

# **Kern County Air Pollution Control District**

## **Rule 410.1A ARCHITECTURAL COATING CONTROLS**

**FINAL STAFF REPORT**

**April 5, 2010**

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## **I. BOARD ADOPTION**

Rule 410.1A, Architectural Coating Controls was adopted by the Kern County Air Pollution Control District's Governing Board on March 11, 2010 at the March 2010 Board meeting. Although Rule 410.1A has been adopted, it will not become effective until January 1, 2011. Rule 410.1 Architectural Coatings (the District's current architectural coatings rule) was rescinded on March 11, 2010 but will remain effective through December 31, 2010. On January 1, 2011 Rule 410.1A, Architectural Coating Controls will become effective and supersede Rule 410.1 Architectural Coatings.

## **II. INTRODUCTION**

This staff report presents the changes made to the rule designed to regulate architectural coatings. Initially Kern County Air Pollution Control District (KCAPCD) staff intended to revise the current architectural coatings rule, Rule 410.1, Architectural Coatings. However, after realizing the extent of the proposed revisions, staff believed it would be more efficient to draft and adopt a new rule rather than revise the current rule. Rule 410.1A will substantially reduce VOC emissions that result from the application of architectural coatings.

On October 28, 2009 KCAPCD held a public workshop for proposed draft Rule 410.1A at the Mojave Veteran's Hall in Mojave, Ca. In response to the workshop, KCAPCD received comments and suggested changes from the U.S. EPA (EPA), the California Air Resources Board (ARB), and interested coatings and chemical manufacturers. KCAPCD considered all comments and suggested changes. Staff incorporated all EPA and ARB suggested changes along with industry suggested changes that would not modify the intent or VOC Content Limits of the Rule.

A revised version of proposed draft Rule 410.1A was submitted to the EPA and ARB for review and approval. Upon receiving written approval of Draft Rule 410.1A, KCAPCD brought the Rule before the KCAPCD Governing Board for adoption.

Appendix A is the clean version of adopted Rule 410.1A Architectural Coating Controls.

Appendix B is a strikeout underline version of adopted Rule 410.1A Architectural Coating Controls showing all changes made to the rule after the workshop.

Appendix C is the Response to Comments that followed the October 28, 2009 workshop.

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### **III. DEFINITION OF ARCHITECTURAL COATING**

Architectural coatings are products that are applied to stationary structures and their accessories. They include house paints, stains, industrial maintenance coatings, traffic coatings, and many other products. When these coatings are applied, VOCs are emitted from the coatings and from solvents that are used for thinning and clean-up.

### **IV. EMISSIONS FROM ARCHITECTURAL COATINGS**

Architectural coatings represent a significant source of VOC emissions throughout California. In the presence of sunlight, VOCs and nitrogen oxides (NOx) undergo a series of chemical reactions to form ozone. Ozone is a strong oxidizer that irritates the respiratory system, leading to a variety of adverse health effects. It also damages plant life and property. VOC emissions from architectural coatings can also lead to the formation of particulate matter (PM). Particulate matter less than 10 microns in diameter can be inhaled deep into the lungs. PM exposure has been associated with a wide range of adverse health impacts, including hospitalization and premature death. Ozone and PM are two of the most serious air pollutants in California. To protect California's population from the harmful effects of exposure to ozone and PM, the ARB and the U.S. EPA have established air quality standards for these contaminants.

VOC emissions from the use of architectural coatings in California are estimated to be about 118 tons per day (tpd) in 2004. This includes 95 tpd from coatings, and about 23 tpd from associated cleanup solvents, thinners, and additives. Total emissions from architectural coatings and associated materials represent almost 10 percent of the VOC emissions from stationary and area sources, and almost 5 percent of the total VOC emissions statewide. The VOC emissions from architectural coatings are more than the combined VOC emissions from petroleum refining and marketing, and are comparable to the emissions from approximately 5 million passenger cars.

### **V. REDUCTIONS IN VOC EMISSIONS**

Based on survey data collected by the ARB, the sales volume for architectural coatings increased from more than 98 million gallons in 2000, to more than 110 million gallons in 2004. However, the total statewide VOC emissions for architectural coatings decreased from 110 to 95 tpd from 2000 to 2004. The VOC reduction occurred due to the implementation of rules with lower VOC limits. Please note that these VOC emissions do not include emissions from thinning solvents, cleanup solvents, or additives.

The survey data also indicates that architectural coatings in California are continuing to shift toward waterborne products. From 2000 to 2004, the percent of total sales volume attributed to waterborne coatings increased from 83 to 88

percent. During this same time period, the architectural coating emissions per capita and the average amount of VOCs per gallon of coating decreased more than 20 percent.

## **VI. RULE 410.1A ARCHITECTURAL COATING CONTROLS**

The provisions of Rule 410.1A, Architectural Coatings Controls are based on ARB's 2007 SCM for architectural coatings. Rule 410.1A will be applicable to architectural coatings as defined in this staff report and to any person who manufactures, blends, repackages, supplies, sells, offers for sale, solicits, or applies any architectural coating for use within the Kern County Air Pollution Control District.

## **VII. EXEMPTIONS**

The Exemptions Section of the Rule has been moved up to Section IV immediately after Severability and directly before Definitions. Section IV.A.2 has been added, which allows any aerosol coating product to be exempt from the provisions of the Rule.

Several manufacturers requested KCAPCD to allow the use of Tertiary Butyl Acetate (t-butyl acetate) TBAC or TBAc as an exempt organic compound in Rule 410.1A. After reviewing the U.S. EPA's delisting of TBAC as a VOC for purposes of VOC emissions limitations and VOC content requirements, the KCAPCD has added TBAC to Rule 102 (Definitions) as an exempt organic compound.

## **VIII. CHANGES IN CATEGORIES AND DEFINITIONS**

To enhance clarity, enforcement, and to limit the types of products that qualify for inclusion into each specific category of Rule 410.1A, Section V of the rule provides definitions for new or revised terms that are not self-explanatory.

To maintain consistency with other air district architectural coatings rules definitions for *Gonioapparent* and *Metallic* have been deleted from 410.1A

Definitions for the following new product categories have been added to 410.1A

- Aluminum Roof
- Basement Specialty Coating
- Concrete/Masonry Sealer
- Driveway Sealer
- Maximum Thinning
- Medium Density Fiberboard
- Particleboard
- Pearlescent
- Reactive Penetrating Sealer
- Semitransparent
- Stone Consolidant
- Tub and Tile Refinish
- Veneer
- Virgin Materials
- Waterproofing Membrane
- Wood Coatings

- Plywood
- Primer, Sealer, and Undercoater
- Wood Substrate
- Zinc-Rich Primer

The following categories have revised definitions in 410.1A.

- Bituminous Roof Primer
- Concrete Curing Compound
- Faux Finishing Coating
- Fire-Resistive Coating
- Fire-Retardant Coating
- Floor Coating
- Graphic Arts
- Industrial Maintenance
- Low Solids Coating
- Metallic Pigmented
- Multi-Color Coating
- Nonflat – High Gloss
- Post-Consumer Coating
- Primers, Sealers, and Undercoaters
- Recycled Coating
- Roof Coating
- Rust Preventative Coating
- Secondary Industrial Materials
- Shellac
- Specialty Primers, Sealers, and Undercoaters
- Stain
- Swimming Pool Coating
- VOC Content

*Faux Finishing Coating* has been expanded to include the following provision: A decorative coating used to create a metallic appearance that contains greater than 48 grams of elemental metallic pigment per liter of coating as applied (greater than 0.4 pounds per gallon) and which requires a clear topcoat to prevent the degradation of the finish under normal use conditions. The metallic pigment content shall be determined in accordance with SCAQMD Method 318-95, incorporated by reference in subsection VII.C.10.

ARB requested that the following language be added to *Fire-Retardant Coating*: A coating labeled and formulated to retard ignition and flame spread, that has been fire tested and rated by a testing agency approved by building code officials for use in bringing building and construction materials into compliance with federal, state and local building code requirements. The fire-retardant coating and the testing agency must be approved by building code officials. The fire-retardant coating shall be tested in accordance with ASTM Designation E 84-07, incorporated by reference in subsection VII.C.7. Effective January 1, 2011, the Fire Retardant coating category is eliminated and...

“Air brush” has been added to the *Graphic Arts* definition.

“Application to floors” has been added to the *Industrial Maintenance Coating* definition and “Antenna” and “Antifouling” have been deleted. “Antenna” and “Antifouling” coatings automatically default to the IM category and do not specifically need to be called-out.

## IX. EXCLUDED CATEGORIES AND DEFINITIONS

The following categories and definitions have been deleted from Rule 410.1A because they were found unnecessary, or were replaced by new categories.

Products from deleted categories have been moved to an appropriate previously existing category, are now included within a new category, or will default to the most closely related category if not called-out in a definition.

- Antenna Coating
- Antifouling Coating
- Clear Brushing Lacquers
- Clear Wood Coating
- Flow Coating
- Lacquer
- Nonindustrial Use
- Primer
- Quick Dry Enamel
- Quick Dry Primer, Sealer, and Undercoater
- Sanding Sealer
- Sealer
- Swimming Pool Repair and Maintenance
- Temperature Indicator Safety Coating
- Undercoater
- Varnish
- Waterproofing Concrete/Masonry Sealer
- Waterproofing Sealer

Table 1 displays the new or existing category that each deleted category or product will now fall under.

**TABLE 1**

<b>NEW CATEGORY</b>	<b>DELETED CATEGORY</b>
Basement Specialty Coatings:	<ul style="list-style-type: none"> <li>• Waterproofing Concrete/Masonry Sealers,</li> <li>• Waterproofing Sealers</li> </ul>
Concrete/Masonry Sealers:	<ul style="list-style-type: none"> <li>• Waterproofing Concrete/Masonry Sealers</li> </ul>
Flat, Nonflat, Nonflat-High Gloss:	<ul style="list-style-type: none"> <li>• Fire Retardant Coatings Clear and Opaque,</li> <li>• Quick Dry Enamels</li> </ul>
High Temperature Coatings:	<ul style="list-style-type: none"> <li>• Temperature-Indicator Safety Coatings</li> </ul>
Industrial Maintenance:	<ul style="list-style-type: none"> <li>• Antenna Coatings,</li> <li>• Antifouling Coatings,</li> <li>• Flow Coatings,</li> <li>• Quick Dry Primers, Sealers &amp; Undercoaters</li> </ul>
Reactive Penetrating Sealers:	<ul style="list-style-type: none"> <li>• Waterproofing Concrete/Masonry Sealers,</li> <li>• Waterproofing Sealers</li> </ul>
Swimming Pool Coatings:	<ul style="list-style-type: none"> <li>• Swimming Pool Repair and Maintenance</li> </ul>
Waterproofing Membranes:	<ul style="list-style-type: none"> <li>• Waterproofing Sealers</li> </ul>
Wood Coatings:	<ul style="list-style-type: none"> <li>• Clear Brushing Lacquers,</li> <li>• Lacquers (including lacquer sanding sealers),</li> <li>• Sanding Sealers (other than lacquer sanding sealers),</li> <li>• Varnishes</li> </ul>

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## X. CHANGES IN VOC CONTENT LIMITS

Table 2 displays the reductions in VOC Content limits between the effective dates of Rule 410.1 and Rule 410.1A.

**TABLE 2**

Coating Category	Effective Until 1/1/2011	Effective 1/1/2011	Effective 1/1/2012
<b>Flat Coatings</b>	100	50	
<b>Nonflat Coatings</b>	150	100	
<b>Nonflat - High Gloss Coatings</b>	250	150	
<b>Specialty Coatings</b>			
Aluminum Roof Coatings		400	
Antenna Coatings	530	See Table 1	
Antifouling Coatings	400	See Table 1	
Basement Specialty Coatings		400	
Bituminous Roof Coatings	300	50	
Bituminous Roof Primers	350	350	
Bond Breakers	350	350	
Clear Wood Coatings			
• Clear Brushing Lacquers	680	See Table 1	
• Lacquers (including lacquer sanding sealers)	550		
• Sanding Sealers (other than lacquer sanding sealers)	350		
• Varnishes	350		
Concrete Curing Compounds	350	350	
Concrete/Masonry Sealers		100	
Driveway Sealers		50	
Dry Fog Coatings	400	150	
Faux Finishing Coatings	350	350	
Fire Resistive Coatings	350	350	
Fire Retardant Coatings			
• Clear	650	See Table 1	
• Opaque	350		
Floor Coatings	250	100	
Flow Coatings	420	See Table 1	
Form-Release Compounds	250	250	
Graphic Arts Coatings (Sign Paints)	500	500	
High Temperature Coatings	420	420	
Industrial Maintenance Coatings	250	250	
Low Solids Coatings	120	120	
Magnesite Cement Coatings	450	450	
Mastic Texture Coatings	300	100	
Metallic Pigmented Coatings	500	500	
Multi-Color Coatings	250	250	
Pre-Treatment Wash Primers	420	420	
Primers, Sealers, and Undercoaters	200	100	
Quick Dry Enamels	250	See Table 1	
Quick Dry Primers, Sealers & Undercoaters	200	See Table 1	
Reactive Penetrating Sealers		350	
Recycled Coatings	250	250	
Roof Coatings	250	50	
Rust Preventative Coatings	400	400	250
Shellacs:			
• Clear	730	730	
• Opaque	550	550	
Specialty Primers, Sealers, and Undercoaters	350	350	100
Stains	250	250	
Stone Consolidants		450	
Swimming Pool Coatings	340	340	

**TABLE 2  
Continued**

<b>Coating Category</b>	<b>Effective Until 1/1/2011</b>	<b>Effective 1/1/2011</b>	<b>Effective 1/1/2012</b>
Swimming Pool Repair and Maintenance Coatings	340	See Table 1	
Temperature-Indicator Safety Coatings	550	See Table 1	
Traffic Marking Coatings	150	100	
Tub and Tile Refinish Coatings		420	
Waterproofing Concrete/Masonry Sealers	400	See Table 1	
Waterproofing Membranes		250	
Waterproofing Sealers	250	See Table 1	
Wood Coatings		275	
Wood Preservatives	350	350	
Zinc-Rich Primers		340	

## **XI. PROVISIONS THAT HAVE BEEN EXCLUDED**

The following is a list of provisions found in Rule 410.1 that have been excluded from Rule 410.1A.

