases.~~

### **III. e) Odor Impacts**

PAR 1113 will require the reduction of the VOC content limit from various coating categories, which will require coating manufacturers to formulate with solvents that emit less VOCs. To comply with the lower VOC content limits, some architectural coatings will be water-based. Water-based coatings have less solvent than existing solvent-based coatings. Based on site visit comparisons between a solvent-based coating manufacturing facility and a water-based coating manufacturing facility, facilities that convert to water-based coatings are assumed to have a beneficial effect on potential nuisance odor.

Affected facilities are not expected to create objectionable odors affecting a substantial number of people for the following reasons: 1) fewer odorous compounds in water-based coatings; and 2) the use of future compliant materials must comply with all applicable SCAQMD rules and regulations.

In summary, the overall reduction in solvent use is expected to reduce odors from coatings. Therefore, PAR 1113 is not expected to create new objectionable odors that would affect a significant number of people and the impact is less than significant.

~~PAR 314 would only affect definitions, fees, and reporting requirements and would not have physical effects on existing affected facilities. Therefore, PAR 314 would have no impact on air quality and greenhouse gases.~~

### **III. g) and h) Greenhouse Gas Impacts**

Global warming is the observed increase in average temperature of the earth's surface and atmosphere. The primary cause of global warming is an increase of greenhouse gas (GHG) emissions in the atmosphere. The six major types of GHG pollutants are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), sulfur hexafluoride (SF<sub>6</sub>), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). The GHG pollutants absorb longwave radiant energy emitted by the earth, which warms the atmosphere. The GHGs also emit longwave radiation both upward to space and back down toward the surface of the earth. The downward part of this longwave radiation emitted by the atmosphere is known as the "greenhouse effect."

The current scientific consensus is that the majority of the observed warming over the last 50 years can be attributable to increased concentration of GHG emissions in the atmosphere due to human activities. Events and activities, such as the industrial revolution and the increased consumption of fossil fuels (e.g., combustion of gasoline, diesel, coal, etc.), have heavily contributed to the increase in atmospheric levels of GHG emissions. As reported by the California Energy Commission (CEC), California contributes 1.4 percent of the global and 6.2 percent of the national GHG emissions (CEC, 2004). Further, approximately 80 percent of GHG emissions in California are from fossil fuel combustion (e.g., gasoline, diesel, coal, etc.).

GHGs are typically reported as CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e). CO<sub>2</sub>e is the amount of CO<sub>2</sub> that would have the same global warming potential (relative measure of how much heat a greenhouse gas traps in the atmosphere) as a given mixture and amount of other greenhouse gases. CO<sub>2</sub>e is estimated by the summation of mass of each GHG multiplied by its global warming potential (global warming potentials: CO<sub>2</sub> = 1, CH<sub>4</sub> = 21, N<sub>2</sub>O = 310, etc.).<sup>2</sup>

#### **Construction**

The proposed project would only affect the future formulation of architectural coatings, which is not expected to require physical changes or modifications involving construction activities. Thus, no construction air quality impacts will result from the proposed project.

#### **Operation**

PAR 1113 is not expected to alter manufacturing processes (other than reformulating coatings) and coating use. No GHG compounds were identified in MSDSs of existing coatings that comply with PAR 1113, and since reformulated coatings are expected to be similar to existing coatings that are already compliant with PAR 1113, reformulated coatings are not expected to generate GHG emissions.

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<sup>2</sup> California Air Resource Board Conversion Table: <http://www.arb.ca.gov/cc/facts/conversiontable.pdf>

Therefore, PAR 1113 is not expected to generate GHG emission, either directly or indirectly, that may have a significant impact on the environment. In addition, PAR 1113 does not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHG gases.

~~PAR 314 would only affect definitions, fees, and reporting requirements and would not have physical effects on existing affected facilities. Therefore, PAR 314 would have no impact on air quality and greenhouse gases.~~

### **Conclusion**

~~PAR 314 would only affect definitions, fees, and reporting requirements and would not have physical effects on existing affected facilities. Therefore, PAR 314 would have no impact on air quality and greenhouse gases.~~ Because of its minor effect on coating formulations compared to existing conditions, PAR 1113 would have a less than significant impact on potential toxic impacts and odor causing impacts on sensitive receptors and no other air quality impacts.

Based upon these considerations, the proposed project would not generate significant adverse construction or operational air quality impacts and, therefore, no further analysis is required or necessary and no mitigation measures are necessary or required.

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**IV. BIOLOGICAL RESOURCES.**

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### **Significance Criteria**

Impacts on biological resources will be considered significant if any of the following criteria apply:

- The project results in a loss of plant communities or animal habitat considered to be rare, threatened or endangered by federal, state or local agencies.
- The project interferes substantially with the movement of any resident or migratory wildlife species.
- The project adversely affects aquatic communities through construction or operation of the project.

### **Discussion**

PAR 1113 would require lowering VOC limits for some categories, changing some coating categories, and restricting the small container exemption for some categories. ~~PAR 314 would include revised definitions, a tiered fee structure, and requirements on acquisitions of architectural coating manufacturers.~~ No major changes to existing architectural operations or stockpiling of additional materials or products outside of existing facilities are expected.

**IV. a), b), & d)** Implementation of the proposed amendments will not cause impacts to sensitive habitats of plants or animals because they do not require acquisition of or construction on open space areas. The overall intent of the proposed amendments is to reduce VOC emissions from affected coating categories. Therefore, the proposed amendments to Rule 1113 will have no direct or indirect impacts that could adversely affect plant or animal species or the habitats on which they rely in the SCAQMD's jurisdiction. The overall net effect of implementing the proposed amended rule will be improved air quality resulting from reduced VOC emissions, which is expected to be beneficial for both plant and animal life. Modifications at existing affected coating manufacturers to switch to low-VOC coatings, such as water-based, would not require acquisition of additional land or further conversions of riparian habitats or sensitive natural communities where endangered or sensitive species may be found.

**IV. c)** Acquisition of protected wetlands is not expected to be necessary to switch to compliant coatings, such as water-based coatings. Affected coating contractors would continue to practice existing operating procedures so the proposed amended rule will not directly remove, fill or interrupt any hydrological system or have an adverse effect on federally protected wetlands. Since coating contractors typically operate in urbanized areas, it is not likely that disposal or accidental releases of coating materials would occur in areas that harbor federally protected wetlands as defined by § 404 of the Clean Water Act.

**IV. e) & f)** There are no provisions in the proposed amended rule that would adversely affect land use plans, local policies or ordinances, or regulations because the ultimate effect of PAR 1113 is to reduce VOC emissions from architectural coatings. Land use and other planning considerations are determined by local governments and no land use or planning requirements will be altered by the proposed project. Proposed amended Rule 1113 would not affect in any way habitat conservation or natural community conservation plans, agricultural resources or operations, and would not create divisions in any existing communities.

Additionally, the proposed project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or any other relevant habitat conservation plan, and would not create divisions in any existing communities because all activities associated with complying with PAR 1113 would occur at existing established industrial facilities.

The SCAQMD, as the Lead Agency for the proposed project, has found that, when considering the record as a whole, there is no evidence that the proposed project would have potential for any new adverse effects on wildlife resources or the habitat upon which wildlife depends. Accordingly, based upon the preceding information, the SCAQMD has, on the basis of substantial evidence, rebutted the presumption of adverse effect contained in §753.5 (d), Title 14 of the California Code of Regulations. Further, in accordance with this conclusion, the SCAQMD believes that this proposed project qualifies for the no effect determination pursuant to Fish and Game Code §711.4 (c).

~~PAR 314 would only affect definitions, fees, and reporting requirements and would not have physical effects on existing affected facilities. Therefore, PAR 314 would have no impact on biological resources.~~

Based upon these considerations, significant adverse biological resources impacts are not anticipated. Therefore, no further analysis or mitigation measures are required or necessary.

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**V. CULTURAL RESOURCES.**

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource, site, or feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code §21074?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Significance Criteria**

Impacts to cultural resources will be considered significant if:

- The project results in the disturbance of a significant prehistoric or historic archaeological site or a property of historic, cultural significance, or tribal cultural significance to a community or ethnic or social group or a California Native American tribe.
- Unique paleontological resources or objects with cultural value to a California Native American tribe are present that could be disturbed by construction of the proposed project.
- The project would disturb human remains.

**Discussion**

PAR 1113 would require lowering VOC limits for some categories, changing some coating categories, and restricting the small container exemption for some categories. ~~PAR 314 would include revised definitions, a tiered fee structure, and requirements on acquisitions of architectural coating manufacturers.~~ No major changes to existing architectural operations or stockpiling of additional materials or products outside of existing facilities are expected.

**V. a), b), c), & d)** There are existing laws in place that are designed to protect and mitigate potential impacts to cultural resources. PAR 1113 is not expected to affect archeological or cultural sites because reformulation of architectural coatings won't require major construction activities such as grading, trenching, etc. The application of architectural coatings typically occurs after site preparation and construction of structures has been completed. As a result, it is expected that archaeological resources would have already been assessed or if the new structure is at an existing residential, commercial or industrial site, then they have already been disturbed or protected. The

proposed revisions to Rule 1113 are, therefore, not anticipated to result in any activities, or promote any programs that could have a significant adverse impact on cultural resources in the district. As a result, the proposed project has no potential to cause a substantial adverse change to a historical or archaeological resource, directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, or disturb any human remains, including those interred outside a formal cemeteries.