- Annual reports have been deleted for the following: Clear Brushing Lacquers; Rust Preventative Coatings; Specialty Primers, Sealers, and Undercoaters; Toxic Exempt Compounds (perchloroethylene and methylene chloride); Recycled Coatings; Bituminous Roof Coatings; and Bituminous Roof Primers.
- Rule 410.1 specifically prohibited the use of Rust Preventative Coatings for industrial use, unless they complied with the 250 g/l VOC limit for Industrial Maintenance Coatings. Since Rust Preventative and Industrial Maintenance Coatings have the same proposed VOC limit, it is no longer necessary to maintain the prohibition provision and it is proposed for elimination.
- Rule 410.1 Architectural Coatings contained a special provision for Lacquers that allowed a person to add VOC to a lacquer to avoid blushing of the finish, if certain conditions were met. In Rule 410.1A, products that were formerly classified as Lacquers are now included in the new Wood Coatings category and the VOC limit is lowered from 550 g/l to 275 g/l. ARB staff has evaluated formulations and manufacturer information for Lacquers that comply with the proposed 275 g/l limit and have determined that the lacquer blushing provision is no longer necessary.
- Rule 410.1 contained an averaging compliance option, which expired in 2005. While averaging is a viable option for a few large businesses, it is difficult for small businesses to participate because they have fewer products. ARB staff has worked extensively with stakeholders to develop categories and VOC limits that are technologically feasible, without the need for an averaging program. Averaging has been eliminated.

- The petition process has been deleted which allows for the use of 340 g/l Industrial Maintenance Coatings in areas with persistent fog and cold temperatures. This petition process was eliminated because it was only used once. ARB staff determined that it was no longer necessary.
- The test method for determining drying times has been deleted because the Quick Dry categories have been eliminated and there is no need to verify drying times. The test method for determining surface chalkiness has also been deleted because chalkiness has been removed from the criteria in the Specialty Primers, Sealers, and Undercoaters category.

## **XII. NEW REQUIREMENTS**

Rule 410.1A contains a new requirement of sales data submittal of architectural coatings. A responsible official from each manufacturer shall upon request of the Executive Officer of the ARB, or his or her delegate, provide data concerning the distribution and sales of architectural coatings. The responsible official shall provide all requested sales data within 180 days of request. Failure to do so could result in the issuance of a Notice of Violation or a Notice to Comply from the KCAPCD. Collection of these data is authorized in the California Health and Safety Code, which requires submission of data to estimate emissions.

Rule 410.1A includes other requirements which are similar to those found in Rule 410.1 but with slight modifications.

These requirements include the following:

- Container labeling requirements regarding the date of manufacture, VOC content, thinning recommendations, and labeling specific to selected coating categories;
- A “painting practices” provision designed to limit VOC emissions from open paint containers;
- A thinning provision specifying allowable thinning practices; and
- A “sell-through” provision allowing three years to sell products manufactured prior to the effective date of a VOC limit.

## **XIII. CHANGES TO REQUIREMENTS**

Section VI.C. *Sell-Through/Existing Stock of Coatings* has been revised as follows:

A coating manufactured prior to the VOC Content limit effective date(s) specified for that coating in the Table of Standards, that complied with the VOC Content

limit in effect at the time the coating was manufactured, may be sold, supplied, or offered for sale for up to three years after the specified VOC Content limit effective date(s) listed in the Table of Standards. Such a coating may be applied at any time, both before and after the specified effective date. This subsection VI.C does not apply to any coating that does not display the date or date-code required by subsection VII.A.1.

#### **XIV. CHANGES TO ADMINISTRATIVE REQUIREMENTS**

The following changes have been made to Section VII *Administrative Requirements*:

“Clear topcoats” has been added to Section VII.A.4.

The terms “Not for residential use” and “Not intended for residential use” have been added to Section VII.A.5.

The following provision has been added to VII.C *Test Methods*:

Calculation of VOC Content: For the purpose of determining compliance with the VOC content limits in the Table of Standards, the VOC content of a coating shall be determined as defined in subsection V.JJJ, V.KKK, or V.LLL. The VOC content of a tint base shall be determined without colorant that is added after the tint base is manufactured. If the manufacturer does not recommend thinning, the VOC content must be calculated for the product as supplied. If the manufacturer recommends thinning, the VOC content must be calculated including the maximum amount of thinning solvent recommended by the manufacturer. If the coating is a multi-component product, the VOC content must be calculated as mixed or catalyzed. If the coating contains silanes, siloxanes, or other ingredients that generate ethanol or other VOCs during the curing process, the VOC content must include the VOCs emitted during curing.

Gonioapparent Characteristics for Coatings has been deleted from VII.C *Test Methods* because it is no longer needed.

#### **XV. COST EFFECTIVENESS**

ARB staff conducted a cost effectiveness analysis of each proposed limit as a separate, stand-alone regulation. Treating each proposed limit as a separate regulation prevents very cost-effective limits (e.g., those with large emission reductions coupled with low costs) from “masking” relatively cost-ineffective limits. The total cost of the proposed limits is estimated to be 12.3 million dollars per year in 2007 dollars. The overall average cost-effectiveness of the proposed limits is estimated to be \$1.12 per pound of VOC reduced. This compares favorably with the cost effectiveness of similar regulations.

Table 3 shows the cost-effectiveness of individual limits ranging from net savings to a net cost of \$13.90 per pound of VOC reduced. The \$13.90 per pound value for Floor Coatings is due to a large number of non-complying products being sold in small volumes. Staff believes that it is appropriate for Floor Coatings manufacturers to reformulate their products to meet the proposed limit because 85 percent of the Floor Coatings manufacturers have already reformulated their coatings to meet the proposed VOC limit.

**TABLE 3**

<b>Coating Category</b>	<b>Individual Cost-Effectiveness for Each Limit (\$ per Pound VOC Reduced)</b>	<b>Calculated Cost per Gallon to Consumers <sup>1</sup> (\$ per Gallon)</b>	<b>Cost Increase Per Gallon to Consumers (\$ per Gallon)</b>
Aluminum Roof	\$0.41	\$14.63	\$1.16
Bituminous Roof	\$1.02	\$11.84	\$6.43
Concrete Masonry Sealer	-\$0.36	\$14.09	-\$0.88
Dry Fog	-\$0.52	\$34.86	-\$3.96
Flat	-\$0.69	\$17.81	-\$0.33
Floor	\$13.90	\$16.96	\$27.30
Mastic Texture	\$2.38	\$17.72	\$8.61
Non Flat	\$7.03	\$19.44	\$4.40
Non Flat High Gloss	-\$1.38	\$23.96	-\$3.39
PSU	\$2.73	\$16.90	\$2.51
Roof	\$1.38	\$29.94	\$1.95
Rust Prevention	-\$0.46	\$30.30	-\$2.51
Specialty PSU	-\$0.71	\$25.19	-\$6.32
Traffic Marking	\$4.76	\$14.18	\$4.00
Waterproofing Membrane	\$6.55	\$33.38	\$17.00
Wood Coatings	-\$1.13	\$38.70	-\$6.34
<b>Overall Results</b>	<b>Cost-Effectiveness (\$ Per Lb VOC Reduced)</b>	<b>Cost per Gallon (\$ Per Gallon)</b>	<b>Cost Increase (\$ Per Gallon)</b>
	\$1.12	\$19.20	\$1.21

1. Costs per gallon were calculated based on raw material costs, and do not necessarily reflect actual retail prices.

## **XVI. VOC REDUCTIONS ACCOMPLISHED BY RULE 410.1**

The implementation of Rule 410.1A is expected to produce substantial long-term VOC emission reductions. Rule 410.1A will contribute to a multi-district (outside of South Coast AQMD), total VOC reduction of up to 28 percent. This is equivalent to a VOC emission reduction of approximately 15.2 tons per/day (approximately 0.101 tpd in KCAPCD) by the year 2012.

Table 4 below shows the expected combined multi-district 15.2 tons per/day of VOC emission reductions outside of the South Coast AQMD. Table 4 lists only the categories that will have lower VOC limits beginning January 1, 2011. Although there are emission reductions from 19 categories, 95 percent of the emission reductions are from nine categories, which account for 80 percent of total emissions. These nine categories are highlighted in boldface in Table 4.

TABLE 4

<b>Total VOC emissions reductions for categories with 2011 lower VOC limits</b> (Large containers only from multi-districts, excluding South Coast AQMD)				
<b>Coating Category</b>	<b>Current VOC Limit (g/l)</b>	<b>2011 VOC Limit (g/l)</b>	<b>California market share outside of SCAQMD</b>	<b>Emissions Reductions excluding SCAQMD</b>
Aluminum Roof	500	400	31%	0.19
Bituminous Roof	300	50	90%	0.17
<b>Concrete/Masonry Sealer<sup>1</sup></b>	<b>250-400</b>	<b>100</b>	<b>41%</b>	<b>0.54</b>
Driveway Sealer	100	50	100%	0.00
<b>Dry Fog</b>	<b>400</b>	<b>150</b>	<b>42%</b>	<b>0.31</b>
<b>Flat</b>	<b>100</b>	<b>50</b>	<b>7%</b>	<b>3.12</b>
Floor	250	100	85%	0.07
Mastic Texture	300	100	79%	0.10
<b>Nonflat - High Gloss</b>	<b>250</b>	<b>150</b>	<b>28%</b>	<b>0.91</b>
<b>Nonflat<sup>2</sup></b>	<b>150</b>	<b>100</b>	<b>28%</b>	<b>2.77</b>
<b>Primers, Sealers, and Undercoaters</b>	<b>200</b>	<b>100</b>	<b>36%</b>	<b>1.12</b>
Reactive Penetrating Sealer <sup>1</sup>	250-400	350	93%	0.00
Roof	250	50	83%	0.07
<b>Rust Preventative</b>	<b>400</b>	<b>250<sup>4</sup></b>	<b>3%</b>	<b>1.57</b>
<b>Specialty Primers, Sealers, and Undercoaters</b>	<b>350</b>	<b>100<sup>4</sup></b>	<b>22%</b>	<b>2.62</b>
Traffic Marking	150	100	74%	0.09
Waterproofing Membranes <sup>1</sup>	250-400	250	68%	0.09
<b>Wood Coatings<sup>1</sup></b>	<b>250-680</b>	<b>275</b>	<b>50%</b>	<b>1.41</b>
Zinc-Rich Primer	500	340	54%	0.01
<b>Total (tons/day)</b>				<b>15.2</b>

1. These are new categories that include coatings from various categories from Rule 410.1. The "Current VOC Limit" for these categories represents the range of VOC limits of the coatings that were combined into the new categories.
2. As of January 1, 2011, the Fire Retardant coating categories are eliminated and coatings with fire retardant properties will be subject to the VOC limit of their primary category (e.g., Flat, Nonflat, etc.). To estimate emission reductions, it was assumed that Fire Retardant would be classified as Nonflat with a VOC limit of 100 g/l, because the majority of the reported coatings were nonflat.
3. Boldface indicates the nine categories that account for 95 percent of the VOC emission reductions.
4. Lower VOC limits do not apply until January 1, 2012 for Rust Preventative Coatings and Specialty Primers, Sealers, and Undercoaters.

## XVII. ECONOMIC IMPACTS

The economic impacts are quantified to the extent feasible, but economic impact analyses can be inherently imprecise by nature. Therefore, some projections are necessarily qualitative or semi-quantitative, based on general observations about the architectural coatings industry. The economic impacts analysis for the proposed Rule provides a general picture of the economic impacts that typical businesses might encounter, but staff recognizes that individual companies may experience impacts different than those projected in this analysis.

Typical California businesses will be affected by the proposed SCM to the extent that the additional costs imposed by the proposed requirements would change their profitability. ARB estimated profitability impacts by calculating the decline in the return on owner's equity (ROE). Assuming that coating manufacturers will have to absorb all of the costs associated with the SCM, the proposed SCM is expected to result in an average ROE decline of 2.1 percent, which is not considered to be a significant impact on the profitability of affected businesses.

ARB'S analysis shows that most affected businesses would be able to absorb the costs of the proposed SCM with no significant adverse impacts on their profitability. However, the proposed SCM may impose economic hardship on some businesses with small or no margin of profitability. Because the proposed amendments would not alter significantly the profitability of most businesses, ARB does not expect a noticeable change in employment; business creation, elimination or expansion; and business competitiveness in California.

If businesses are unable to reduce their costs of doing business, they would pass their cost increases on to consumers. If all costs were passed on to the consumer ARB estimates an average potential increase of about \$1.21 per gallon.

ARB stated in their Architectural Coatings 2007 SCM that consumers who do not wish to purchase these reformulated coatings would still be able to buy the currently available complying coatings at current prices. These products will still be available with no expected price increase. The competition from these existing compliant coatings will likely constrain any price increases for the reformulated coatings. This would keep most manufacturers from passing their total increased costs onto the consumers. Thereby, making the actual retail price increases less than the likely projections.

Furthermore, companies that supply resins, solvents, or other chemicals and equipment for use in reformulating architectural coatings would potentially benefit from the proposed SCM as they experience an increase in demand for their products.