Based on the above discussion, the proposed project is not expected to create any significant adverse effect to a historical resource as defined in §15064.5; cause a new significance impact to an archaeological resource as defined in §15064.5; directly or indirectly destroy a unique paleontological resource, site, or feature; or disturb any human including those interred outside formal cemeteries.

V. e) PAR 1113 is not expected to require physical changes to a site, feature, place, cultural landscape, sacred place or object with cultural value to a California Native American Tribe. Furthermore, the proposed project is not expected to result in a physical change to a resource determined to be eligible for inclusion or listed in the California Register of Historical Resources or included in a local register of historical resources. For these reasons, the proposed project is not expected to cause any substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code §21074.

It is important to note that as part of releasing this CEQA document for public review and comment, the SCAQMD also provided a formal notice of the proposed project to all California Native American Tribes (Tribes) that requested to be on the Native American Heritage Commission's (NAHC) notification list per Public Resources Code § 21080.3.1 (b)(1). The NAHC notification list provides a 30-day period during which a Tribe may respond to the formal notice, in writing, requesting consultation on the proposed project.

In the event that a Tribe submits a written request for consultation during this 30-day period, the SCAQMD will initiate a consultation with the Tribe within 30 days of receiving the request in accordance with Public Resources Code § 21080.3.1 (b). Consultation ends when either: 1) both parties agree to measures to avoid or mitigate a significant effect on a Tribal Cultural Resource and agreed upon mitigation measures shall be recommended for inclusion in the environmental document [see Public Resources Code § 21082.3 (a)]; or, 2) either party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached [see Public Resources Code § 21080.3.2 (b)(1)-(2) and § 21080.3.1 (b)(1)].

Based upon these considerations, significant adverse cultural resources impacts are not anticipated. Therefore, no further analysis or mitigation measures are required or necessary.

**VI. ENERGY.**

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with adopted energy conservation plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the need for new or substantially altered power or natural gas utility systems?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Create any significant effects on local or regional energy supplies and on requirements for additional energy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create any significant effects on peak and base period demands for electricity and other forms of energy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Comply with existing energy standards?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Significance Criteria**

Impacts to energy and mineral resources will be considered significant if any of the following criteria are met:

- The project conflicts with adopted energy conservation plans or standards.
- The project results in substantial depletion of existing energy resource supplies.
- An increase in demand for utilities impacts the current capacities of the electric and natural gas utilities.
- The project uses non-renewable resources in a wasteful and/or inefficient manner.

**Discussion**

PAR 1113 would require lowering VOC limits for some categories, changing some coating categories, and restricting the small container exemption for some categories. ~~PAR 314 would include revised definitions, a tiered fee structure, and requirements on acquisitions of architectural coating manufacturers.~~ No major changes to existing architectural operations or stockpiling of additional materials or products outside of existing facilities are expected.

**VI. a) & e)** Lowering VOC content limits of affected architectural facilities will not conflict with adopted energy conservation plans or cause affected facilities to be out of compliance with existing energy standards because coating contractors are expected to continue current coating operations using the same or similar coating equipment, but using new formulations of coatings affected by PAR 1113. Because add-on control equipment is not expected to be used to comply with the provisions of PAR 1113, no additional energy use is expected to be required. Additionally, PAR 1113 will not substantially increase the number of businesses or amount of equipment in the district and, therefore, would not be expected to interfere with existing energy standards or future energy conservation plans because these are typically targeted to residential consumers, etc.

**VI. b), c) & d)** The architectural coating operations are not expected to change as a result of lowering the VOC content limit of affected coatings. Since there will be no additional demand for electricity, there will be no need for new or substantially altered power or natural gas utility

systems as a result of the proposed project. The proposed project will have a non-significant effect on the electricity capacity or demand and, therefore, no significant impact on peak or base demands for electricity.

~~PAR 314 would only affect definitions, fees, and reporting requirements and would not have physical effects on existing affected facilities. Therefore, PAR 314 would have no impact on energy.~~

Based on the above consideration, significant adverse impacts to energy are not expected from PARs 1113 ~~and 314~~. Since there are no significant adverse impacts, no mitigation measures are required or necessary.

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**VII. GEOLOGY AND SOILS.**

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Significance Criteria**

Impacts on the geological environment will be considered significant if any of the following criteria apply:

- Topographic alterations would result in significant changes, disruptions, displacement, excavation, compaction or over covering of large amounts of soil.
- Unique geological resources (paleontological resources or unique outcrops) are present that could be disturbed by the construction of the proposed project.
- Exposure of people or structures to major geologic hazards such as earthquake surface rupture, ground shaking, liquefaction or landslides.

- Secondary seismic effects could occur which could damage facility structures, e.g., liquefaction.
- Other geological hazards exist which could adversely affect the facility, e.g., landslides, mudslides.

### **Discussion**

PAR 1113 would require lowering VOC limits for some categories, changing some coating categories, and restricting the small container exemption for some categories. ~~PAR 314 would include revised definitions, a tiered fee structure, and requirements on acquisitions of architectural coating manufacturers.~~ No major changes to existing architectural operations or stockpiling of additional materials or products outside of existing facilities are expected.

**VII. a)** Architectural coatings are applied to new and existing buildings, stationary structures, roads, etc. The proposed amendments affect coating formulators, sellers, and users and have no effects on geophysical formations in the district because the proposed project does not require or induce the construction of any structures. Coating activities and operations are not expected to change from current practice so the proposed amendments to Rule 1113 will not expose people to potential substantial adverse geological effects greater than what they are exposed to already. Lowering the VOC content limit of affected coating categories will not result in exposing people or structures to risks of loss, injury, or death involving: rupture of an earthquake fault, seismic ground shaking, ground failure or landslides.

**VII. b)** The proposed project will not require major construction activities (e.g., grading, trenching, refilling and repaving), so there are no potential impacts to existing geophysical conditions. No soil is expected to be disrupted because no new development will be required as a result of the proposed project. Therefore, no substantial soil erosion or loss of topsoil is expected from lowering the VOC content limit of affected coating categories.

**VII. c) & d)** The proposed project does not involve construction of new structures and, therefore, will not involve locating any structures on soil that is unstable or expansive. For this reason, no destabilization of unstable soils would be expected that could cause on- or off-site landslides, lateral spreading, subsidence, liquefaction or collapse.

**VII. e)** The proposed project does not involve the installation of septic tanks or alternative waste water disposal systems. Therefore, this type of soil impact will not occur.

~~PAR 314 would only affect definitions, fees, and reporting requirements and would not have physical effects on existing affected facilities. Therefore, PAR 314 would have no impact on geology and soils.~~

Based upon these considerations, significant adverse geology and soil impacts are not anticipated. Therefore, no further analysis or mitigation measures are required or necessary.

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**VIII. HAZARDS AND HAZARDOUS MATERIALS.**

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, and disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions, or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public use airport or a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Significantly increased fire hazard in areas with flammable materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Significance Criteria

Impacts associated with hazards will be considered significant if any of the following occur:

- Non-compliance with any applicable design code or regulation.
- Non-conformance to National Fire Protection Association standards.
- Non-conformance to regulations or generally accepted industry practices related to operating policy and procedures concerning the design, construction, security, leak detection, spill containment or fire protection.
- Exposure to hazardous chemicals in concentrations equal to or greater than the Emergency Response Planning Guideline (ERPG) 2 levels.

### Discussion

PAR 1113 would require lowering VOC limits for some categories, changing some coating categories, and restricting the small container exemption for some categories. ~~PAR 314 would include revised definitions, a tiered fee structure, and requirements on acquisitions of architectural coating manufacturers.~~ No major changes to existing architectural operations or stockpiling of additional materials or products outside of existing facilities are expected.

**VIII.a), b), c) g) & h)** PAR 1113 does not include provisions that would directly or indirectly dictate the use of any specific coating formulations. Persons who currently use architectural coatings would continue to have the flexibility of choosing the product formulation best suited for their needs. It is likely that persons who utilize these materials would choose architectural coatings that do not pose a substantial safety hazard. In addition, in response to increased customer awareness of toxic or hazardous materials and customer demand, colorant and architectural coating manufacturers have on their own attempted to reduce the amount of hazardous materials included in coatings.

### Toxics and Flammability

Section III.d) evaluates toxics from affected architectural coatings. Based on a comparison of toxics identified in MSDSs from PAR 1113 non-compliant coatings and PAR 1113 compliant coatings, toxic concentrations in affected architectural coatings remain either the same or are reduced.

Assuming that coatings reformulated to comply with PAR 1113 would be similar to existing coatings that already comply with PAR 1113, architectural coatings in the Rule 314 data that had VOC contents that are equal or less than those proposed for PAR 1113 were used as surrogates to evaluate health impacts from reformulated coatings.

A number of physical or chemical properties may cause a substance to be a fire hazard. With respect to determining whether any conventional or replacement solvent is a fire hazard, Material Safety Data Sheets (MSDSs) list the National Fire Protection Association 704 flammability hazard ratings (i.e. NFPA 704). NFPA 704 is a “standard (that) provides a readily recognized, easily understood system for identifying flammability hazards and their severity using spatial, visual, and numerical methods to describe in simple terms the relative flammability hazards of a material<sup>3</sup>.