## **XVIII. ENVIRONMENTAL IMPACTS**

Both the California Environmental Quality Act (CEQA) and ARB policy require an evaluation of the potential adverse environmental impacts of proposed projects. In June 2000, ARB staff prepared a formal environmental impact report (EIR) for the 2000 Suggested Control Measures (SCM) for architectural coatings. The EIR included an analysis of potential environmental impacts that could result throughout California (excluding the South Coast AQMD) from implementation of the 2000 SCM. ARB staff investigated six main areas of potential environmental impacts which include: air quality; water demand and quality; public services; transportation and circulation; solid and hazardous waste; and health hazards.

The analysis concluded that implementing the SCM would have no significant adverse impacts, but would have a net air quality benefit.

In September 2007, ARB released a staff prepared Technical Support Document (TSD) designed to accompany the proposed 2007 SCM for architectural coatings. Chapter 6 of the TSD describes the potential environmental impacts associated with adoption of the 2007 SCM. The TSD explains that there will be no significant adverse environmental impacts associated with adopting the 2007 SCM. In addition, adoption and implementation of the 2007 SCM is expected to produce substantial long-term VOC emission reductions. Based on the analysis of potential direct and indirect air quality effects associated with a multi-district implementation of the 2007 SCM, the overall Statewide (excluding South Coast AQMD) VOC emissions reduction will be approximately 15 tpd by the year 2012. ARB staff believes that districts can use the 2007 TSD and the 2000 EIR to support their environmental impact analyses when they adopt local rules based on the proposed 2007 SCM for architectural coatings.

KCAPCD's initial study for Rule 410.1A found that all potentially significant effects have been analyzed adequately in ARB's previous EIR and in Chapter 6 of the 2007 TSD to the SCM. All impacts have been avoided or mitigated pursuant to that earlier EIR and no new impacts found. Therefore, KCAPCD is referencing the ARB EIR study and subsequent ARB analysis of the revised SCM. Nothing further is required under CEQA.

A complete copy of the Final Program Environmental Impact Report and the Technical Support Document can be obtained by mail from:

California Air Resources Board  
Cal EPA Building 1001 I St. P.O. Box 2815, Sacramento, CA 95812

Or on the ARB website:

EIR: <http://www.arb.ca.gov/coatings/arch/CEQA/FEIR.htm>

TSD: [http://www.arb.ca.gov/coatings/arch/TSD\\_Chapters\\_5-8.pdf](http://www.arb.ca.gov/coatings/arch/TSD_Chapters_5-8.pdf)

## **XIX. SOCIOECONOMIC IMPACTS**

CHSC Section 40728.5 exempts districts with a population of less than 500,000 persons from the requirement to assess the socioeconomic impacts of proposed rules. Eastern Kern County population is below 500,000 persons.

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**XX. REFERENCES**

Air Resources Board. "2001 Architectural Coatings Survey, Final Reactivity Analysis." March, 2005.

Air Resources Board. "2005 Architectural Coatings Survey, Draft Report." September, 2006.

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Air Resources Board. "Environmental Impact Assessment of Tertiary-Butyl Acetate." January, 2006.

Air Resources Board. "Final Program Environmental Impact Report." June, 2000.

Air Resources Board. "Staff Report for Proposed Amendments to the Suggested Control Measure for Architectural Coatings." September, 2007.

Air Resources Board. "Technical Support Document for Proposed Amendments to the Suggested Control Measure for Architectural Coatings." September, 2007.

U.S. EPA. "Definitions of VOC and ROG." November, 2004.

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**APPENDIX A:**  
**ADOPTED RULE 410.1A**  
**ARCHITECTURAL COATING CONTROLS**

## 410.1A Final Staff Report – Adopted Rule

### **RULE 410.1A      Architectural Coating Controls** Adopted 3/11/10 Effective as of 1/1/2011

#### **I.      Purpose**

The purpose of this rule is to limit VOC emissions from architectural coatings. This rule specifies VOC Content limits, storage, cleanup, and labeling requirements for architectural coatings.

#### **II.     Applicability**

Except as provided in subsection IV, the provisions of this rule are applicable to architectural coatings as defined in this rule and to any person who manufactures, blends, repackages, supplies, sells, offers for sale, solicits, or applies any architectural coating for use within the District.

#### **III.    Severability**

Each provision of this rule shall be deemed severable, and in the event that any provision of this rule is held to be invalid, the remainder of this rule shall continue in full force and effect.

#### **IV.    Exemptions**

A. Provisions of this Rule shall not apply to:

1. Any architectural coating that is supplied, sold, offered for sale, or manufactured for use outside of the District or for shipment to other manufacturers for reformulation or repackaging.
2. Any aerosol coating product.

B. Provisions of section VI and subsection VII.A shall not apply to any architectural coating sold in a container with a volume of one liter (1.057 quarts) or less.

#### **V.     Definitions**

- A. Adhesive: Any chemical substance applied for the purpose of bonding two surfaces together other than by mechanical means.
- B. Aerosol Coating Product: A pressurized coating product containing pigments or resins that dispenses product ingredients by means of a propellant and is packaged in a disposable can for hand-held application, or for use in specialized equipment for ground traffic/marketing applications.
- C. Aluminum Roof Coating: A coating labeled and formulated exclusively for application to roofs and containing at least 84 grams of elemental aluminum pigment per liter of coating (at least 0.7 pounds per gallon). Pigment content shall be determined in accordance with SCAQMD Method 318-95, incorporated by reference in subsection VII.C.10.

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- D. Appurtenance: Any accessory to a stationary structure coated at the site of installation, whether installed or detached, including but not limited to: bathroom and kitchen fixtures; cabinets; concrete forms; doors; elevators; fences; hand railings; heating equipment, air conditioning equipment and other fixed mechanical equipment or stationary tools; lampposts; partitions; pipes and piping systems; rain gutters and downspouts; stairways, fixed ladders, catwalks and fire escapes; and window screens.
- E. Architectural Coating: A coating to be applied to stationary structures or their appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs. Coatings applied in shop applications or to nonstationary structures such as airplanes, airships, ships, boats, locomotives, railcars and automobiles, and adhesives are not considered architectural coatings for the purposes of this Rule.
- F. Basement Specialty Coating: A clear or opaque coating that is labeled and formulated for application to concrete and masonry surfaces to provide a hydrostatic seal for basements and other below-grade surfaces. Basement Specialty Coatings must meet the following criteria:
1. Coating must be capable of withstanding at least 10 psi of hydrostatic pressure, as determined in accordance with ASTM D7088-04, which is incorporated by reference in subsection VII.C.15;
  2. Coating must be resistant to mold and mildew growth and must achieve a microbial growth rating of 8 or more, as determined in accordance with ASTM D3273-00 and ASTM D3274-95, incorporated by reference in subsection VII.C.21.
- G. Bitumens: Black or brown materials including, but not limited to, asphalt, tar, pitch and asphaltite that are soluble in carbon disulfide, consist mainly of hydrocarbons and are obtained from natural deposits or as residues from distillation of crude petroleum or coal.
- H. Bituminous Roof Coating: A coating which incorporates bitumens that is labeled and formulated exclusively for roofing.
- I. Bituminous Roof Primer: A primer which incorporates bitumens that is labeled and formulated exclusively for roofing and intended for the purpose of preparing a weathered or aged surface or improving the adhesion of subsequent surfacing components.
- J. Bond Breaker: A coating labeled and formulated for application between layers of concrete to prevent a freshly poured top layer of concrete from bonding to the layer over which it is poured.
- K. Coating: A material applied onto or impregnated into a substrate for protective, decorative or functional purposes. Such materials include, but are not limited to, paints, varnishes, sealers and stains.

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- L. Colorant: A concentrated pigment dispersed in water, solvent and/or binder that is added to an architectural coating after packaging in sale units to produce the desired color.
- M. Concrete Curing Compound: A coating labeled and formulated for application to freshly poured concrete to perform one or more of the following functions:
1. Retard the evaporation of water; or
  2. Harden or dustproof the surface of freshly poured concrete.
- N. Concrete/Masonry Sealer: A clear or opaque coating that is labeled and formulated primarily for application to concrete and masonry surfaces to perform one or more of the following functions:
1. Prevent penetration of water; or
  2. Provide resistance against abrasion, alkalis, acids, mildew, staining, or ultraviolet light; or
  3. Harden or dustproof the surface of aged or cured concrete.
- O. Driveway Sealer: A coating labeled and formulated for application to worn asphalt driveway surfaces to perform one or more of the following functions:
1. Fill cracks; or
  2. Seal the surface to provide protection; or
  3. Restore or preserve the appearance.
- P. Dry Fog Coating: A coating labeled and formulated only for spray application such that overspray droplets dry before subsequent contact with incidental surfaces in the vicinity of the surface coating activity.
- Q. Exempt Compound: A compound identified as exempt pursuant to the definition of Volatile Organic Compound (VOC), Subsection V. III. Exempt compounds content of a coating shall be determined by U.S. EPA Method 24 or South Coast Air Quality Management District (SCAQMD) Method 303-91 (Revised August 1993), incorporated by reference in Subsection VII.C.12.
- R. Faux Finish Coating: A coating labeled and formulated to meet one or more of the following criteria:
1. A glaze or textured coating used to create artistic effects including, but not limited to: dirt, suede, old age, smoke damage, and simulated marble or wood grain; or
  2. A decorative coating used to create a metallic, iridescent, or pearlescent appearance that contains 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); or
  3. A decorative coating used to create a metallic appearance that contains less than 48 grams of elemental metallic pigment per liter of coating as applied (less than 0.4 pounds per gallon), when tested in accordance with SCAQMD Method 318-95, incorporated by reference in subsection VII.C.10; or
  4. A decorative coating used to create a metallic appearance that contains greater than 48 grams of elemental metallic pigment per liter of coating as applied

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- (greater than 0.4 pounds per gallon) and which requires a clear topcoat to prevent the degradation of the finish under normal use conditions. The metallic pigment content shall be determined in accordance with SCAQMD Method 318-95, incorporated by reference in subsection VII.C.10; or
5. A clear topcoat to seal and protect a Faux Finishing coating that meets the requirements of subsection IV.R.1, IV.R.2, IV.R.3, or VR.4. These clear topcoats must be sold and used solely as part of a Faux Finishing coating system, and must be labeled in accordance with subsection VII.A.4.
- S. Fire Resistive Coating: A coating labeled and formulated to protect structural integrity by increasing fire endurance of interior or exterior steel and other structural materials. The Fire Resistive category includes sprayed fire resistive materials and intumescent fire resistive coatings that are used to bring structural materials into compliance with Federal, State and local building code requirements. Any fire resistive coating and a testing agency must be approved by building code officials. Any fire resistive coating shall be tested in accordance with ASTM Designation E 119-07, incorporated by reference in Subsection VII.C.8.
- T. Fire Retardant Coating: A coating labeled and formulated to retard ignition and flame spread, that has been fire tested and rated by a testing agency approved by building code officials for use in bringing building and construction materials into compliance with federal, state and local building code requirements. The fire-retardant coating and the testing agency must be approved by building code officials. The fire-retardant coating shall be tested in accordance with ASTM Designation E 84-07, incorporated by reference in subsection VII.C.7. Effective January 1, 2011, the Fire Retardant coating category is eliminated and coatings with fire retardant properties will be subject to the VOC limit of their primary category (e.g., Flat Nonflat, ECT.).
- U. Flat Coating: A coating not defined under any other definition in this Rule and that registers gloss less than 15 on an 85 degree meter or less than five on a 60 degree meter according to ASTM Designation D 523-89 (1999), incorporated by reference in Subsection VII.C.9.
- V. Floor Coating: An opaque coating labeled and formulated for application to flooring, including, but not limited to, decks, porches, steps, garage floors, and other horizontal surfaces which may be subject to foot traffic.
- W. Form-Release Compound: A coating labeled and formulated for application to a concrete form to prevent freshly poured concrete from bonding to the form. The form may consist of wood, metal or some material other than concrete.
- X. Graphic Arts Coating or Sign Paint: A coating labeled and formulated for hand-application by artists using brush, air brush, or roller techniques to indoor and outdoor signs (excluding structural components) and murals including lettering enamels, poster colors, copy blockers and bulletin enamels.

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- Y. High-Temperature Coating: A high performance coating labeled and formulated for application to substrates exposed continuously or intermittently to temperatures above 204°C (400°F).
- Z. Industrial Maintenance Coating: High performance architectural coatings including primers, sealers, undercoaters, intermediate coats, and topcoats formulated for application to substrates, including floors, exposed to one or more of the following extreme environmental conditions listed in Subsections V.Z.1. through V.Z.5. and labeled as specified in Subsection VII.A.5
1. Immersion in water, wastewater or chemical solutions (aqueous and non-aqueous solutions), or chronic exposure of interior surfaces to moisture condensation;
  2. Acute or chronic exposure to corrosive, caustic or acidic agents or to chemicals, chemical fumes or chemical mixtures or solution;
  3. Frequent exposure to temperatures above 121°C (250°F);
  4. Frequent heavy abrasion, including mechanical wear and frequent scrubbing with industrial solvents, cleansers or scouring agents; or
  5. Exterior exposure of metal structures and structural components.
- AA. Low Solids Coating: A coating containing 0.12 kilogram or less of solids per liter (1 pound or less of solids per gallon) of coating material as recommended for application by the manufacturer. The VOC content for Low Solids Coatings shall be calculated in accordance with section V.JJJ.
- BB. Magnesite Cement Coating: A coating labeled and formulated for application to magnesite cement decking to protect the magnesite cement substrate from erosion by water.
- CC. Manufacture's Maximum Thinning Recommendations: The maximum recommendation for thinning that is indicated on the label or lid of the coating container.
- DD. Mastic Texture Coating: A coating labeled and formulated to cover holes and minor cracks and to conceal surface irregularities, and applied in a single coat of at least 10 mils (at least 0.010 inch) dry film thickness.
- EE. Medium Density Fiberboard (MDF): A composite wood product, panel, molding, or other building material composed of cellulosic fibers (usually wood) made by dry forming and pressing a resinated fiber mat.
- FF. Metallic Pigmented Coating: A coating that is labeled and formulated to provide a metallic appearance. Metallic Pigmented coatings must contain at least 48 grams of elemental metallic pigment (excluding zinc) per liter of coating as applied (at least 0.4 pounds per gallon), when tested in accordance with SCAQMD Method 318-95, incorporated by reference in Subsection VII.C.10. The Metallic Pigmented Coating category does not include coatings applied to roofs or Zinc-Rich Primers.

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- GG. Multicolor Coating: A coating packaged in a single container and that is labeled and formulated to exhibit more than one color when applied in a single coat.
- HH. Nonflat Coating: coating not defined under any other definition in this Rule and that registers a gloss of 15 or greater on an 85 degree meter and 5 or greater on a 60 degree meter according to ASTM Designation D 523-89 (1999), incorporated by reference in Subsection VII.C.9.
- II. Nonflat - High Gloss Coating: A nonflat coating that registers a gloss of 70 or above on a 60 degree meter according to ASTM Designation D 523-89 (1999), incorporated by reference in Subsection VII.C.9. Nonflat - High Gloss coatings must be labeled in accordance with subsection VII.A.10.
- JJ. Particleboard: A composite wood product panel, molding, or other building material composed of cellulosic material (usually wood) in the form of discrete particles, as distinguished from fibers, flakes, or strands, which are pressed together with resin.
- KK. Pearlescent: Exhibiting various colors depending on the angles of illumination and viewing, as observed in mother-of-pear.
- LL. Plywood: A panel product consisting of layers of wood veneers or composite core pressed together with resin. Plywood includes panel products made by either hot or cold pressing (with resin) veneers to a platform.
- MM. Post Consumer Coating: Finished coatings generated by a business or consumer that have served their intended end uses, and are recovered from or otherwise diverted from the waste stream for the purpose of recycling.
- NN. Pre-Treatment Wash Primer: A primer that contains a minimum of 0.5 percent acid, by weight, when tested in accordance with ASTM Designation D 1613-06, incorporated by reference in Subsection VII.C.11. labeled and formulated for application directly to bare metal surfaces to provide corrosion resistance and to promote adhesion of subsequent topcoats.
- OO. Primer, Sealer, and Undercoater: A coating labeled and formulated for one or more of the following purposes:
1. To provide a firm bond between the substrate and the subsequent coatings; or
  2. To prevent subsequent coatings from being absorbed by the substrate; or
  3. To prevent harm to subsequent coatings by materials in the substrate; or
  4. To provide a smooth surface for the subsequent application of coatings; or
  5. To provide a clear finish coat to seal the substrate; or
  6. To block materials from penetrating into or leaching out of a substrate.
- PP. Reactive Penetrating Sealer: A clear or pigmented coating that is 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 penetrate into concrete and masonry substrates and chemically react to form covalent bonds with naturally

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occurring minerals in the substrate. Reactive Penetrating Sealers line the pores of concrete and masonry substrates with a hydrophobic coating, but do not form a surface film. Reactive Penetrating Sealers must meet all of the following criteria:

1. The Reactive Penetrating Sealer must 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, incorporated by reference in subsection VII.C.22: ASTM C67-07, or ASTM C97-02, or ASTM C140-06; and
2. The Reactive Penetrating Sealer must not reduce the water vapor transmission rate by more than 2 percent after application on a concrete or masonry substrate. This performance must be verified on standardized test specimens, in accordance with ASTM E96/E96M-05, incorporated by reference in subsection VII.C.23; and
3. Products labeled and formulated for vehicular traffic surface chloride screening applications must meet the performance criteria listed in the National Cooperative highway Research Report 244 (1981), incorporated by reference in subsection VII.C.24; and
4. Reactive Penetrating Sealers must be labeled in accordance with subsection VII.A.8.

QQ. Recycled Coating: An architectural coating formulated such that it contains a minimum of 50% by volume post-consumer coating, with a maximum of 50% by volume secondary industrial materials or virgin materials.

RR. Residential: Areas where people reside or lodge, including, but not limited to, single and multiple family dwellings, condominiums, mobile homes, apartment complexes, motels and hotels.

SS. Roof Coating: A non-bituminous coating labeled and formulated for application to roofs for the primary purpose of preventing water penetration, reflecting ultraviolet light, or reflecting solar radiation.

TT. Rust Preventative Coating: A coating formulated to prevent corrosion of metal surfaces for one or more of the following applications:

1. Direct-to-metal coating; or
2. Coating intended for application over rusty, previously coated surfaces.

The Rust Preventative category does not include the following:

3. Coatings that are required to be applied as a topcoat over a primer; or
4. Coatings that are intended for use on wood or any other nonmetallic surface.

Rust Preventative coatings are for metal substrates only and must be labeled as such, in subsection VII.A.6.

UU. Secondary Industrial Materials: Products or by-products of the paint manufacturing process that are of known composition and have economic value but can no longer be used for their intended purpose.

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- VV. Semitransparent Coating: A coating that contains binders and colored pigments and is formulated to change the color of the surface, but not conceal the grain pattern or texture.
- WW. Shellac: A clear or opaque coating formulated solely with resinous secretions of the lac beetle (*Lacififer lacca*), and formulated to dry by evaporation without a chemical reaction.
- XX. Shop Application: Application of a coating to a product or a component of a product in or on the premises of a factory or a shop as part of a manufacturing, production or repairing process (e.g., original equipment manufacturing coatings).
- YY. Solicit: To require for use or to specify, by written or oral contract.
- ZZ. Specialty Primer, Sealer and Undercoater: A coating that is formulated for application to a substrate to block water-soluble stains resulting from: fire damage; smoke damage; or water damage. Specialty Primers, Sealers, and Undercoaters must be labeled in accordance with subsection VII.A.7.
- AAA. Stain: A semitransparent or opaque coating labeled and formulated to change the color of a surface but not conceal grain pattern or texture.
- BBB. Stone Consolidant: A coating that is labeled and formulated for application to stone substrates to repair historical structures that have been damaged by weather or other decay mechanisms. Stone Consolidants must penetrate into substrates to create bonds between particles and consolidate deteriorated material. Stone Consolidants must be specified and used in accordance with ASTM E2167-01, incorporated by reference in subsection VII.C.25.  
Stone Consolidants are for professional use only and must be labeled as such, in accordance with the labeling requirements in subsection VII.C.10.
- CCC. Swimming Pool Coating: A coating labeled and formulated to coat the interior of swimming pools and to resist swimming pool chemicals. Swimming pool coatings include coatings used for swimming pool repair and maintenance.
- DDD. Tint Base: An architectural coating to which colorant is added after packaging in sale units to produce a desired color.
- EEE. Traffic Marking Coating: A coating labeled and formulated for marking and striping streets, highways or other traffic surfaces including, but not limited to, curbs, berms, driveways, parking lots, sidewalks and airport runways.
- FFF. Tub and Tile Refinish Coating: A clear or opaque coating that is labeled and formulated exclusively for refinishing the surface of a bathtub, shower, sink, or countertop. Tub and Tile Refinish coatings must meet all of the following criteria:
1. The coating must have a scratch hardness of 3H or harder and a gouge hardness of 4H or harder. This must be determined on bonderite 1000, in

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accordance with ASTM D3363-05, incorporated by reference in subsection VII.C.17; and

2. The coating must have a weight loss of 20 milligrams or less after 1000 cycles. This must be determined with CS-17 wheels on bonderite 1000, in accordance with ASTM D4060-07, incorporated by reference in subsection VII.C.18; and
3. The coating must withstand 1000 hours or more of exposure with few or no #8 blisters. This must be determined on unscribed bonderite, in accordance with ASTM D4585-99, and ASTM D714-02e1, incorporated by reference in subsection VII.C.19; and
4. The coating must have an adhesion rating of 4B or better after 24 hours of recovery. This must be determined on unscribed bonderite, in accordance with ASTM D4585-99 and ASTM D3359-02, incorporated by reference in subsection VII.C.16.

GGG. Veneer: Thin sheets of wood peeled or sliced from logs for use in the manufacture of wood products such as plywood, laminated veneer lumber, or other products.

HHH. Virgin Materials: Materials that contain no post-consumer coatings or secondary industrial materials.

III. Volatile Organic Compound (VOC): Any volatile compound containing at least one atom of carbon, excluding Exempt Compounds as listed in Rule 102 Definitions.

JJJ. VOC Actual: VOC Actual is the weight of VOC per volume of coating and it is calculated with the following equation:

$$\text{VOC Actual} = \frac{(W_s - W_w - W_{ec})}{(V_m)}$$

Where:

VOC Actual = the grams of VOC per liter of coating (also known as Material VOC)

W<sub>s</sub> = weight of volatiles, in grams

W<sub>w</sub> = weight of water, in grams

W<sub>ec</sub> = weight of exempt compounds, in grams

V<sub>m</sub> = volume of coating, in liters

KKK. VOC Content: The weight of VOC per volume of coating. VOC content is VOC Regulatory, as defined in section V.LLL, for all coatings except those in the Low Solids category. For all coatings in the Low Solids category, the VOC Content is VOC Actual, as defined in section V.JJJ. If the coating is a multi-component product, the VOC content is VOC Regulatory as mixed or catalyzed. If the coating contains silanes, siloxanes, or other ingredients that generate ethanol or other VOCs during the curing process, the VOC content must include the VOCs emitted during curing.

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LLL. VOC Regulatory: VOC Regulatory is the weight of VOC per volume of coating, less the volume of water and exempt compounds. It is calculated with the following equation:

$$\text{VOC Regulatory} = \frac{(W_s - W_w - W_{ec})}{(V_m - V_w - V_{ec})}$$

Where:

VOC Regulatory = grams of VOC per liter of coating, less water and exempt compounds (also known as Coating VOC)

$W_s$  = weight of volatiles, in grams

$W_w$  = weight of water, in grams

$W_{ec}$  = weight of exempt compounds, in grams

$V_m$  = volume of coating, in liters

$V_w$  = volume of water, in liters

$V_{ec}$  = volume of exempt compounds, in liters

MMM. Waterproofing Membrane: A clear or opaque coating that is labeled and formulated for application to concrete and masonry surfaces to provide a seamless waterproofing membrane that prevents any penetration of liquid water into the substrate.

Waterproofing Membranes are intended for the following waterproofing applications: below-grade surfaces, between concrete slabs, inside tunnels, inside concrete planters, and under flooring materials. Waterproofing Membranes must meet the following criteria:

1. Coating must be applied in a single coat of at least 25 mils (at least 0.025 inch) dry film thickness; and
2. Coatings must meet or exceed the requirements contained in ASTM C836-06, incorporated by reference in subsection VII.C.20.

The Waterproofing Membrane category does not include topcoats that are included in the Concrete/Masonry Sealer category (e.g., parking deck topcoats, pedestrian deck topcoats, etc.).

NNN. Wood Coatings: Coatings labeled and formulated for application to wood substrates only. The Wood Coatings category includes the following clear and semitransparent coatings: lacquers; varnishes; sanding sealers; penetrating oils; clear stains; wood conditioners used as undercoats; and wood sealers used as topcoats. The Wood Coatings category also includes the following opaque wood coatings: opaque lacquers; opaque sanding sealers; and opaque lacquer undercoaters. The Wood Coatings category does not include the following: clear sealers that are labeled and formulated for use on concrete/masonry surfaces; or coatings intended for substrates other than wood.

Wood Coatings must be labeled “For Wood Substrates Only”, in accordance with subsection VII.A.11.

OOO. Wood Preservative: A coating labeled and formulated to protect exposed wood from decay or insect attack, registered with both the U.S. EPA under the Federal

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Insecticide, Fungicide, and Rodenticide Act (7 United States Code (U.S.C.) Section 136, et seq.) and with the California Department of Pesticide Regulation.

PPP. Wood Substrates: A substrate made of wood, particleboard, plywood, medium density fiberboard, rattan, wicker, bamboo, or composite products with exposed wood grain. Wood Products do not include items comprised of simulated wood.

QQQ. Zinc-Rich Primer: Is a coating that meets all of the following specifications:

1. Coating contains at least 65 percent metallic zinc powder or zinc dust by weight of total solids; and
2. Coating is formulated for application to metal substrates to provide a firm bond between the substrate and subsequent applications of coatings; and
3. Coating is intended for professional use only and is labeled as such, in accordance with the labeling requirements in subsection VII.A.12.

### VI. Requirements

A. VOC Content Limits: No person except as provided in Subsections VI.B. and VI.C., shall:

1. Manufacture, blend, or repackage for sale within the District;
2. Supply, sell or offer for sale within the District; or
3. Solicit for application or apply within the District, any architectural coating with a VOC content in excess of the corresponding VOC Content limit specified in the Table of Standards, after the specified effective date in the Table of Standards. Limits are expressed as VOC Regulatory, thinned to the manufacture's maximum thinning recommendation, excluding any colorant added to tint bases.

B. Most Restrictive VOC Limit: If a coating meets the definition in Section V for one or more specialty coating categories that are listed in the Table of Standards, then that coating is not required to meet the VOC limits for Flat, Nonflat, or Nonflat – High Gloss coatings, but is required to meet the VOC limit for the applicable specialty coating listed in the Table of Standards.

With the exception of the specialty coating categories specified in subsections VI.B.1 through VI.B.12, if a coating is recommended for use in more than one of the specialty coating categories listed in the Table of Standards, the most restrictive (or lowest) VOC content shall apply. This requirement applies to: usage recommendations that appear anywhere on the coating container, anywhere on any label or sticker affixed to the container, or in any sales, advertising, or technical literature supplied by a manufacturer or anyone acting on their behalf.