Although substances can have the same NFPA 704 Flammability Ratings Code, other factors can make each substance’s fire hazard very different from each other. For this reason, additional

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<sup>3</sup> National Fire Protection Association, FAQ for Standard 704.  
<http://www.nfpa.org/faq.asp?categoryID=928&cookie%5Ftest=1#23057>

chemical characteristics, such as auto-ignition temperature, boiling point, evaporation rate, flash point, lower explosive limit (LEL), upper explosive limit (UEL), and vapor pressure, are also considered when determining whether a substance is fire hazard. The following is a brief description of each these chemical characteristics.

Auto-ignition Temperature: The auto-ignition temperature of a substance is the lowest temperature at which it will spontaneously ignite in a normal atmosphere without an external source of ignition, such as a flame or spark.

Boiling Point: The boiling point of a substance is the temperature at which the vapor pressure of the liquid equals the environmental pressure surrounding the liquid. Boiling is a process in which molecules anywhere in the liquid escape, resulting in the formation of vapor bubbles within the liquid.

Evaporation Rate: Evaporation rate is the rate at which a material will vaporize (evaporate, change from liquid to a vapor) compared to the rate of vaporization of a specific known material. This quantity is represented as a unit-less ratio. For example, a substance with a high evaporation rate will readily form a vapor which can be inhaled or explode, and thus have a higher hazard risk. Evaporation rates generally have an inverse relationship to boiling points (i.e., the higher the boiling point, the lower the rate of evaporation).

Flashpoint: Flash point is the lowest temperature at which a volatile liquid can vaporize to form an ignitable mixture in air. Measuring a liquid's flash point requires an ignition source. At the flash point, the vapor may cease to burn when the source of ignition is removed. There are different methods that can be used to determine the flashpoint of a solvent but the most frequently used method is the Tagliabue Closed Cup standard (ASTM D56), also known as the TCC. The flashpoint is determined by a TCC laboratory device which is used to determine the flash point of mobile petroleum liquids with flash point temperatures below 175 degrees Fahrenheit (79.4 degrees Centigrade).

Flash point is a particularly important measure of the fire hazard of a substance. For example, the Consumer Products Safety Commission (CPSC) promulgated Labeling and Banning Requirements for Chemicals and Other Hazardous Substances in 15 U.S.C. §1261 and 16 CFR Part 1500. Per the CPSC, the flammability of a product is defined in 16 CFR Part 1500.3 (c)(6) and is based on flash point. For example, a liquid needs to be labeled as: 1) "Extremely Flammable" if the flash point is below 20 degrees Fahrenheit; 2) "Flammable" if the flash point is above 20 degrees Fahrenheit but less than 100 degrees Fahrenheit; or, 3) "Combustible" if the flash point is above 100 degrees Fahrenheit up to and including 150 degrees Fahrenheit.

Lower Explosive Limit (LEL): The lower explosive limit of a gas or a vapor is the limiting concentration (in air) that is needed for the gas to ignite and explode or the lowest concentration (percentage) of a gas or a vapor in air capable of producing a flash of fire in presence of an ignition source (e.g., arc, flame, or heat). If the concentration of a substance in air is below the LEL, there is not enough fuel to continue an explosion. In other words, concentrations lower than the LEL are "too lean" to burn. For example, methane gas has a LEL of 4.4 percent (at 138 degrees Centigrade) by volume, meaning 4.4 percent of the total volume of the air consists of methane. At 20 degrees Centigrade, the

LEL for methane is 5.1 percent by volume. If the atmosphere has less than 5.1 percent methane, an explosion cannot occur even if a source of ignition is present. When the concentration of methane reaches 5.1 percent, an explosion can occur if there is an ignition source.

Upper Explosive Limit (UEL): The upper explosive limit of a gas or a vapor is the highest concentration (percentage) of a gas or a vapor in air capable of producing a flash of fire in presence of an ignition source (e.g., arc, flame, or heat). Concentrations of a substance in air above the UEL are "too rich" to burn.

Vapor Pressure: Vapor pressure is an indicator of a chemical's tendency to evaporate into gaseous form.

The types and amounts of flammable solvents in the coatings remained the same or were reduced or were eliminated in the PAR 1113 compliant coatings when compared to the PAR 1113 non-compliant coatings. Table 2-5 presents all flammable solvents identified in MSDS for coatings evaluated in this analysis and their flammable characteristics.

Table 2-5 Chemical Characteristics for Typical Coating Solvents

<i>Traditional/Conventional Solvents</i>						
<b>Chemical Compounds</b>	<b>M.W.</b>	<b>Boiling Point</b> (°F)	<b>Flashpoint</b> (°F)	<b>Vapor Pressure</b> (mmHg @ 68 °F)	<b>Lower Explosive Limit</b> (% by Vol.)	<b>Flammability Classification</b> (NFPA)*
Stoddard Solvent	144	302 - 324	140	2	0.8	2
Petroleum Distillates (Naptha)	100	314 - 387	105	40	1.0	4
EGBE	118	340	141	0.6	1.1	2
EGME	76	256	107	6	2.5	2
EGEE	90	275	120	4	1.8	2
<i>Replacement Solvents</i>						
<b>Chemical Compounds</b>	<b>M.W.</b>	<b>Boiling Point</b> (°F)	<b>Flashpoint</b> (°F)	<b>Vapor Pressure</b> (mmHg @ 68 °F)	<b>Lower Explosive Limit</b> (% by Vol.)	<b>Flammability Classification</b> (NFPA)*
Acetone	58	133	1.4	180	2.6	3
PCBTF (Oxsol 100)	181	282	109	5	0.90	1

\*National Fire Protection Association

0 = minimal; 1 = slight; 2 = moderate; 3 = serious; 4 = severe

For the Rust Preventative Coatings (RPC) Category, the primary replacement solvents are expected to be either acetone or parachlorobenzotrifluoride (PCBTF). Acetone is more flammable and has a lower flash point than some solvents used currently. PCBTF generally poses an equal or lower fire hazard to existing solvents. Based on current formulations sold in SCAQMD, only one manufacturer may be affected in the RPC category by PAR 1113. While this manufacturer already has a product line that is compliant with Rule 1113, their product line that utilizes the existing Small Container Exemption in the current Rule 1113 will require reformulation. The manufacturer

will likely use the same formulation being used for their compliant line in their larger containers for their small container product line. Although these smaller containers necessarily contain less acetone than the larger containers already being sold with acetone, the manufacturer is already producing the compliant line and the product is being used by consumers, therefore, the reformulation will not result in a significant increase in fire hazards to the environment beyond existing conditions.

Some manufacturers will reformulate with water-based compounds and/or most likely use less of it to comply with PAR 1113 (instead of using hazardous solvents). Table 2-6 shows their flammable characteristics.

Table 2-6 Chemical Characteristics for Typical Water-Based Coating

<i>Traditional/Conventional Water Based</i>						
<b>Chemical Compounds</b>	<b>M.W.</b>	<b>Boiling Point</b> (°F)	<b>Flashpoint</b> (°F)	<b>Vapor Pressure</b> (mmHg @ 68 °F)	<b>Lower Explosive Limit</b> (% by Vol.)	<b>Flammability Classification</b> (NFPA)*
Propylene glycol	76	370	210	0.1	2.6	1
EGBE	118	340	141	0.6	1.1	2
EGME	76	256	107	6	2.5	2
EGEE	90	275	120	4	1.8	2
<i>Replacement Water Based</i>						
<b>Chemical Compounds</b>	<b>M.W.</b>	<b>Boiling Point</b> (°F)	<b>Flashpoint</b> (°F)	<b>Vapor Pressure</b> (mmHg @ 68 °F)	<b>Lower Explosive Limit</b> (% by Vol.)	<b>Flammability Classification</b> (NFPA)*
Di-Propylene Glycol	134	451	279	30	1	1
Propylene Glycol	76	370	210	0.1	2.6	1
Ethylene Glycol	227	388	232	0.06	3.2	1
Texanol	216	471	248	0.1	0.62	1

**VIII. d)** Government Code §65962.5 typically refers to a list of facilities that may be subject to Resource Conservation and Recovery Act (RCRA) permits. Since PAR 1113 relates to coatings, it is not expected to have direct impacts on facilities affected by Government Code §65962.5 Facilities affected by Government Code §65962.5 would still need to comply with any regulations relating to that code section. The use of PAR 1113 compliant coatings is not expected to interfere with existing hazardous waste management programs and based on analyses presented earlier in this section (VIII.a), b), c), & h)) and in Section III. Air Quality and Greenhouse Gases of this document, PAR 1113 may reduce the amount of hazardous materials in architectural coatings. Accordingly, PAR 1113 is not expected to result in a new significant impact to the public or environment from sites on lists compiled pursuant to Government Code §65962.5.

Lastly, affected facilities would be expected to continue to manage any and all hazardous materials and hazardous waste, in accordance with federal, state and local regulations.

**VIII. e)** Since the use of PAR 1113 compliant coatings is not expected to generate significant adverse new hazardous emissions in general or increase the manufacture or use of hazardous materials, the implementation of PAR 1113 is not expected to increase or create any new safety hazards to people working or residing in the vicinity of public/private airports. As stated above, PAR 1113 compliant coatings are expected to be reformulated with less toxic and hazardous material content than PAR 1113 non-compliant coatings.