1. Metallic pigmented coatings.
2. Shellacs.
3. Pretreatment wash primers.
4. Industrial maintenance coatings.
5. Low-solids coatings.
6. Wood preservatives.

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7. High-temperature coatings.
  8. Bituminous roof primers.
  9. Specialty primers, sealers and undercoaters.
  10. Aluminum roof coatings.
  11. Zinc-rich primers.
  12. Wood Coatings.
- C. Sell-Through/Existing Stock of Coatings: A coating manufactured prior to the VOC Content limit effective date(s) specified for that coating in the Table of Standards, that complied with the VOC Content limit in effect at the time the coating was manufactured, may be sold, supplied, or offered for sale for up to three years after the specified VOC Content limit effective date(s) listed in the Table of Standards. Such a coating may be applied at any time, both before and after the specified effective date. This subsection VI.C does not apply to any coating that does not display the date or date-code required by subsection VII.A.1.
- D. Painting Practices: All architectural coating containers used to apply the contents therein to a surface directly from the container by pouring, siphoning, brushing, rolling, padding, ragging or other means, shall be closed when not in use. Such architectural coating containers include, but are not limited to, drums, buckets, cans, pails, trays or other application containers. Containers of any VOC-containing materials used for thinning and cleanup shall also be closed when not in use.
- E. Thinning: No person who applies or solicits application of any architectural coating shall apply a coating thinned to exceed the applicable VOC limit specified in the Table of Standards.
- F. Coatings Not Listed in the Table of Standards: For any coating that does not meet any of the definitions for specialty coatings categories listed in the Table of Standards, the VOC content limit shall be determined by classifying the coating as a Flat, Nonflat, or Nonflat-High Gloss coating, based on its gloss, as defined in Subsections V.U., V.HH. and V.II. and the corresponding Flat, Nonflat, or Nonflat-High Gloss VOC limit in the Table of Standards shall apply.

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**TABLE OF STANDARDS**  
**VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS**

Coating Category	Effective 1/1/2011	Effective 1/1/2012
<b>Flat Coatings</b>	50	
<b>Nonflat Coatings</b>	100	
<b>Nonflat - High Gloss Coatings</b>	150	
<b>Specialty Coatings:</b>		
Aluminum Roof Coatings	400	
Basement Specialty Coatings	400	
Bituminous Roof Coatings	50	
Bituminous Roof Primers	350	
Bond Breakers	350	
Concrete Curing Compounds	350	
Concrete/Masonry Sealers	100	
Driveway Sealers	50	
Dry Fog Coatings	150	
Faux Finishing Coatings	350	
Fire Resistive Coatings	350	
Floor Coatings	100	
Form-Release Compounds	250	
Graphic Arts Coatings (Sign Paints)	500	
High Temperature Coatings	420	
Industrial Maintenance Coatings	250	
Low Solids Coatings <sup>2</sup>	120	
Magnesite Cement Coatings	450	
Mastic Texture Coatings	100	
Metallic Pigmented Coatings	500	
Multi-Color Coatings	250	
Pre-Treatment Wash Primers	420	
Primers, Sealers, and Undercoaters	100	
Reactive Penetrating Sealers	350	
Recycled Coatings	250	
Roof Coatings	50	
Rust Preventative Coatings	400	250
Shellacs:		
• Clear	730	
• Opaque	550	
Specialty Primers, Sealers, and Undercoaters	350	100
Stains	250	
Stone Consolidants	450	
Swimming Pool Coatings	340	
Traffic Marking Coatings	100	
Tub and Tile Refinish Coatings	420	
Waterproofing Membranes	250	
Wood Coatings	275	
Wood Preservatives	350	
Zinc-Rich Primers	340	

1. Limits are expressed as VOC Regulatory thinned to the manufacturer's maximum thinning recommendation, excluding any colorant added to tint bases.
2. Limit is expressed as VOC Actual.

**VII. Administrative Requirements**

A. Labeling Requirements: Each manufacturer of any architectural coating subject to this Rule shall display information listed in Subsections VII.A.1. through VII.A.12 on coating container (or label) in which coating is sold or distributed.

1. Date Code: The date coating was manufactured, or date code representing date, shall be indicated on label, lid or bottom of container. If manufacturer uses a date code for any coating, manufacturer shall file an explanation of each code with the Executive Officer of the ARB.
2. Thinning Recommendations: A statement of manufacturer's recommendation regarding thinning of coating shall be indicated on label or lid of container. This requirement does not apply to thinning of architectural coatings with water. If thinning of coating prior to use is not necessary, recommendation must specify coating is to be applied without thinning.
3. VOC Content: Each container of any coating subject to this rule shall display one of the following values in grams of VOC per liter of coating:
  - a. Maximum VOC Content as determined from all potential product formulations; or
  - b. VOC Content as determined from actual formulation data; or
  - c. VOC Content as determined using the test methods in subsection VII.C.2.

If the manufacturer does not recommend thinning, the container must display the VOC Content, as supplied. If the manufacturer recommends thinning, the container must display the VOC Content including the maximum amount of thinning solvent recommended by the manufacturer. If the coating is a multi-component product, the container must display the VOC content as mixed or catalyzed. If the coating contains silanes, siloxanes, or other ingredients that generate ethanol or other VOCs during the curing process, the VOC content must include the VOCs emitted during curing. VOC Content shall be determined as defined in subsections V.JJJ, V.KKK, and V.LLL.

4. Faux Finishing Coatings: The labels of all clear topcoat Faux Finishing coatings shall prominently display the statement “This product can only be sold or used as part of a Faux Finishing coating system.”
5. Industrial Maintenance Coatings: The labels of all Industrial Maintenance coatings shall prominently display the statement “For industrial use only” or “For professional use only” or “Not for residential use” or “Not intended for residential use”.
6. Rust Preventative Coatings: The labels of all rust preventative coatings shall prominently display statement “For Metal Substrates Only”.

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7. Specialty Primers, Sealers and Undercoaters: Until January 1, 2012, the labels of all specialty primers, sealers and undercoaters shall prominently display one or more of following descriptions:
  - a. For fire damaged substrates;
  - b. For smoke damaged substrates;
  - c. For water damaged substrates; or
8. Reactive Penetrating Sealers: The labels of all Reactive Penetrating Sealers shall prominently display the statement “Reactive Penetrating Sealer”.
9. Stone Consolidants: The labels of all Stone Consolidants shall prominently display the statement “Stone Consolidant – For Professional Use Only”.
10. Nonflat-High Gloss Coatings: The labels of all nonflat-high gloss coatings shall prominently display words “High Gloss”.
11. Wood Coatings: The labels of all Wood Coatings shall prominently display the statement “For Wood Substrates Only”.
12. Zinc Rich Primers: The labels of all Zinc Rich Primers shall prominently display one of the following statements “Not For Residential Use” or “Not Intended For Residential Use” or “For Industrial Use Only” or “For professional use only”.

### B. Reporting Requirements

1. Sales Data: A responsible official from each manufacturer shall upon request of the Executive Officer of the ARB, or his or her delegate, provide data concerning the distribution and sales of architectural coatings. The responsible official shall within 180 days provide information including, but not limited to:
  - a. The name and mailing address of the manufacturer;
  - b. The name, address and telephone number of a contact person;
  - c. The name of the coating product as it appears on the label and the applicable coating category;
  - d. Whether the product is marketed for interior or exterior use or both;
  - e. The number of gallons sold in California in containers greater than one liter (1.057 quart) and equal to or less than one liter (1.057 quart);
  - f. The VOC Actual content and VOC Regulatory content in grams per liter. If thinning is recommended, list the VOC Actual content and VOC Regulatory content after maximum recommended thinning. If containers less than one liter have a different VOC content than containers greater than one liter, list separately. If the coating is a multi-component product, provide the VOC content as mixed or catalyzed;
  - g. The names and CAS numbers of the VOC constituents in the product;

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- h. The names and CAS numbers of any compounds in the product specifically exempted from the VOC definition, as listed in Rule 102 Definitions;
  - i. Whether the product is marketed as solventborne, waterborne, or 100% solids;
  - j. Description of resin or binder in the product;
  - k. Whether the coating is a single-component or multi-component product;
  - l. The density of the product in pounds per gallon;
  - m. The percent by weight of: solids, all volatile materials, water, and any compounds in the product specifically exempted from the VOC; definition, as listed in Rule 102 Definitions
  - n. The percent by volume of: solids, water, and any compounds in the product specifically exempted from the VOC definition, as listed in Rule 102 Definitions.
2. All sales data listed in subsection VII.B.1.a to VII.B.1.n shall be maintained by the responsible official for a minimum of three years. Sales data submitted by the responsible official to the Executive Officer of the ARB may be claimed as confidential, and such information shall be handled in accordance with the procedures specified in Title 17, California Code of Regulations Sections 91000-91022.

### C. Test Methods

1. Calculation of VOC Content: For the purpose of determining compliance with the VOC content limits in the Table of Standards, the VOC content of a coating shall be determined as defined in subsection V.JJJ, V.KKK, or V.LLL. The VOC content of a tint base shall be determined without colorant that is added after the tint base is manufactured. If the manufacturer does not recommend thinning, the VOC content must be calculated for the product as supplied. If the manufacturer recommends thinning, the VOC content must be calculated including the maximum amount of thinning solvent recommended by the manufacturer. If the coating is a multi-component product, the VOC content must be calculated as mixed or catalyzed. If the coating contains silanes, siloxanes, or other ingredients that generate ethanol or other VOCs during the curing process, the VOC content must include the VOCs emitted during curing.
2. VOC Content of Coatings: To determine physical properties of a coating in order to perform calculations in Subsections V.LLL. or V.JJJ., the reference method for VOC content shall be U.S. EPA Method 24, except as provided in Subsections VII.C.3 and VII.C.4. An alternative method to determine VOC content of coatings is SCAQMD Method 304-91 (Revised 1996), incorporated by reference in Subsection VII.C.4. The exempt compounds content shall be determined by SCAQMD Method 303-91 (Revised 1993), BAAQMD Method 43 (Revised 1996), or BAAQMD Method 41 (Revised 1995), as applicable, incorporated by reference in Subsection VII.C.12, VII.C.13, and VII.C.14,

respectively. To determine VOC content of a coating, the manufacturer may use U.S. EPA Method 24, or an alternative method as provided in Subsection VII.C.3., formulation data, or any other reasonable means for predicting coating has been formulated as intended (e.g., quality assurance checks, recordkeeping). However, if there are any inconsistencies between results of a Method 24 test and any other means for determining VOC content, Method 24 test results will govern, except when an alternative method is approved as specified in Subsection VII.C.3. The District Air Pollution Control Officer (APCO) may require manufacturer to conduct a Method 24 analysis.

3. Alternative Test Methods: Other test methods demonstrated to provide results acceptable for purposes of determining compliance with Subsection VII.C.2., after review and approved in writing by the staffs of District, ARB and U.S. EPA, may also be used.
4. Alternative VOC Content of Coatings: The VOC content of coatings may be analyzed either by U.S. EPA Method 24 or SCAQMD Method 304-91 (Revised 1996), “Determination of Volatile Organic Compounds (VOC) in Various Materials”, “SCAQMD Laboratory Methods of Analysis for Enforcement Samples” (see Subsection VII.C.2.).
5. VOC Content of Coatings: The VOC content of a coating shall be determined by U.S. EPA Method 24 as it exists in Appendix A of 40 Code of Federal Regulations (CFR) Part 60, “Determination of Volatile Matter Content, Water Content, Density, Volume Solids and Weight Solids of Surface Coatings” (see Subsection VII.C.2.).
6. Methacrylate Traffic Marking Coatings: The VOC content of methacrylate multicomponent coatings used as traffic marking coatings shall be analyzed by procedures in 40 CFR Part 59, Subpart D, Appendix A, “Determination of Volatile Matter Content of Methacrylate Multicomponent Coatings Used as Traffic Marking Coatings”. (This method has not been approved for methacrylate multicomponent coatings used for other purposes than traffic marking coatings or for other classes of multicomponent coatings).
7. Flame Spread Index: The flame spread index of a fire retardant coating shall be determined by ASTM E 84-07, “Standard Test Method for Surface Burning Characteristics of Building Materials” (see Subsection V.T., Fire Retardant Coating).
8. Fire Resistance Rating: The fire resistance rating of a fire resistive coating shall be determined by ASTM E 119-07, “Standard Test Methods for Fire Tests of Building Construction Materials” (see Subsection V.S., Fire Resistive Coating).

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9. Gloss Determination: Gloss of a coating shall be determined by ASTM D 523-89 (1999), “Standard Test Method for Specular Gloss” (see Subsections V.U., V.HH., and V.II. Flat Coating, Nonflat Coating, and Nonflat-High Gloss Coating).
10. Metal Content of Coatings: Metallic content of a coating shall be determined by SCAQMD Method 318-95, “Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction,” *SCAQMD Laboratory Methods of Analysis for Enforcement Samples* (see Subsections V.C., V.R., and V.FF; Aluminum Roof, Faux Finishing, and Metallic Pigmented Coating).
11. Acid Content of Coatings: The acid content of a coating shall be determined by ASTM D 1613-06, “Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediaries Used in Paint, Varnish, Lacquer and Related Products” (see Subsection V.NN., Pretreatment Wash Primer).
12. Exempt Compounds: The content of compounds pursuant to U.S. EPA Method 24 shall be analyzed by SCAQMD Method 303-91 (Revised 1993), “Determination of Exempt Compounds”, “SCAQMD Laboratory Methods of Analysis for Enforcement Samples” (see Subsection V.III., Volatile Organic Compound and Subsection VII.C.2.).
13. Exempt Compounds–Siloxanes: Exempt compounds that are cyclic, branched or linear completely methylated siloxanes, shall be analyzed as exempt compounds for compliance with Section VIII by BAAQMD Method 43, “Determination of Volatile Methylsiloxanes in Solvent-Based Coatings, Inks, and Related Materials”, “BAAQMD Manual of Procedures”, Volume III, adopted 11/6/96 (see Subsection V.III., Volatile Organic Compound and Subsection VII.C.2.).
14. Exempt Compounds– Parachlorobenzotrifluoride (PCBTF): The exempt compound parachlorobenzotrifluoride shall be analyzed as an exempt compound for compliance with Section VIII by BAAQMD Method 41, “Determination of Volatile Organic Compounds in Solvent-Based Coatings and Related Materials Containing Parachlorobenzotrifluoride”, “BAAQMD Manual of Procedures”, Volume III, adopted 12/20/95 (see Subsection V.III., Volatile Organic Compounds and Subsection VII.C.2.).
15. Hydrostatic Pressure for Basement Specialty Coatings: ASTM D7088-04, “Standard Practice for Resistance to Hydrostatic Pressure for Coatings Used in Below Grade Applications Applied to Masonry” (see section V.F., Basement Specialty Coating).
16. Tub and Tile Refinish Coating Adhesion: ASTM D 4585-99, “Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation” and ASTM D3359-02, “Standard Test Methods for Measuring Adhesion by Tape Test” (see section V.FFF., Tub and Tile Refinish Coating).

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17. Tub and Tile Refinish Coating Hardness: ASTM D 3363-05, “Standard Test Method for Film Hardness by Pencil Test” (see section V.FFF., Tub and Tile Refinish Coating).
18. Tub and Tile Refinish Coating Abrasion Resistance: ASTM D 4060-07, “Standard Test Methods for Abrasion Resistance of Organic Coatings by the Taber Abraser” (see section V.FFF., Tub and Tile Refinish Coating).
19. Tub and Tile Refinish Coating Water Resistance: ASTM D 4585-99, “Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation” and ASTM D714-02e1, “Standard Test Method for Evaluating Degree of Blistering of Paints” (see section V.FFF., Tub and Tile Refinish Coating).
20. Waterproofing Membrane: ASTM C836-06, “Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course” (see section V.MMM., Waterproofing Membrane).
21. Mold and Mildew Growth for Basement Specialty Coatings: ASTM D3273-00, “Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber” and ASTM D3274-95, “Standard Test Method for Evaluating Degree of Surface Disfigurement of Paint Films by Microbial (Fungal or Algal) Growth or Soil and Dirt Accumulation” (see section V.F., Basement Specialty Coating).
22. Reactive Penetrating Sealer Water Repellency: ASTM C67-07, “Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile”; or ASTM C97-02, “Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone”; or ASTM C140-06, “Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units” (see section V.PP., Reactive Penetrating Sealer).
23. Reactive Penetrating Sealer Water Vapor Transmission: ASTM E96/E96M-05, “Standard Test Method for Water Vapor Transmission of Materials” (see section V.PP., Reactive Penetrating Sealer).
24. Reactive Penetrating Sealer - Chloride Screening Applications: National Cooperative Highway Research Report 244 (1981), “Concrete Sealers for the Protection of Bridge Structures” (see section V.PP., Reactive Penetrating Sealer).
25. Stone Consolidants: ASTM E2167-01, “Standard Guide for Selection and Use of Stone Consolidants” (see section V.BBB., Stone Consolidant).

**APPENDIX B:**

**ADOPTED RULE 410.1A**

**ARCHITECTURAL COATING CONTROLS**

**STRIKEOUT UNDERLINE WORKSHOP VERSION**

## 410.1A Final Staff Report – Strikeout and Underline Adopted Rule

**RULE 410.1A**      **Architectural Coating Controls** Adopted 3/11/10 Effective as of 1/1/2011

### **I. Purpose**

The purpose of this rule is to limit VOC emissions from architectural coatings. This rule specifies VOC Content limits, storage, cleanup, and labeling requirements for architectural coatings.

### **II. Applicability**

Except as provided in subsection IV, the provisions of this rule are applicable to architectural coatings as defined in this rule and to any person who manufactures, blends, repackages, supplies, sells, offers for sale, solicits, or applies any architectural coating for use within the District.

### **III. Severability**

Each provision of this rule shall be deemed severable, and in the event that any provision of this rule is held to be invalid, the remainder of this rule shall continue in full force and effect.

### **IV. Exemptions**

A. Provisions of this Rule shall not apply to:

1. Any architectural coating that is supplied, sold, offered for sale, or manufactured for use outside of the District or for shipment to other manufacturers for reformulation or repackaging.
2. Any aerosol coating product.

~~B. any architectural coating that is supplied, sold, offered for sale, or manufactured for use outside of the District or for shipment to other manufacturers for reformulation or repackaging.~~

B. Provisions of section VI and subsection VII.A shall not apply to any architectural coating sold in a container with a volume of one liter (1.057 quarts) or less.

~~C. Provisions of section VI and subsection VII.A shall not apply to any architectural coating sold in a container with a volume of one liter (1.057 quarts) or less.~~

### **IV.V. Definitions**

A. Adhesive: Any chemical substance applied for the purpose of bonding two surfaces together other than by mechanical means.

B. Aerosol Coating Product: A pressurized coating product containing pigments or resins that dispenses product ingredients by means of a propellant and are is packaged in a disposable can for hand-held application, or for use in specialized equipment for ground traffic/marketing applications.

- C. Aluminum Roof Coating: A coating labeled and formulated exclusively for application to roofs and containing at least 84 grams of elemental aluminum pigment per liter of coating (at least 0.7 pounds per gallon). Pigment content shall be determined in accordance with SCAQMD Method 318-95, incorporated by reference in subsection VII.C.~~9~~10.
- D. Appurtenance: Any accessory to a stationary structure coated at the site of installation, whether installed or detached, including but not limited to: bathroom and kitchen fixtures; cabinets; concrete forms; doors; elevators; fences; hand railings; heating equipment, air conditioning equipment and other fixed mechanical equipment or stationary tools; lampposts; partitions; pipes and piping systems; rain gutters and downspouts; stairways, fixed ladders, catwalks and fire escapes; and window screens.
- E. Architectural Coating: A coating to be applied to stationary structures or their appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs. Coatings applied in shop applications or to nonstationary structures such as airplanes, airships, ships, boats, locomotives, railcars and automobiles, and adhesives are not considered architectural coatings for the purposes of this Rule.
- F. Basement Specialty Coating: A clear or opaque coating that is labeled and formulated for application to concrete and masonry surfaces to provide a hydrostatic seal for basements and other below-grade surfaces. Basement Specialty Coatings must meet the following criteria:
1. Coating must be capable of withstanding at least 10 psi of hydrostatic pressure, as determined in accordance with ASTM D7088-04, which is incorporated by reference in subsection VII.C.~~14~~15;
  2. Coating must be resistant to mold and mildew growth and must achieve a microbial growth rating of 8 or more, as determined in accordance with ASTM D3273-00 and ASTM D3274-95, incorporated by reference in subsection VII.C.~~20~~21.
- G. Bitumens: Black or brown materials including, but not limited to, asphalt, tar, pitch and asphaltite that are soluble in carbon disulfide, consist mainly of hydrocarbons and are obtained from natural deposits or ~~are~~as residues from distillation of crude petroleum or coal.
- H. Bituminous Roof Coating: A coating which incorporates bitumens that is labeled and formulated exclusively for roofing.
- I. Bituminous Roof Primer: A primer which incorporates bitumens that is labeled and formulated exclusively for roofing and intended for the purpose of preparing a weathered or aged surface or improving the adhesion of subsequent surfacing components.

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- J. Bond Breaker: A coating labeled and formulated for application between layers of concrete to prevent a freshly poured top layer of concrete from bonding to the layer over which it is poured.
- K. Coating: A material applied onto or impregnated into a substrate for protective, decorative or functional purposes. Such materials include, but are not limited to, paints, varnishes, sealers and stains.
- L. Colorant: A concentrated pigment dispersed in water, solvent and/or binder that is added to an architectural coating after packaging in sale units to produce the desired color.
- M. Concrete Curing Compound: A coating labeled and formulated for application to freshly poured concrete to perform one or more of the following functions:
1. Retard the evaporation of water; or
  2. Harden or dustproof the surface of freshly poured concrete.
- N. Concrete/Masonry Sealer: A clear or opaque coating that is labeled and formulated primarily for application to concrete and masonry surfaces to perform one or more of the following functions:
1. Prevent penetration of water; or
  2. Provide resistance against abrasion, alkalis, acids, mildew, staining, or ultraviolet light; or
  3. Harden or dustproof the surface of aged or cured concrete.
- O. Driveway Sealer: A coating labeled and formulated for application to worn asphalt driveway surfaces to perform one or more of the following functions:
1. Fill cracks; or
  2. Seal the surface to provide protection; or
  3. Restore or preserve the appearance.
- P. Dry Fog Coating: A coating labeled and formulated only for spray application such that overspray droplets dry before subsequent contact with incidental surfaces in the vicinity of the surface coating activity.
- Q. Exempt Compound: A compound identified as exempt pursuant to the definition of Volatile Organic Compound (VOC), Subsection IV. ~~KKK~~III. Exempt compounds content of a coating shall be determined by U.S. EPA Method 24 or South Coast Air Quality Management District (SCAQMD) Method 303-91 (Revised August ~~1996~~1993), incorporated by reference in Subsection VII.C.~~11~~12.
- R. Faux Finish Coating: A coating labeled and formulated to meet one or more of the following criteria:
1. A glaze or textured coating used to create artistic effects including, but not limited to: dirt, suede, old age, smoke damage, and simulated marble or wood grain; or
  2. A decorative coating used to create a metallic, iridescent, or pearlescent appearance that contains at least 48 grams of pearlescent mica pigment or

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- other iridescent pigment per liter of coating as applied (at least 0.4 pounds per gallon); or
3. A decorative coating used to create a metallic appearance that contains less than 48 grams of elemental metallic pigment per liter of coating as applied (less than 0.4 pounds per gallon), when tested in accordance with SCAQMD Method 318-95, incorporated by reference in subsection VII.C.9~~10~~; or
  4. A decorative coating used to create a metallic appearance that contains greater than 48 grams of elemental metallic pigment per liter of coating as applied (greater than 0.4 pounds per gallon) and which requires a clear topcoat to prevent the degradation of the finish under normal use conditions. The metallic pigment content shall be determined in accordance with SCAQMD Method 318-95, incorporated by reference in subsection VII.C.10; or
  5. A clear topcoat to seal and protect a Faux Finishing coating that meets the requirements of subsection IV.R.1, IV.R.2, IV.R.3, or VR.4. These clear topcoats must be sold and used solely as part of a Faux Finishing coating system, and must be labeled in accordance with subsection VII.A.4.
- S. Fire Resistive Coating: A coating labeled and formulated to protect structural integrity by increasing fire endurance of interior or exterior steel and other structural materials. The Fire Resistive category includes sprayed fire resistive materials and intumescent fire resistive coatings that are used to bring structural materials into compliance with Federal, State and local building code requirements. Any fire resistive coating and a testing agency must be approved by building code officials. Any fire resistive coating shall be tested in accordance with ASTM Designation E 119-07, incorporated by reference in Subsection VII.C.7~~8~~.
- T. Fire Retardant Coating: A coating labeled and formulated to retard ignition and flame spread, that has been fire tested and rated by a testing agency approved by building code officials for use in bringing building and construction materials into compliance with federal, state and local building code requirements. The fire-retardant coating and the testing agency must be approved by building code officials. The fire-retardant coating shall be tested in accordance with ASTM Designation E 84-07, incorporated by reference in subsection VII.C.7. Effective January 1, 2011, the Fire Retardant coating category is eliminated and ~~Coatings-coatings~~ with fire retardant properties will be subject to the VOC limit of their primary category (e.g., Flat Nonflat, ECT.). ~~Any fire retardant coating shall be tested in accordance with ASTM Designation E 84-99, incorporated by reference in Subsection VII.C.6.~~
- U. Flat Coating: A coating not defined under any other definition in this Rule and that registers gloss less than 15 on an 85 degree meter or less than five on a 60 degree meter according to ASTM Designation D 523-89 (1999), incorporated by reference in Subsection VII.C.8~~9~~.
- V. Floor Coating: An opaque coating labeled and formulated for application to flooring, including, but not limited to, decks, porches, steps, garage floors, and other horizontal surfaces which may be subject to foot traffic.

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W. Form-Release Compound: A coating labeled and formulated for application to a concrete form to prevent freshly poured concrete from bonding to the form. The form may consist of wood, metal or some material other than concrete.

~~X. Gonioapparent~~: A change in appearance with a change in the angle of illumination or the angle of view, as defined according to ASTM E 284-06b, incorporated by reference in subsection VII.C15.

~~Y.X.~~ Graphic Arts Coating or Sign Paint: A coating labeled and formulated for hand-application by artists using brush, air brush, or roller techniques to indoor and outdoor signs (excluding structural components) and murals including lettering enamels, poster colors, copy blockers and bulletin enamels.

~~Z.Y.~~ High-Temperature Coating: A high performance coating labeled and formulated for application to substrates exposed continuously or intermittently to temperatures above 204°C (400°F).

~~AA.Z.~~ Industrial Maintenance Coating: High performance architectural coatings including ~~antenna, antifouling, intermediate coats, primers, sealers, undercoaters, intermediate coats, and topcoats, and undercoaters~~ formulated for application to substrates, including floors, exposed to one or more of the following extreme environmental conditions listed in Subsections ~~IV.AA.Z.1.~~ through ~~IV.AA.Z.5.~~ and labeled as specified in Subsection VII.A.5

1. Immersion in water, wastewater or chemical solutions (aqueous and non-aqueous solutions), or chronic exposure of interior surfaces to moisture condensation;
2. Acute or chronic exposure to corrosive, caustic or acidic agents or to chemicals, chemical fumes or chemical mixtures or solution;
3. Frequent exposure to temperatures above 121°C (250°F);
4. Frequent heavy abrasion, including mechanical wear and frequent scrubbing with industrial solvents, cleansers or scouring agents; or
5. Exterior exposure of metal structures and structural components.