**VIII. f)** As already noted PAR 1113 compliant coatings would likely be formulated with less toxic materials than PAR 1113 non-compliant coatings. Further, PAR 1113 compliant coatings are expected to be manufactured, transported, stored and applied in the same quantities as PAR 1113 non-compliant coatings. As a result, PAR 1113 is not expected to conflict with business emergency response plans. With respect to suppliers and sellers of affected architectural coatings, Health and Safety Code §25506 specifically requires all businesses handling hazardous materials to submit a business emergency response plan to assist local administering agencies in the emergency release or threatened release of a hazardous material. Business emergency response plans generally require the following:

- Identification of individuals who are responsible for various actions, including reporting, assisting emergency response personnel and establishing an emergency response team;
- Procedures to notify the administering agency, the appropriate local emergency rescue personnel, and the California Office of Emergency Services;
- Procedures to mitigate a release or threatened release to minimize any potential harm or damage to persons, property or the environment;
- Procedures to notify the necessary persons who can respond to an emergency within the facility;
- Details of evacuation plans and procedures;
- Descriptions of the emergency equipment available in the facility;
- Identification of local emergency medical assistance; and
- Training (initial and refresher) programs for employees in:
  - The safe handling of hazardous materials used by the business;
  - Methods of working with the local public emergency response agencies;
  - The use of emergency response resources under control of the handler; and
  - Other procedures and resources that will increase public safety and prevent or mitigate a release of hazardous materials.

In general, every county or city and all facilities using a minimum amount of hazardous materials are required to formulate detailed contingency plans to eliminate, or at least minimize, the possibility and effect of fires, explosion, or spills. In conjunction with the California Office of Emergency Services, local jurisdictions have enacted ordinances that set standards for area and

business emergency response plans. These requirements include immediate notification, mitigation of an actual or threatened release of a hazardous material, and evacuation of the emergency area. Based on the analysis in VIII.a), b), & c) and VIII.h), PAR 1113 coatings are expected to have similar or less hazardous properties than existing architectural coatings. Therefore PAR 1113 is not expected to impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

**VIII. h)** PAR 1113 is expected to reduce the VOC content limits for specified coating categories primarily through reformulation of the solvent or water-based technologies. It is anticipated that the reformulation will primarily entail the use of water-based components or low-VOC materials which are less hazardous or flammable than the materials currently being used. Refer to the discussion in VIII b) and c) for the comparison of solvents currently used in the affected coatings versus the solvents used to reformulate the same coatings to a lower VOC content limit.

The Uniform Fire Code and Uniform Building Code set standards intended to minimize risks from flammable or otherwise hazardous materials. Local jurisdictions are required to adopt the uniform codes or comparable regulations. Local fire agencies require permits for the use or storage of hazardous materials and permit modifications for proposed increases in their use. Permit conditions depend on the type and quantity of the hazardous materials at the facility. Permit conditions may include, but are not limited to, specifications for sprinkler systems, electrical systems, ventilation, and containment. The fire departments make annual business inspections to ensure compliance with permit conditions and other appropriate regulations. Consequently, local fire departments ensure that adequate permit conditions are in place to protect against potential risk of upset from the use of hazardous materials. However, any use of hazardous materials at affected facilities is not expected to change and may even decrease as a result of implementing the proposed project.

~~PAR 314 would only affect definitions, fees, and reporting requirements and would not have physical effects on existing affected facilities. Therefore, PAR 314 would have no impact on hazards and hazardous materials.~~

Based upon these considerations, significant adverse hazards and hazardous materials impacts are not anticipated. Therefore, no further analysis or mitigation measures are required or necessary.

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**IX. HYDROLOGY AND WATER QUALITY.**

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards, waste discharge requirements, exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board, or otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in substantial erosion or siltation on- or off-site or flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Place housing or other structures within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, or inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
g) Require or result in the construction of new water or wastewater treatment facilities or new storm water drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Significance Criteria**

Potential impacts on water resources will be considered significant if any of the following criteria apply:

Water Demand:

- The existing water supply does not have the capacity to meet the increased demands of the project, or the project would use more than 262,820 gallons per day of potable water.
- The project increases demand for total water by more than five million gallons per day.

Water Quality:

- The project will cause degradation or depletion of ground water resources substantially affecting current or future uses.
- The project will cause the degradation of surface water substantially affecting current or future uses.
- The project will result in a violation of National Pollutant Discharge Elimination System (NPDES) permit requirements.
- The capacities of existing or proposed wastewater treatment facilities and the sanitary sewer system are not sufficient to meet the needs of the project.
- The project results in substantial increases in the area of impervious surfaces, such that interference with groundwater recharge efforts occurs.
- The project results in alterations to the course or flow of floodwaters.

**Discussion**

PAR 1113 would require lowering VOC limits for some categories, changing some coating categories, and restricting the small container exemption for some categories. ~~PAR 314 would~~

~~include revised definitions, a tiered fee structure, and requirements on acquisitions of architectural coating manufacturers.~~ No major changes to existing architectural operations or stockpiling of additional materials or products outside of existing facilities are expected.

**IX. a) & i)** Lowering the VOC content limit of coatings at affected facilities will have no direct or indirect impact on hydrology and water quality because the reformulation of the coatings is not expected to change the current architectural coating operation practices or alter the coating formulations to be more detrimental to water quality. It is likely that coating formulators will replace conventional coating formulations and, as noted in Tables 2-5 and 2-6, may contain similar compounds, just less of it.

In the past the SCAQMD has received comments that with the increased use of waterborne technologies to meet the lower VOC content limits, there will be a greater trend of coating applicators to improperly dispose of the waste generated from these coatings into the ground, storm drains, or sewer systems. However, there are no data to support this contention. In any event, there are several reasons why there should be no significant increase over current practices for improper disposal due to greater use of water-borne coatings.

Results from a survey of contractors determined that a majority either dispose of the waste material properly as required by the coating manufacturer's MSDS or recycle the waste material regardless of type of coating. Based upon these results, there is no reason to expect that paint contractors will change their disposal practices, especially those that dispose of wastes properly, with the implementation of PAR 1113. There is also no reason to expect that illegal disposal practices will increase as a result of implementing PAR 1113.

State and federal regulations promote the development and use of coatings formulated with non-hazardous solvents. Based on discussions with coating formulators, the trend in coating technologies is to replace toxic/hazardous solvents with equal or less toxic/hazardous solvents. Therefore, wastewater which may be generated from reformulated coatings is expected to contain less hazardous materials than the wastewater generated for solvent-based coating operations, thereby reducing toxic influent to the Publicly Owned Treatment Works (POTWs).

Consumer and user outreach and education programs such as the PaintCare stewardship program created by the ACA to recycle or dispose of unwanted paint, the ACA's "Protocol for Management of Post Consumer Paint," and the SCAQMD's "Painter's Guide to Clean Air" provide the public and painting contractors with information on environmentally sound coating disposal practices. These public outreach programs are expected to reduce the amount of coating waste material entering the sewer systems, storm drainage systems, and that would be dumped on the ground, therefore, further reducing any water quality impacts associated with the improper disposal of compliant coatings.

The EPA in its Report to Congress entitled "Study of Volatile Organic Compound Emissions from Consumer and Commercial Products" evaluated consumer products to determine which categories were likely to be disposed of to POTWs. The study found that the likelihood of paints, primers, and varnishes being disposed of to POTWs was low. Therefore, this category was not even evaluated for its VOC emission impacts on POTWs. This suggests that the presence of solvents from this category of consumer products in wastewater streams is very low compared to the total volume of solvents being disposed of from other consumer product categories.

To evaluate potential water quality impacts from PAR 1113, it is assumed that future compliant AIM coatings will be formulated primarily with water-borne technologies, though a percentage of reformulations will involve exempt solvents. As a result, more water will be used for clean-up and the resultant wastewater material could be disposed of into the public sewer system. It is anticipated that current coating equipment (i.e., spray guns, rollers, and brushes) clean-up practices of using water will continue into the future. Table 2-7 illustrates the “worst-case” potential increase of waste material likely to be received by POTWs in the district as a result of implementing PAR 1113. POTW’s average daily flow is based on historical wastewater flow in the district. See Appendix C for details on estimated usage.

Table 2-7 Projected POTW Impact from Implementing PAR 1113

Year	POTW Average Daily Flow <sup>a</sup> (mgd)	POTW Capacity <sup>b</sup> (mgd)	Estimated Usage (mgd)	Coatings Disposal Daily Flow <sup>c</sup> (mgd)	Total Impacts (% Increase to POTW capacity)
2014	1,535.6	2,369.5	3.3 x 10 <sup>-4</sup>	3.3 x 10 <sup>-4</sup>	1.4 x 10 <sup>-5</sup>

<sup>a</sup> 2012 data of total average daily wastewater flows handled by all POTWs greater than 10 mgd in the district (2012 AQMP, Table 3.5-5).

<sup>b</sup> Based on design daily flows by all POTWs greater than 10 mgd in the district (2012 AQMP).

<sup>c</sup> Assumes that one gallon of water will be used to clean-up equipment for every gallon of coating applied. The figures for Coatings Disposal Flow are based on the annual emissions inventory of the affected coating categories in 2014;

mgd = millions of gallons per day

The potential increase estimated as a result of implementing PAR 1113 is considered to be well within the projected capacity of POTWs in the district based on historical wastewater data. Hence, wastewater impacts associated with the disposal of water-borne clean-up waste material generated from PAR 1113 affected coating categories are not considered significant. With the increasing trend toward less toxic water-borne coatings, it is likely that there will be less severe impacts to water quality because of improvements in affluent water quality. Therefore, PAR 1113 will not significantly adversely affect water resources, water quality standards, groundwater supplies, existing water supplies or wastewater treatment facilities.