~~BB.AA.~~ Low Solids Coating: A coating containing 0.12 kilogram or less of solids per liter (1 pound or less of solids per gallon) of coating material as recommended for application by the manufacturer. The VOC content for Low Solids Coatings shall be calculated in accordance with section ~~V.III.JII.~~

~~CC.BB.~~ Magnesite Cement Coating: A coating labeled and formulated for application to magnesite cement decking to protect the magnesite cement substrate from erosion by water.

~~DD.CC.~~ Manufacturer's Maximum Thinning Recommendations: The maximum recommendation for thinning that is indicated on the label or lid of the coating container.

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~~EE~~DD. Mastic Texture Coating: A coating labeled and formulated to cover holes and minor cracks and to conceal surface irregularities, and applied in a single coat of at least 10 mils (at least 0.010 inch) dry film thickness.

~~FF~~EE. Medium Density Fiberboard (MDF): A composite wood product, panel, molding, or other building material composed of cellulosic fibers (usually wood) made by dry forming and pressing a resinated fiber mat.

~~GG~~Metall~~ic~~: ~~Similar to the appearance of a gonioapparent material, as defined herein, containing metal flakes.~~

~~HH~~FF. Metallic Pigmented Coating: A coating that is labeled and formulated to provide a metallic appearance. Metallic Pigmented coatings must contain at least 48 grams of elemental metallic pigment (excluding zinc) per liter of coating as applied (at least 0.4 pounds per gallon), when tested in accordance with SCAQMD Method 318-95, incorporated by reference in Subsection VII.C.910. The Metallic Pigmented Coating category does not include coatings applied to roofs or Zinc-Rich Primers.

~~H~~GG. Multicolor Coating: A coating packaged in a single container and that is labeled and formulated to exhibit more than one color when applied in a single coat.

~~JJ~~HH. Nonflat Coating: coating not defined under any other definition in this Rule and that registers a gloss of 15 or greater on an 85 degree meter and 5 or greater on a 60 degree meter according to ASTM Designation D 523-89 (1999), incorporated by reference in Subsection VII.C.89.

~~KK~~II. Nonflat - High Gloss Coating: A nonflat coating that registers a gloss of 70 or above on a 60 degree meter according to ASTM Designation D 523-89 (1999), incorporated by reference in Subsection VII.C.89. Nonflat - High Gloss coatings must be labeled in accordance with subsection VII.A.910.

~~LL~~JJ. Particleboard: A composite wood product panel, molding, or other building material composed of cellulosic material (usually wood) in the form of discrete particles, as distinguished from fibers, flakes, or strands, which are pressed together with resin.

~~MM~~KK. Pearlescent: Exhibiting various colors depending on the angles of illumination and viewing, as observed in mother-of-pear.

~~NN~~LL. Plywood: A panel product consisting of layers of wood veneers or composite core pressed together with resin. Plywood includes panel products made by either hot or cold pressing (with resin) veneers to a platform.

~~OO~~MM. Post Consumer Coating: Finished coatings generated by a business or consumer that have served their intended end uses, and are recovered from or otherwise diverted from the waste stream for the purpose of recycling.

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~~PP~~NN. Pre-Treatment Wash Primer: A primer that contains a minimum of 0.5 percent acid, by weight, when tested in accordance with ASTM Designation D 1613-9606, incorporated by reference in Subsection VII.C.~~10~~11, labeled and formulated for application directly to bare metal surfaces to provide corrosion resistance and to promote adhesion of subsequent topcoats.

~~OO~~OO. Primer, Sealer, and Undercoater: A coating labeled and formulated for one or more of the following purposes:

1. To provide a firm bond between the substrate and the subsequent coatings; or
2. To prevent subsequent coatings from being absorbed by the substrate; or
3. To prevent harm to subsequent coatings by materials in the substrate; or
4. To provide a smooth surface for the subsequent application of coatings; or
5. To provide a clear finish coat to seal the substrate; or
6. To block materials from penetrating into or leaching out of a substrate.

~~RR~~PP. Reactive Penetrating Sealer: A clear or pigmented coating that is 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 penetrate into concrete and masonry substrates and chemically react to form covalent bonds with naturally occurring minerals in the substrate. Reactive Penetrating Sealers line the pores of concrete and masonry substrates with a hydrophobic coating, but do not form a surface film. Reactive Penetrating Sealers must meet all of the following criteria:

1. The Reactive Penetrating Sealer must 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, incorporated by reference in subsection VII.C.22: ASTM C67-07, or ASTM C97-02, or ASTM C140-06; and
2. The Reactive Penetrating Sealer must not reduce the water vapor transmission rate by more than 2 percent after application on a concrete or masonry substrate. This performance must be verified on standardized test specimens, in accordance with ASTM E96/E96M-05, incorporated by reference in subsection VII.C.23; and
3. Products labeled and formulated for vehicular traffic surface chloride screening applications must meet the performance criteria listed in the National Cooperative highway Research Report 244 (1981), incorporated by reference in subsection VII.C.24; and
4. Reactive Penetrating Sealers must be labeled in accordance with subsection VII.A.8.

~~SS~~OO. Recycled Coating: An architectural coating formulated such that it contains a minimum of 50% by volume post-consumer coating, with a maximum of 50% by volume secondary industrial materials or virgin materials.

~~TT~~RR. Residential: Areas where people reside or lodge, including, but not limited to, single and multiple family dwellings, condominiums, mobile homes, apartment complexes, motels and hotels.

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~~UU~~.SS. Roof Coating: A non-bituminous coating labeled and formulated for application to roofs for the primary purpose of preventing water penetration, reflecting ultraviolet light, or reflecting solar radiation.

~~VV~~.TT. Rust Preventative Coating: A coating formulated to prevent corrosion of metal surfaces for one or more of the following applications:

1. Direct-to-metal coating; or
2. Coating intended for application over rusty, previously coated surfaces.

The Rust Preventative category does not include the following:

3. Coatings that are required to be applied as a topcoat over a primer; or
4. Coatings that are intended for use on wood or any other nonmetallic surface.

Rust Preventative coatings are for metal substrates only and must be labeled as such, in subsection VII.A.6.

~~WW~~.UU. Secondary Industrial Materials: Products ~~of~~or by-products of the paint manufacturing process that are of known composition and have economic value but can no longer be used for their intended purpose.

~~XX~~.VV. Semitransparent Coating: A coating that contains binders and colored pigments and is formulated to change the color of the surface, but not conceal the grain pattern ~~of~~or texture.

~~YY~~.WW. Shellac: A clear or opaque coating formulated solely with resinous secretions of the lac beetle (*Lacifer lacca*), and formulated to dry by evaporation without a chemical reaction.

~~ZZ~~.XX. Shop Application: Application of a coating to a product or a component of a product in or on the premises of a factory or a shop as part of a manufacturing, production or repairing process (e.g., original equipment manufacturing coatings).

~~AAA~~.YY. Solicit: To require for use or to specify, by written or oral contract.

ZZ. Specialty Primer, Sealer and Undercoater: A coating that is formulated for application to a substrate to block water-soluble stains resulting from: fire damage; smoke damage; or water damage. Specialty Primers, Sealers, and Undercoaters must be labeled in accordance with subsection VII.A.7.

~~CCC~~.AAA. Stain: A semitransparent or opaque coating labeled and formulated to change the color of a surface but not conceal grain pattern or texture.

~~DDD~~.BBB. Stone Consolidant: A coating that is labeled and formulated for application to stone substrates to repair historical structures that have been damaged by weather or other decay mechanisms. Stone Consolidants must penetrate into substrates to create bonds between particles and consolidate deteriorated material. Stone Consolidants must be specified and used in accordance with ASTM E2167-01, incorporated by reference in subsection VII.C.25.

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Stone Consolidants are for professional use only and must be labeled as such, in accordance with the labeling requirements in subsection VII.C.~~12~~10.

~~EEE.CCC.~~ Swimming Pool Coating: A coating labeled and formulated to coat the interior of swimming pools and to resist swimming pool chemicals. Swimming pool coatings include coatings used for swimming pool repair and maintenance.

~~FFF.DDD.~~ Tint Base: An architectural coating to which colorant is added after packaging in sale units to produce a desired color.

~~GGG.EEE.~~ Traffic Marking Coating: A coating labeled and formulated for marking and striping streets, highways or other traffic surfaces including, but not limited to, curbs, berms, driveways, parking lots, sidewalks and airport runways.

~~HHH.FFF.~~ Tub and Tile Refinish Coating: A clear or opaque coating that is labeled and formulated exclusively for refinishing the surface of a bathtub, shower, sink, or countertop. Tub and Tile Refinish coatings must meet all of the following criteria:

1. The coating must have a scratch hardness of 3H or harder and a gouge hardness of 4H or harder. This must be determined on bonderite 1000, in accordance with ASTM D3363-05, incorporated by reference in subsection VII.C.17; and
2. The coating must have a weight loss of 20 milligrams or less after 1000 cycles. This must be determined with CS-17 wheels on bonderite 1000, in accordance with ASTM D4060-07, incorporated by reference in subsection VII.C.18; and
3. The coating must withstand 1000 hours or more of exposure with few or no #8 blisters. This must be determined on unscribed bonderite, in accordance with ASTM D4585-99, and ASTM D714-02e1, incorporated by reference in subsection VII.C.19; and
4. The coating must have an adhesion rating of 4B or better after 24 hours of recovery. This must be determined on unscribed bonderite, in accordance with ASTM D4585-99 and ASTM D3359-02, incorporated by reference in subsection VII.C.16.

~~HH.GGG.~~ Veneer: Thin sheets of wood peeled or sliced from logs for use in the manufacture of wood products such as plywood, laminated veneer lumber, or other products.

~~JJJ.HHH.~~ Virgin Materials: Materials that contain no post-consumer coatings or secondary industrial materials.

~~KKK.III.~~ Volatile Organic Compound (VOC): Any volatile compound containing at least one atom of carbon, excluding Exempt Compounds as listed in Rule 102 Definitions.

~~LLL.JJJ.~~ VOC Actual: VOC Actual is the weight of VOC per volume of coating and it is calculated with the following equation:

$$\text{VOC Actual} = \frac{W_s - W_w - W_{ec}}{V}$$

(Vm)

Where:

VOC Actual = the grams of VOC per liter of coating (also known as Material VOC)

Ws = weight of volatiles, in grams

Ww = weight of water, in grams

Wec = weight of exempt compounds, in grams

Vm = volume of coating, in liters

~~MMM.KKK.~~ VOC Content Calculation: The weight of VOC per volume of coating. VOC content is VOC Regulatory, as defined in section IV.~~NNN.LLL~~, for all coatings except those in the Low Solids category. For all coatings in the Low Solids category, the VOC Content is VOC Actual, as defined in section IV.~~LLL.JJJ~~. If the coating is a multi-component product, the VOC content is VOC Regulatory as mixed or catalyzed. If the coating contains silanes, siloxanes, or other ingredients that generate ethanol or other VOCs during the curing process, the VOC content must include the VOCs emitted during curing.

~~NNN.LLL.~~ VOC Regulatory: VOC Regulatory is the weight of VOC per volume of coating, less the volume of water and exempt compounds. It is calculated with the following equation:

$$\text{VOC Regulatory} = \frac{(Ws - Ww - Wec)}{(Vm - Vw - Vec)}$$

Where:

VOC Regulatory = grams of VOC per liter of coating, less water and exempt compounds (also known as Coating VOC)

Ws = weight of volatiles, in grams

Ww = weight of water, in grams

Wec = weight of exempt compounds, in grams

Vm = volume of coating, in liters

Vw = volume of water, in liters

Vec = volume of exempt compounds, in liters

~~OOO.MMM.~~ Waterproofing Membrane: A clear or opaque coating that is labeled and formulated for application to concrete and masonry surfaces to provide a seamless waterproofing membrane that prevents any penetration of liquid water into the substrate. Waterproofing Membranes are intended for the following waterproofing applications: below-grade surfaces, between concrete slabs, inside tunnels, inside concrete planters, and under flooring materials. Waterproofing Membranes must meet the following criteria:

1. Coating must be applied in a single coat of at least 25 mils (at least 0.025 inch) dry film thickness; and
2. Coatings must meet or exceed the requirements contained in ASTM C836-06, incorporated by reference in subsection VII.C.20.

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The Waterproofing Membrane category does not include topcoats that are included in the Concrete/Masonry Sealer category (e.g., parking deck topcoats, pedestrian deck topcoats, etc.).

~~PPP.NNN.~~ Wood Coatings: Coatings labeled and formulated for application to wood ~~substances~~ substrates only. The Wood Coatings category includes the following clear and semitransparent coatings: lacquers; varnishes; sanding sealers; penetrating oils; clear stains; wood conditioners used as undercoats; and wood sealers used as topcoats. The Wood Coatings category also includes the following opaque wood coatings: opaque lacquers; opaque sanding sealers; and opaque lacquer undercoats. The Wood Coatings category does not include the following: clear sealers that are labeled and formulated for use on concrete/masonry surfaces; or coatings intended for substrates other than wood.

Wood Coatings must be labeled “For Wood Substrates Only”, in accordance with subsection VII.A.11.

~~OOO.OOO.~~ Wood Preservative: A coating labeled and formulated to protect exposed wood from decay or insect attack, registered with both the U.S. EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (7 United States Code (U.S.C.) Section 136, et seq.) and with the California Department of Pesticide Regulation.