**IX. b) & h)** Historically, potential water demand to reformulate conventional coatings into water based coatings and to clean up water based coatings has not resulted in a significant adverse impact on water demand or depleted groundwater supplies. Using “worst-case” assumptions, increased water demand from implementing PAR 1113 can be calculated for both manufacturer of water-based coatings and water used to clean coating equipment. As shown in Table 2-7, water demand associated with the manufacture and clean-up of water-borne formulations is estimated to be 337 gallons per day (122,897 gallons per year). This increased water demand does not exceed the SCAQMD’s significant threshold of 5,000,000 gallons per day and, therefore, is not considered to be a significant water demand impact.

While it is not possible to predict water shortages in the future, existing entitlements and resources in the district provide sufficient water supplies that currently exceed demand. Further, according to the Metropolitan Water District (MWD), the largest supplier of water to California, “Metropolitan has supply capabilities that would be sufficient to meet expected demands from 2015 through 2035 under the single dry-year and multiple dry-year conditions. Metropolitan has comprehensive plans for stages of actions it would undertake to address up to 50 percent reduction

in its water supplies and a catastrophic interruption in water supplies through its Water Surplus and Drought Management and Water Supply Allocation Plans.”<sup>4</sup> MWD is expected to continue providing a reliable water supply through developing a portfolio of diversified water sources that includes: cooperative conservation; water recycling; and groundwater storage, recovery, and replenishment programs. Other additional water supplies will be supplied in the future as a result of water transfer from other water agencies, desalination projects and state and federal water initiatives, such as CALFED, California’s Colorado River Water Use Plan.

As shown in Table 2-8, it is within the capacity of the local water suppliers to supply the small incremental increase in water demand associated with the implementation of PAR 1113. Sufficient water supplies are available to serve the project from existing entitlements and no new or expanded entitlements are needed to implement the proposed project. Therefore, no significant water demand impacts are expected as the result of implementing PAR 1113.

Table 2-8 Projected Water Demand from Implementing PAR 1113

Year	Projected Water Supplied, <sup>a</sup> billion gal per year	Projected Water Demand with 20 Percent Reduction, <sup>b</sup> billion gal per year	Projected Coating Sales, <sup>c</sup> million gal per year	Projected Mfgr Water Demand, <sup>d</sup> million gal per year	Projected Cleanup Water Demand <sup>e</sup> , million gal per year	PAR 1113 Total Water Demand, <sup>f</sup> million gal per year	PAR 1113 Total Demand, <sup>f</sup> gal per day	Total Impacts, <sup>g</sup> percent of demand
2014	1,498	1,198	0.1205	0.1205	0.1205	0.2409	660	0.00002

- a) Water demand and supply projections obtained from hydrology setting in 2012 AQMP.
- b) On November 10, 2009, the state Legislature passed Senate Bill 7 as part of the Seventh Extraordinary Session, referred to as SBX7-7. This new law is the water conservation component to the historic Delta legislative package, and seeks to achieve a 20 percent statewide reduction in urban per capita water use in California by December 31, 2020. The projected water demand from the 2012 AQMP was reduced by 20 percent pursuant to this legislation.
- c) SCAQMD Staff Report for PAR 1113
- d) Assumes that one gallon of water would be used to manufacture one gallon of coating applied. This estimate includes the water used in humidifiers for and for purging lines in colorant systems. This volume also assumes as "worst-case" scenario, that all affected coatings used in the SCAQMD's jurisdiction were manufactured here and does not take into consideration the fact that some affected coatings are already waterborne coatings.
- e) Assumes that one gallon of water would be used to clean-up equipment for every gallon of coating applied. Also assumes as a "worst-case" scenario, that full conversion of affected coating categories to waterborne formulations occurs in 2019.
- f) Total amount of manufactured and clean-up water demand.
- g) The percentage of increase in water demand as a result of the incremental increase due to water clean-up of waterborne coating material.

**IX. c) & d)** The proposed project would not change current architectural coating application or practices. Consequently, no major construction activities will be necessary to comply with PAR 1113, so the proposed project will not require site preparation, so the proposed project is not expected to alter any existing drainage patterns, increase the rate or amount of surface runoff water that would exceed the capacity of existing or planned stormwater drainage systems.

<sup>4</sup> From Metropolitan Water District, The Regional Urban Water Management Plan, November 2010.

**IX. e)** Since PAR 1113 does not require construction of new structures, it will not result in placing housing in a 100-year flood hazard areas. Architectural coating contractors are not expected to change their existing coating practices, so any flood hazards would be part of the existing setting or would be present for reasons unrelated to PAR 1113.

**IX. f)** Since PAR 1113 does not require construction of new facilities; thus it will not expose people or structures to a significant risk of loss, injury or death by altering existing flood risks or risks from seiches, tsunami's or mudflow conditions.

**IX. g)** As indicated in the discussion under items IX a) & i), the proposed project is not expected to result in a significant increase in the volume of wastewater generated in the district. Similarly, as discussed under items IX b) & h), the proposed project is not expected to significantly increase demand for water in the district. As a result, it is not anticipated that PAR 1113 would generate additional volumes of wastewater that could exceed the capacity of existing stormwater drainage systems or require the construction of new wastewater or stormwater drainage facilities.

Based on the above considerations, significant adverse impacts to hydrology and water quality are not expected to occur from implementing PAR 1113. Since there are no significant adverse impacts and no mitigation measures are required.

Therefore, based on the above analysis, there would be adequate capacity to serve the proposed project's projected demand addition to the provider's existing commitments.

~~PAR 314 would only affect definitions, fees, and reporting requirements and would not have physical effects on existing affected facilities. Therefore, PAR 314 would have no impact on hydrology and water quality.~~

Based upon these considerations, significant adverse hydrology and water quality impacts are not anticipated and, therefore, no further analysis is required or necessary.

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**X. LAND USE AND PLANNING.**

	<b>Potentially Significant Impact</b>	<b>Less Than Significant With Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Significance Criteria**

Land use and planning impacts will be considered significant if the project conflicts with the land use and zoning designations established by local jurisdictions.

**Discussion**

PAR 1113 would require lowering VOC limits for some categories, changing some coating categories, and restricting the small container exemption for some categories. ~~PAR 314 would include revised definitions, a tiered fee structure, and requirements on acquisitions of architectural coating manufacturers.~~ No major changes to existing architectural operations or stockpiling of additional materials or products outside of existing facilities are expected.

**X. a)** Lowering the VOC content limit of certain coatings at affected facilities will not create divisions in any existing communities because there is no anticipated change to current architectural coating practices. Further, the proposed project does not require construction of any features, such as freeways, that would physically divide an established community.

**X. b)** Architectural coating operations would still be expected to comply, and not interfere, with any applicable land use plans, zoning ordinances, habitat conservation or natural community conservation plans. There are no provisions of the proposed project that would directly affect these plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no present or planned land uses in the region or planning requirements will be altered by the proposed project. No new development or alterations to existing land use designations will occur as a result of the implementation of the proposed amendments. It is not anticipated that existing land uses located in the district would require additional land to continue current operations or require rezoning as a result of implementing PAR 1113. Therefore, no significant adverse impacts affecting existing or future land uses are expected.

~~PAR 314 would only affect definitions, fees, and reporting requirements and would not have physical effects on existing affected facilities. Therefore, PAR 314 would have no impact on land use and planning.~~

Based on the above consideration, significant adverse impacts to land use and planning are not expected from PAR 1113 ~~and PAR 314~~. Since there are no significant adverse impacts, no mitigation measures are required.

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**XI. MINERAL RESOURCES.**

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Significance Criteria**

Project-related impacts on mineral resources will be considered significant if any of the following conditions are met:

- The project would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
- The proposed project results in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

**Discussion**

PAR 1113 would require lowering VOC limits for some categories, changing some coating categories, and restricting the small container exemption for some categories. ~~PAR 314 would include revised definitions, a tiered fee structure, and requirements on acquisitions of architectural coating manufacturers.~~ No major changes to existing architectural operations or stockpiling of additional materials or products outside of existing facilities are expected.

**XI. a) & b)** There are no provisions of the proposed amended rule that would directly result in the loss of availability of a known mineral resource, such as aggregate, coal, shale, etc. of value to the region and the residents of the state, or of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. The proposed project would lower the VOC content of certain coatings which needs no mineral resource to reformulate.

~~PAR 314 would only affect definitions, fees, and reporting requirements and would not have physical effects on existing affected facilities. Therefore, PAR 314 would have no impact on mineral resources.~~

Based on the above consideration, significant adverse impacts to mineral resources are not expected from PAR 1113 ~~and PAR 314~~. Since there are no significant adverse impacts, no mitigation measures are required.

**XII. NOISE.**

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project result in:				
a) Exposure of persons to or generation of permanent noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public use airport or private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Significance Criteria**

Impacts on noise will be considered significant if:

- Construction noise levels exceed the local noise ordinances or, if the noise threshold is currently exceeded, project noise sources increase ambient noise levels by more than three decibels (dBA) at the site boundary. Construction noise levels will be considered significant if they exceed federal Occupational Safety and Health Administration (OSHA) noise standards for workers.
- The proposed project operational noise levels exceed any of the local noise ordinances at the site boundary or, if the noise threshold is currently exceeded, project noise sources increase ambient noise levels by more than three dBA at the site boundary.

**Discussion**

PAR 1113 would require lowering VOC limits for some categories, changing some coating categories, and restricting the small container exemption for some categories. ~~PAR 314 would include revised definitions, a tiered fee structure, and requirements on acquisitions of architectural coating manufacturers.~~ No major changes to existing architectural operations or stockpiling of additional materials or products outside of existing facilities are expected.

**XII. a), b), c) & d)** Excessive generation of noise, excessive groundborne vibration, or substantial increase in ambient noise levels is generally not associated with architectural coating operations. The proposed project is not expected to increase noise levels relative to existing noise levels that

are currently generated from the application and use of architectural coatings. Since architectural coating operations are not noise intensive, it is expected that painting contractors would comply with existing relevant local community noise standards and ordinances. In addition to noise generated by coating contractors operations, noise sources from adjacent sources may include nearby freeways, truck traffic to adjacent businesses, and operational noise from adjacent businesses. In general, the primary noise source at existing facilities that use architectural coatings is generated by vehicular traffic, such as trucks transporting raw materials to the facility, trucks hauling wastes away from the facility, trucks to recycle waste or other materials, and miscellaneous noise such as spray equipment (i.e. compressors, spray nozzles) and heavy equipment use (forklifts, trucks, etc.). Noise is generated during operating hours, which generally range from 6 a.m. to 5 p.m. Monday through Friday. PAR 1113 is not expected to alter noise from existing noise generating sources. It is likely that contractor or affected facilities using architectural coatings are operating in compliance with any local noise regulations that may exist in their respective communities. There will be no adverse noise impacts even if a facility is located near an airport or private airstrip. Additionally, the implementation of PAR 1113 is not expected to result in significant noise impacts in residential areas because changing the VOC content will not affect noise levels from coating applications. As with industrial or commercial areas, it is assumed that these areas are subject to local community noise standards. Contractors or do-it-yourselfers applying compliant PAR 1113 coatings in residential areas are expected to comply with local community noise standards. Thus, the lowering of the VOC content limit requirement of affected coating categories would have no additional noise impacts.

~~PAR 314 would only affect definitions, fees, and reporting requirements and would not have physical effects on existing affected facilities. Therefore, PAR 314 would have no impact on noise.~~

Based on the above considerations, significant adverse impacts to noise are not expected from PARs 1113 and 314. Since there are no significant adverse impacts, no mitigation measures are required.

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**XIII. POPULATION AND HOUSING.**

Would the project:	<b>Potentially Significant Impact</b>	<b>Less Than Significant With Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Induce substantial growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (e.g. through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Significance Criteria**

Impacts of the proposed project on population and housing will be considered significant if the following criteria are exceeded:

- The demand for temporary or permanent housing exceeds the existing supply.
- The proposed project produces additional population, housing or employment inconsistent with adopted plans either in terms of overall amount or location.

**Discussion**

PAR 1113 would require lowering VOC limits for some categories, changing some coating categories, and restricting the small container exemption for some categories. ~~PAR 314 would include revised definitions, a tiered fee structure, and requirements on acquisitions of architectural coating manufacturers.~~ No major changes to existing architectural operations or stockpiling of additional materials or products outside of existing facilities are expected.

**XIII. a) & b)** Human population in the SCAQMD’s jurisdiction is anticipated to grow regardless of implementing the proposed project. The proposed amendments will primarily affect the formulation of architectural coatings and are not anticipated to generate any significant effects, either direct or indirect on the district's population as no additional workers are anticipated to be required to comply with the proposed amendments. Further, PAR 1113 is not expected to cause a relocation of population within the SCAQMD. As a result, housing within the SCAQMD is expected to be unaffected by the proposed amendments. The population will not grow directly as a result of the proposed amended rule and the coating activity will not indirectly induce growth in the area of the coating facilities. The construction of single- or multiple-family housing units would not be required as a result of implementing the proposed project. Therefore, existing housing or populations in the district are not anticipated to be displaced necessitating the construction of replacement housing elsewhere.

~~PAR 314 would only affect definitions, fees, and reporting requirements and would not have physical effects on existing affected facilities. Therefore, PAR 314 would have no impact on population and housing.~~

Based on the above considerations, significant adverse impacts to population and housing are not expected from PARs 1113 and 314. Since there are no significant adverse impacts, no mitigation measures are required.

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**XIV. PUBLIC SERVICES.**

Would the proposal result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

	<b>Potentially Significant Impact</b>	<b>Less Than Significant With Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Significance Criteria**

Impacts on public services will be considered significant if the project results in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives.

**Discussion**

PAR 1113 would require lowering VOC limits for some categories, changing some coating categories, and restricting the small container exemption for some categories. ~~PAR 314 would include revised definitions, a tiered fee structure, and requirements on acquisitions of architectural coating manufacturers.~~ No major changes to existing architectural operations or stockpiling of additional materials or products outside of existing facilities are expected.

**XIV. a) & b)** The proposed amendments will not substantially increase the amount of businesses or equipment in the district. Reformulation of coatings is not expected to require new or additional fire fighting resources or police protection. In fact, PAR 1113 may actually result in fewer impacts to public service agencies because compliant coatings are expected to be formulated with less hazardous materials compared to current coatings. Any increase in accidental releases of compliant coating materials would be expected to result in a concurrent reduction in the number of accidental releases of existing coating materials. As a result, the net number of accidental releases would be expected to remain constant, allowing for population growth in the district. Additionally, future compliant coating materials are not expected to cause significant adverse human health impacts, so accidental release scenarios would be expected to pose a lower risk to the public and responding fire and police departments. The fire hazards were already discussed in Section VIII and the impacts were considered less than significant. Furthermore, if manufacturers continue to use solvents such as texanol, propylene glycol, ethylene glycol, etc., in their compliant water-borne

coatings, fire departments would not be expected to experience adverse impacts because in general these solvents are less flammable solvents and, therefore, create fewer emergency incidents. Demands on public service systems are not expected to increase and impacts to these systems are, therefore, not considered to be significant because any potential increase in the use of flammable substances, such as acetone, are expected to be minor and, as a result, are not expected to be adversely affect performance objectives, service ratios, response times, etc.

**XIV. c)** Because coating operations are not expected to change, contractor operations or affected facilities are not expected to require new employees. As noted in item “XIII. Population and Housing,” the proposed project will not increase population growth in the district. Consequently, no new impacts to schools, parks or other recreational facilities are foreseen as a result of implementing the proposed amendments to Rule 1113.

**XIV. d)** The proposal would not result in the need for new or physically altered public facilities in order to maintain acceptable service ratios, response times or other performance objectives.

~~PAR 314 would only affect definitions, fees, and reporting requirements and would not have physical effects on existing affected facilities. Therefore, PAR 314 would have no impact on public services.~~

Based on the above considerations, significant adverse impacts to public services are not expected from PARs 1113 ~~and 314~~. Since there are no significant adverse impacts, no mitigation measures are required.

**XV. RECREATION.**

	<b>Potentially Significant Impact</b>	<b>Less Than Significant With Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment or recreational services?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Significance Criteria**

Impacts to recreation will be considered significant if:

- The project results in an increased demand for neighborhood or regional parks or other recreational facilities.
- The project adversely affects existing recreational opportunities.

**Discussion**

PAR 1113 would require lowering VOC limits for some categories, changing some coating categories, and restricting the small container exemption for some categories. ~~PAR 314 would include revised definitions, a tiered fee structure, and requirements on acquisitions of architectural coating manufacturers.~~ No major changes to existing architectural operations or stockpiling of additional materials or products outside of existing facilities are expected.

**XV. a) & b)** The proposed amendments will not generate additional demand for, or otherwise affect land used for recreational purposes. The proposed amendments are not expected to have adverse effects on land uses in general. As discussed under “Land Use and Planning” above, there are no provisions in the proposed project that would affect land use plans, policies or ordinances, or regulations. Land use and other planning considerations are determined by local governments; no land use or planning requirements will be altered by the proposal. As already noted in item “XIII, Population and Housing”, the proposed project is not expected to increase population growth in the district because no additional employees would be required to apply lower VOC coatings so no additional demand for parks is anticipated. Further, the proposed amendments would not increase the use of existing neighborhood and regional parks or other recreational facilities or include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

~~PAR 314 would only affect definitions, fees, and reporting requirements and would not have physical effects on existing affected facilities. Therefore, PAR 314 would have no impact on recreation.~~

Based on the above considerations, significant adverse impacts to recreation are not expected from PARs 1113 and 314. Since there are no significant adverse impacts, no mitigation measures are required.

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**XVI. SOLID/HAZARDOUS WASTE.**

Would the project:	<b>Potentially Significant Impact</b>	<b>Less Than Significant With Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Comply with federal, state, and local statutes and regulations related to solid and hazardous waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Significance Criteria**

The proposed project impacts on solid/hazardous waste will be considered significant if the following occurs:

- The generation and disposal of hazardous and non-hazardous waste exceeds the capacity of designated landfills.

**Discussion**

PAR 1113 would require lowering VOC limits for some categories, changing some coating categories, and restricting the small container exemption for some categories. ~~PAR 314 would include revised definitions, a tiered fee structure, and requirements on acquisitions of architectural coating manufacturers.~~ No major changes to existing architectural operations or stockpiling of additional materials or products outside of existing facilities are expected.

**XVI. a) & b)** Coating operations are not expected to change as a result of the proposed amendments. Similarly, the volume of coatings and coating wastes is not expected to increase as a result of implementing PAR 1113. Therefore, no new solid or hazardous waste will be generated as a result of lowering the VOC content limit of certain coatings in Rule 1113. Affected facilities would continue to comply with federal, state, and local statutes and regulations related to solid and hazardous waste handling and disposal. Therefore, potential solid waste impacts are considered not significant.

~~PAR 314 would only affect definitions, fees, and reporting requirements and would not have physical effects on existing affected facilities. Therefore, PAR 314 would have no impact on solid/hazardous waste.~~

Based on the above consideration, significant adverse impacts to solid/hazardous waste are not expected from PARs 1113 ~~and 314~~. Since there are no significant adverse impacts, no mitigation measures are required.

**XVII. TRANSPORTATION/TRAFFIC.**

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### **Significance Criteria**

Impacts on transportation/traffic will be considered significant if any of the following criteria apply:

- Peak period levels on major arterials are disrupted to a point where level of service (LOS) is reduced to D, E or F for more than one month.
- An intersection's volume to capacity ratio increase by 0.02 (two percent) or more when the LOS is already D, E or F.
- A major roadway is closed to all through traffic, and no alternate route is available.
- The project conflicts with applicable policies, plans or programs establishing measures of effectiveness, thereby decreasing the performance or safety of any mode of transportation.
- There is an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system.
- The demand for parking facilities is substantially increased.
- Water borne, rail car or air traffic is substantially altered.
- Traffic hazards to motor vehicles, bicyclists or pedestrians are substantially increased.
- The need for more than 350 employees
- An increase in heavy-duty transport truck traffic to and/or from the facility by more than 350 truck round trips per day
- Increase customer traffic by more than 700 visits per day.

### **Discussion**

PAR 1113 would require lowering VOC limits for some categories, changing some coating categories, and restricting the small container exemption for some categories. ~~PAR 314 would include revised definitions, a tiered fee structure, and requirements on acquisitions of architectural coating manufacturers.~~ No major changes to existing architectural operations or stockpiling of additional materials or products outside of existing facilities are expected.

**XVII. a) & b)** PAR 1113 is not expected to alter affected coating operations so no additional transportation/circulation impacts are expected to occur directly or indirectly as a result of lowering the VOC content limit of certain coatings in Rule 1113. As noted in item XIII, Population and Housing, no new employees are expected to be needed at affected facilities and therefore no new worker trips that could increase traffic or affect in any way the level of service designation for any roadways will result from the proposed amendments. Similarly, additional parking would not be required from implementing PAR 1113. Because affected coating operations are not expected to change, no additional raw materials will be needed and, therefore, no transport trips that could affect the level of service for roadways will be generated from the continued operation of the coating activity.

**XVII. c)** Air traffic patterns are not expected to be directly or indirectly affected by the proposed amended rule because the coating activity will not require any air transportation of any materials. Since PAR 1113 will not require transport of materials by air, no increase in any safety risks are expected.

**XVII. d) & e)** The proposed amendments to Rule 1113 does not have direct or indirect impact on specific construction design because the proposed project does not require or induce the

construction of roadway design features. PAR 1113 simply lowers the VOC content limit of certain coatings, so it is expected that the architectural coating operation would not change.

**XVII. f)** Affected facilities would still be expected to comply with, and not interfere with adopted policies, plans, or programs supporting alternative transportation. The lowering of the VOC content limit of certain coatings in Rule 1113 will not hinder compliance with any applicable alternative transportation plans or policies.

~~PAR 314 would only affect definitions, fees, and reporting requirements and would not have physical effects on existing affected facilities. Therefore, PAR 314 would have no impact on transportation/traffic.~~

Based on the above considerations, significant adverse impacts to transportation/circulation are not expected from PARs 1113 ~~and 314~~. Since there are no significant adverse impacts, no mitigation measures are required.

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**XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.**

	<b>Potentially Significant Impact</b>	<b>Less Than Significant With Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion**

PAR 1113 would require lowering VOC limits for some categories, changing some coating categories, and restricting the small container exemption for some categories. ~~PAR 314 would include revised definitions, a tiered fee structure, and requirements on acquisitions of architectural coating manufacturers.~~ No major changes to existing architectural operations or stockpiling of additional materials or products outside of existing facilities are expected.

~~PAR 314 would only affect definitions, fees, and reporting requirements and would not have physical effects on existing affected facilities. Therefore, PAR 314 would have no impact on the environment.~~

**XVIII. a)** As discussed in items I through XVII above, the proposed amended rules ~~have~~ has no potential to cause significant adverse environmental effects because it would ~~a~~ result in lowering the VOC content limit of certain coatings in PAR 1113 ~~and there is no physical effects from PAR 314.~~ Therefore, the proposed project is not expected to degrade the quality of the environment,

substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal. Similarly, PARs 1113 ~~and 314~~ would not eliminate important examples of the major periods of California history or prehistory or otherwise degrade cultural resources.

**XVIII. b)** Based on the foregoing analyses, since PARs 1113 ~~and 314~~ will not result in project-specific significant environmental impacts and indeed will reduce emissions; PARs 1113 ~~and 314~~ ~~are~~ is not expected to cause cumulative impacts in conjunction with other projects that may occur concurrently with or subsequent to the proposed project. Cumulative air quality impacts from the proposed amendments, previous amendments and all other AQMP control measures considered together are not expected to be significant because implementation of all AQMP control measures is expected to result in net emission reductions and overall air quality improvement. Furthermore, PARs 1113 ~~and 314~~ impacts will not be "cumulatively considerable" because the incremental impacts are not considerable when viewed in connection with the effects of past, current, or probable future projects.

**XVIII. c)** Based on the foregoing analyses, PARs 1113 ~~and 314~~ ~~are~~ is not expected to cause significant adverse effects on human beings, either directly, or indirectly.

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## **APPENDICES**

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**APPENDIX A**

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**PROPOSED AMENDED RULE 1113**

In order to save space and avoid repetition, please refer to the latest version of Proposed Amended Rule 1113 located in the February 5, 2016 Governing Board Package. The version of Proposed Amended Rule 1113 that was circulated with the Draft EA released on September 15, 2015 for a 30-day public review and comment period ending October 15, 2015 was “Rule 1113, Draft August 19, 2015”.

Original hard copies of the Draft EA, which include the draft version of the proposed rule listed above, can be obtained through the SCAQMD Public Information Center at the Diamond Bar headquarters or by calling (909) 396-2039.

**APPENDIX B**

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**ASSUMPTIONS AND CALCULATIONS**

**Table 1 SCE Sales and Emissions**

SCE Sales

Coating Group	Year	Quarts	Emissions
RPC	2008	123,411.50	0.58
RPC	2009	145,367.37	0.68
RPC	2010	171,675.39	0.79
RPC	2011	190,585.69	0.87
RPC	2012	149,381.46	0.70
RPC	2013	158,026.51	0.74
<b>RPC</b>	<b>2014</b>	<b>151,236.87</b>	<b>0.71</b>
emissions at 100 g/L		0.09	
Em reductions RPC		0.63	

Coating Group	Year	Quarts	Emissions
IM	2008	11,284.94	0.05
IM	2009	11,632.35	0.05
IM	2010	2,330.60	0.01
IM	2011	3,397.85	0.01
IM	2012	3,243.87	0.01
IM	2013	9,611.52	0.01
<b>IM</b>	<b>2014</b>	<b>2,687.04</b>	<b>0.01</b>
emissions at 100 g/L		0.002	
Em reductions IM		0.01	
Zinc Rich Primer	2008	51.00	0.00
Zinc Rich Primer	2009	52.75	0.00
Zinc Rich Primer	2010	111.50	0.00
Zinc Rich Primer	2011	169.50	0.00
Zinc Rich Primer	2012	72.00	0.00
Zinc Rich Primer	2013	179.65	0.00
Zinc Rich Primer	2014	75.75	0.00
emissions at 100 g/L		0.000	
Em reductions Zn PSU		0.0003	

**Conversions:**

g/L\*volume (gallons)/119.83/2000/365

g/L /119.83 (convert g/L to lbs./gal)

lbs/gal x # of gallons used = lbs

lbs/2,000 (convert lbs to tons)

tons/365 to go from annual to daily

**Table 1 SCE Sales and Emissions (Continued)**

Coating Group	Year	Quarts	Emissions
Flat	2008	47,944.36	0.023
Flat	2009	7,865.50	0.006
Flat	2010	8,751.02	0.007
Flat	2011	11,882.35	0.009
Flat	2012	14,593.49	0.011
Flat	2013	18,841.33	0.014
Flat	2014	5,982.60	0.005

emissions at 100 g/L		0.003	
Em reductions Flat		0.002	
Non-Flat	2008	171,824.65	0.33
Non-Flat	2009	115,620.35	0.30
Non-Flat	2010	102,501.52	0.27
Non-Flat	2011	74,774.27	0.16
Non-Flat	2012	104,243.47	0.25
Non-Flat	2013	106,476.28	0.25
Non-Flat	2014	83,771.85	0.20
emissions at 100 g/L		0.048	
Em reductions NF		0.15	

**Table 2 Building Envelopes Coatings Emissions**

Volume (gallons)	SWA VOC	Adjusted SWA VOC	Emissions (tpd)	# products	# product over 100 g/L	# products over 50 g/L	Potential Emissions *	Projected Reductions**
20,295	86 g/L	22 g/L	0.012	12	2	3	0.01	0.005

\* All coatings formulated to 100g/L VOC limit

\*\* All coatings formulated to 50g/L

The sales weighted average (SWA) VOC is high because of a high selling non-compliant product, the adjusted SWA VOC is without the non-compliant products included.

**Table 3 Additional Water Usage**

Category	Total SCE Sales (2014 gallons)	Rustoleum RPC	Waterborne SCE	Potential increase in waterborne gallons
RPC	151,236.87	69,584.61	39.00	81,613.26
Non-Flat	83,771.85		45,465	38,306.85
IM	2,762.79		107	2,655.79
Flat	5,982.60		5,661	321.60
			<b>Total</b>	<b>122,897.51</b>

## **APPENDIX C**

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### **RESPONSES TO COMMENTS**

One comment letter was received from the American Coatings Association that contained a comment relative to CEQA. The entire comment letter is presented in Appendix C. Comments 15-1 through 15-4 are pertinent to PAR 1113 rule language and the responses to those comments can be found in the Staff Report contained in the February 5, 2016 Governing Board Package. The comment relative to CEQA is labeled 15-5 and the response is included here.



October 9, 2015

Ms. Heather Farr  
Office of Planning, Rule Development, and Area Sources  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

Ms. Cynthia Carter  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

**RE: SCAQMD Rule 1113/Rule 314 Amendments; Supplemental ACA Comments  
and CEQA Comments**

Dear Ms. Farr and Ms. Carter:

The American Coatings Association (ACA) would like to supplement the comments that we submitted on September 25, 2015 with regards to eliminating 11 categories from the Small Container Exemption (SCE), especially with regards to Stone Consolidants and Reactive Penetrating Sealers. Also there appears to be several typos in the proposed Rule 1113 Table of Standards. We have also included CEQA comments as well. Finally, we incorporate by reference previously submitted ACA comments on Rule 1113/Rule 314.<sup>1</sup>

As ACA mentioned in our September 25 comments, ACA believes that the District has not provided an adequate justification for eliminating the small container exemption for these additional categories since manufacturers do not utilize the exemption for these categories, and no emission reductions will result from this change. In addition, while the SCE has not been utilized for these categories in the past, manufacturers may look to the small container option to solve a new issue in the field in the future. Further, if for example a company makes a technology breakthrough but the product does not meet the category limit, these technologically superior products could not make it to the marketplace. Therefore we do not support eliminating the SCE for these or any categories.

These comments supplement our September 25, 2015 comments specifically with respect to Stone Consolidants and Reactive Penetrating Sealers and have included supplementary information regarding ongoing modern building preservation research in the District.

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<sup>1</sup> ACA's previous comment letters are dated: September 25, 2015; September 10, 2015; July 8, 2015; April 30, 2015; March 10, 2015; January 20, 2015.

**Stone Consolidants**

15-1

We again appreciate the District adding the Stone Consolidants category to Rule 1113 in the 2013 amendments. ACA recommends not eliminating this category from the Small Container Exemption. The category definition as written is extraordinarily narrow with regards to allowable project use. While many registered historic landmarks incorporate natural stone substrates, the technology has been successfully utilized in the repair of otherwise irreparable architectural materials including concrete and adobe.

Stone Consolidants represent a niche subcategory of materials designed to repair historic structures that have been damaged by weathering or other surface decay mechanisms. As building inventory ages, the mix of architectural substrates with identified preservation problems shifts. ACA recommends the small container exemption be maintained.

**Table of Standards and Small Container Exemption**

15-2

There seems to be several discrepancies between the August 19, 2015 PAR Rule 1113 Table of Standards and the Small Container Exemption (SCE) provision. The Table of Standards includes a check and Footnote 3 designation for Reactive Penetrating Sealers, Wood preservatives (below ground and others) and Recycled Coatings, however these categories are not listed in the Small Container Exemption provision, nor are these categories listed in the Staff report (page 19) or the Staff slide number 35 from the August 26, 2015 meeting. ACA assumes (and supports) that there is a typo in the Table of Standards and that the District is not going to eliminate the SCE for these categories. In addition, the Table of Standards has a Footnote 4 designation indicating that the Color Indicating Safety Paint category is to be eliminated from the SCE on 1/1/2019, however the Staff Report and the August 26, 2015 slide 35 indicate a 1/1/2016 date. ACA does not support eliminating this or any categories from the SCE, however if over our objection the District proceeds forward, the 1/1/2019 date is preferred.

**Reactive Penetrating Sealers**

15-3

We again appreciate the District adding the Reactive Penetrating Sealer category to Rule 1113 in the 2013 amendments. Just in case the typo mentioned earlier is not a typo, ACA recommends not eliminating the Small Container Exemption for Reactive Penetrating Sealers since these sealers allow a narrow range of high-performance water and chloride ion screening technologies used in commercial, institutional and highway and bridge deck applications. While the Small Container Exemption may not have been used extensively, there could be a need for higher VOC products to solve emerging architectural substrate protection problems in the future.

**South Coast AQMD Area Modern Building Preservation**

15-4

Los Angeles and surrounding areas are in the midst of an emerging modern building preservation crisis. Multiple task forces and working groups have been formed under the umbrella of the Los Angeles Conservancy Modern Committee and through The Getty Conservation Institute. A

15-4  
cont.

substantial number of modern structures feature concrete façades and exposed structural elements subject to the same intragranular decay mechanisms as natural stone.

The National Park Service listed ten case study homes in the National Register of Historic Places as part of a pilot project. <https://www.laconservancy.org/issues/case-study-houses>  
Many structures of similar age exist outside of this protected status. The Getty's Conserving Modern Architecture Initiative is focused on a number of identified decay and preservation issues. [http://www.getty.edu/conservation/our\\_projects/field\\_projects/cmai/](http://www.getty.edu/conservation/our_projects/field_projects/cmai/)

The Initiative recently convened a meeting of experts to study the conservation of concrete heritage with the modern building preservation problem in mind.  
[http://www.getty.edu/conservation/our\\_projects/field\\_projects/cmai/cmai\\_experts.html](http://www.getty.edu/conservation/our_projects/field_projects/cmai/cmai_experts.html)

The resulting report pointed to a number of unresolved technology issues yet to be fully researched. Coatings designed to protect substrates without visible changes in appearance will be part of the solution. That may or may not include existing Stone Consolidant and Reactive Penetrating Sealer technologies – either would be outside the scope of current restrictive category definitions. The solution could include new technologies that do not fit the 50 g/L Default limit. Either path points to a need for ongoing regulatory flexibility provided by the Small Container Exemption.

15-5

**CEQA Considerations**

ACA suggests that the California Environmental Quality Act (CEQA) requires that projects potentially affecting historical resources weigh the costs and benefits in the project Environmental Impact Assessment (EIA). ACA believes there is a direct link between the lack of availability of specialty coatings for historical structures (since the District is eliminating the Small Container Exemption Stone Consolidants and Reactive Penetrating Sealers) and potential for permanent and negative impairment of same in the currently proposed SCM revisions. For your convenience, a section from CEQA follows:

**§ 21084.1. Historical resource; substantial adverse change**

A project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. For purposes of this section, an historical resource is a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources. Historical resources included in a local register of historical resources, as defined in subdivision (k) of Section 5020.1, or deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1, are presumed to be historically or culturally significant for purposes of this section, unless the preponderance of the evidence demonstrates that the resource is not historically or culturally significant. The fact that a resource is not listed in, or determined to be eligible for listing in, the California Register of Historical Resources, not included in a local register of historical resources, or not deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1 shall not

ACA Comments on SCAQMD Rule 1113 & Rule 314 Amendments

September 9, 2015

preclude a lead agency from determining whether the resource may be an historical resource for purposes of this section.

Thank you for your consideration of our comments. Please do not hesitate to contact us if you have any questions.

Sincerely,

/s/

David Darling, P.E.  
Senior Director, Environmental Affairs

/s/

Timothy Serie, Esq.  
Counsel, Government Affairs

Cc: Philip Fine

**\*\*Sent via email\*\***

Comments 15-1 through 15-4 are pertinent to PAR 1113 rule language and those responses are contained in the Staff Report. Please refer to the Staff Report in the February 5, 2016 Governing Board Package.

*Response to comment 15-5*

In the 2011 amendment to Rule 1113, staff received a comment from the State Office of Historic Preservation detailing their concerns with the restrictions placed on stone consolidants and reactive penetrating sealers. At that time, staff worked with the manufacturers and agreed to allow a higher VOC category for materials used to address the needs of historic preservation (including stone consolidants and reactive penetrating sealers).

For stone consolidants, the sales weighted VOC for 2014 is 100 g/L and there has never been a product reported over the 450 g/L VOC limit. Therefore, PAR 1113 will not affect the sale and usage of stone consolidants within SCAQMD's jurisdiction.

For reactive penetrating sealers, the Rule 314 data indicates that there is only one product sold slightly over the 350 g/L VOC limit. The same company also sells several compliant versions of this product, one at a significantly higher sales volume. The sales weighted VOC for reactive penetrating sealers is 329 g/L for 2014 sales. Therefore, SCAQMD staff does not believe that any historical structures or resources will be adversely impacted due to a lack of the availability of specialty coatings from the proposed provisions set forth in PAR 1113.