~~RRR.PPP.~~ Wood Substrates: A substrate made of wood, particleboard, plywood, medium density fiberboard, rattan, wicker, bamboo, or composite products with exposed wood grain. Wood Products do not include items comprised of simulated wood.

~~SSS.OQQ.~~ Zinc-Rich Primer: Is a coating that meets all of the following specifications:

1. Coating contains at least 65 percent metallic zinc powder or zinc dust by weight of total solids; and
2. Coating is formulated for application to metal substrates to provide a firm bond between the substrate and subsequent applications of coatings; and
3. Coating is intended for professional use only and is labeled as such, in accordance with the labeling requirements in subsection VII.A.12.

### V. Exemptions

~~A.Provisions of this Rule shall not apply to any architectural coating that is supplied, sold, offered for sale, or manufactured for use outside of the District or for shipment to other manufacturers for reformulation or repackaging.~~

~~B.Provisions of section VI and subsection VII.A shall not apply to any architectural coating sold in a container with a volume of one liter (1.057 quarts) or less.~~

### VI. Requirements

A. VOC Content Limits: No person except as provided in Subsections VI.B., and VI.C., ~~and VI.H.~~ shall:

1. Manufacture, blend, or repackage for sale within the District;

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2. Supply, sell or offer for sale within the District; or
3. Solicit for application or apply within the District, any architectural coating with a VOC content in excess of the corresponding VOC Content limit specified in the Table of Standards, after the specified effective date in the Table of Standards. Limits are expressed as VOC Regulatory, thinned to the manufacture's maximum thinning recommendation, excluding ~~and any~~ colorant added to tint bases.

- B. Most Restrictive VOC Limit: If a coating meets the definition in Section IV for one or more specialty coating categories that are listed in the Table of Standards, then that coating is not required to meet the VOC limits for Flat, Nonflat, or Nonflat – High Gloss coatings, but is required to meet the VOC limit for the applicable specialty coating listed in the Table of Standards.

With the exception of the specialty coating categories specified in subsections VI.B.1 through VI.B.12, if a coating is recommended for use in more than one of the specialty coating categories listed in the Table of Standards, the most restrictive (or lowest) VOC content shall apply. This requirement applies to: usage recommendations that appear anywhere on the coating container, anywhere on any label or sticker affixed to the container, or in any sales, advertising, or technical literature supplied by a manufacturer or anyone acting on their behalf.

1. Metallic pigmented coatings.
2. Shellacs.
3. Pretreatment wash primers.
4. Industrial maintenance coatings.
5. Low-solids coatings.
6. Wood preservatives.
7. High-temperature coatings.
8. Bituminous roof primers.
9. Specialty primers, sealers and undercoaters.
10. Aluminum roof coatings.
11. Zinc-rich primers.
12. Wood Coatings.

- C. Sell-Through/Existing Stock of Coatings: A coating manufactured prior to the VOC Content limit effective date(s) specified for that coating in the Table of Standards, that complied with the VOC Content limit in effect at the time the coating was manufactured, may be sold, supplied, or offered for sale for up to three years after the specified VOC Content limit effective date(s) listed in the Table of Standards. ~~In addition, a Such a coating manufactured before the effective date specified for that coating in the Table of Standards may be applied at any time, both before and after the specified effective date, so long as the coating complied with the standards in effect at the time the coating was manufactured.~~ This subsection VI.C does not apply to any coating that does not display the date or date-code required by subsection VII.A.1.

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- D. Painting Practices: All architectural coating containers used to apply the contents therein to a surface directly from the container by pouring, siphoning, brushing, rolling, padding, ragging or other means, shall be closed when not in use. Such architectural coating containers include, but are not limited to, drums, buckets, cans, pails, trays or other application containers. Containers of any VOC-containing materials used for thinning and cleanup shall also be closed when not in use.
- E. Thinning: No person who applies or solicits application of any architectural coating shall apply a coating thinned to exceed the applicable VOC limit specified in the Table of Standards.
- F. Coatings Not Listed in the Table of Standards: For any coating that does not meet any of the definitions for specialty coatings categories listed in the Table of Standards, the VOC content limit shall be determined by classifying the coating as a Flat, Nonflat, or Nonflat-High Gloss coating, based on its gloss, as defined in Subsections ~~IV.U.~~, ~~IV.LL~~HH, and ~~IV.MM~~II, and the corresponding Flat, Nonflat, or Nonflat-High Gloss VOC limit in the Table of Standards shall apply.

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**TABLE OF STANDARDS**  
**VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS**

Coating Category	Effective 1/1/2011	Effective 1/1/2012
<b>Flat Coatings</b>	50	
<b>Nonflat Coatings</b>	100	
<b>Nonflat - High Gloss Coatings</b>	150	
<b>Specialty Coatings:</b>		
Aluminum Roof Coatings	400	
Basement Specialty Coatings	400	
Bituminous Roof Coatings	50	
Bituminous Roof Primers	350	
Bond Breakers	350	
Concrete Curing Compounds	350	
Concrete/Masonry Sealers	100	
Driveway Sealers	50	
Dry Fog Coatings	150	
Faux Finishing Coatings	350	
Fire Resistive Coatings	350	
Floor Coatings	100	
Form-Release Compounds	250	
Graphic Arts Coatings (Sign Paints)	500	
High Temperature Coatings	420	
Industrial Maintenance Coatings	250	
Low Solids Coatings <sup>2</sup>	120	
Magnesite Cement Coatings	450	
Mastic Texture Coatings	100	
Metallic Pigmented Coatings	500	
Multi-Color Coatings	250	
Pre-Treatment Wash Primers	420	
Primers, Sealers, and Undercoaters	100	
Reactive Penetrating Sealers	350	
Recycled Coatings	250	
Roof Coatings	50	
Rust Preventative Coatings	400	250
Shellacs:		
• Clear	730	
• Opaque	550	
Specialty Primers, Sealers, and Undercoaters	350	100
Stains	250	
Stone Consolidants	450	
Swimming Pool Coatings	340	
Traffic Marking Coatings	100	
Tub and Tile Refinish Coatings	420	
Waterproofing Membranes	250	
Wood Coatings	275	

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Wood Preservatives	350	
Zinc-Rich Primers	340	

1. Limits are expressed as VOC Regulatory thinned to the manufacturer's maximum thinning recommendation, excluding any colorant added to tint bases.
2. Limit is expressed as VOC Actual.

### VII. Administrative Requirements

A. Labeling Requirements: Each manufacturer of any architectural coating subject to this Rule shall display information listed in Subsections VII.A.1. through VII.A.12 on coating container (or label) in which coating is sold or distributed.

1. Date Code: The date coating was manufactured, or date code representing date, shall be indicated on label, lid or bottom of container. If manufacturer uses a date code for any coating, manufacturer shall file an explanation of each code with the Executive Officer of the ARB.
2. Thinning Recommendations: A statement of manufacturer's recommendation regarding thinning of coating shall be indicated on label or lid of container. This requirement does not apply to thinning of architectural coatings with water. If thinning of coating prior to use is not necessary, recommendation must specify coating is to be applied without thinning.
3. VOC Content: Each container of any coating subject to this rule shall display one of the following values in grams of VOC per liter of coating:
  - a. Maximum VOC Content as determined from all potential product formulations; or
  - b. VOC Content as determined from actual formulation data; or
  - c. VOC Content as determined using the test methods in subsection VII.C.~~1~~2.

If the manufacturer does not recommend thinning, the container must display the VOC Content, as supplied. If the manufacturer recommends thinning, the container must display the VOC Content including the maximum amount of thinning solvent recommended by the manufacturer. If the coating is a multi-component product, the container must display the VOC content as mixed or catalyzed. If the coating contains silanes, siloxanes, or other ingredients that generate ethanol or other VOCs during the curing process, the VOC content must include the VOCs emitted during curing. VOC Content shall be determined as defined in subsections ~~IV.LLL~~JJJ, ~~IV.MMM~~KKK, and ~~IV.NNN~~LLL.

4. Faux Finishing Coatings: The labels of all clear topcoat Faux Finishing coatings shall prominently display the statement "This product can only be sold or used as part of a Faux Finishing coating system."
5. Industrial Maintenance Coatings: The labels of all Industrial Maintenance coatings shall prominently display the statement "For industrial use only" or

“For professional use only” or “Not for residential use” or “Not intended for residential use”.

6. Rust Preventative Coatings: The labels of all rust preventative coatings shall prominently display statement “For Metal Substrates Only”.
7. Specialty Primers, Sealers and Undercoaters: Until January 1, 2012, the labels of all specialty primers, sealers and undercoaters shall prominently display one or more of following descriptions:
  - a. For fire damaged substrates;
  - b. For smoke damaged substrates;
  - c. For water damaged substrates; or
8. Reactive Penetrating Sealers: The labels of all Reactive Penetrating Sealers shall prominently display the statement “Reactive Penetrating Sealer”.
9. Stone Consolidants: The labels of all Stone Consolidants shall prominently display the statement “Stone Consolidant – For Professional Use Only”.
10. Nonflat-High Gloss Coatings: The labels of all nonflat-high gloss coatings shall prominently display words “High Gloss”.
11. Wood Coatings: The labels of all Wood Coatings shall prominently display the statement “For Wood Substrates Only”.
12. Zinc Rich Primers: The labels of all Zinc Rich Primers shall prominently display one of the following the statements ~~“For Professional Use Only”~~ “Not For Residential Use” or “Not Intended For Residential Use” or “For Industrial Use Only” or “For professional use only”.

#### B. Reporting Requirements

1. Sales Data: A responsible official from each manufacturer shall upon request of the Executive Officer of the ARB, or his or her delegate, provide data concerning the distribution and sales of architectural coatings. The responsible official shall within 180 days provide information including, but not limited to:
  - a. The name and mailing address of the manufacturer;
  - b. The name, address and telephone number of a contact person;
  - c. The name of the coating product as it appears on the label and the applicable coating category;
  - d. Whether the product is marketed for interior or exterior use or both;
  - e. The number of gallons sold in California in containers greater than one liter (1.057 quart) and equal to or less than one liter (1.057 quart);
  - f. The VOC Actual content and VOC Regulatory content in grams per liter. If thinning is recommended, list the VOC Actual content and VOC Regulatory content after maximum recommended thinning. If containers less than one liter have a different VOC content than

containers greater than one liter, list separately. If the coating is a multi-component product, provide the VOC content as mixed or catalyzed;

- g. The names and CAS numbers of the VOC constituents in the product;
- h. The names and CAS numbers of any compounds in the product specifically exempted from the VOC definition, as listed in ~~Subsection IV.KKK~~ Rule 102 Definitions;
- i. Whether the product is marketed as solventborne, waterborne, or 100% solids;
- j. Description of resin or binder in the product;
- k. Whether the coating is a single-component or multi-component product;
- l. The density of the product in pounds per gallon;
- m. The percent by weight of: solids, all volatile materials, water, and any compounds in the product specifically exempted from the VOC definition, as listed in ~~Subsection IV.KKK~~; and Rule 102 Definitions
- n. The percent by volume of: solids, water, and any compounds in the product specifically exempted from the VOC definition, as listed in ~~Subsection IV.KKK~~ Rule 102 Definitions.

- 2. All sales data listed in subsection VII.B.1.a to VII.B.1.n shall be maintained by the responsible official for a minimum of three years. Sales data submitted by the responsible official to the Executive Officer of the ARB may be claimed as confidential, and such information shall be handled in accordance with the procedures specified in Title 17, California Code of Regulations Sections 91000-91022.

### C. Test Methods

1. Calculation of VOC Content: For the purpose of determining compliance with the VOC content limits in the Table of Standards, the VOC content of a coating shall be determined as defined in subsection V.JJJ, V.KKK, or V.LLL. The VOC content of a tint base shall be determined without colorant that is added after the tint base is manufactured. If the manufacturer does not recommend thinning, the VOC content must be calculated for the product as supplied. If the manufacturer recommends thinning, the VOC content must be calculated including the maximum amount of thinning solvent recommended by the manufacturer. If the coating is a multi-component product, the VOC content must be calculated as mixed or catalyzed. If the coating contains silanes, siloxanes, or other ingredients that generate ethanol or other VOCs during the curing process, the VOC content must include the VOCs emitted during curing.

2. VOC Content Determination of Coatings: To determine physical properties of a coating in order to perform calculations in Subsections ~~IV.NNN~~ LLL, or ~~IV.LLL~~ JJJ, the reference method for VOC content shall be U.S. EPA Method 24, except as provided in Subsections VII.C.2-3 and VII.C.34. An alternative method to determine VOC content of coatings is SCAQMD Method 304-91

(Revised 1996), incorporated by reference in Subsection VII.C.~~3~~4. The exempt compounds content shall be determined by SCAQMD Method 303-91 (Revised 1993), BAAQMD Method 43 (Revised 1996), or BAAQMD Method 41 (Revised 1995), as applicable, incorporated by reference in Subsection VII.C.~~11~~12, VII.C.~~12~~13, and VII.C.~~13~~14, respectively. To determine VOC content of a coating, the manufacturer may use U.S. EPA Method 24, or an alternative method as provided in Subsection VII.C.~~2~~3, formulation data, or any other reasonable means for predicting coating has been formulated as intended (e.g., quality assurance checks, recordkeeping). However, if there are any inconsistencies between results of a Method 24 test and any other means for determining VOC content, Method 24 test results shall ~~shall~~will govern, except when an alternative method is approved as specified in Subsection VII.C.~~2~~3. The District Air Pollution Control Officer (APCO) may require manufacturer to conduct a Method 24 analysis.

~~2~~3.Alternative Test Methods: Other test methods demonstrated to provide results acceptable for purposes of determining compliance with Subsection VII.C.~~1~~2, after review and approved in writing by the staffs of District, ARB and U.S. EPA, may also be used.

~~3~~4.Alternative VOC Content of Coatings: The VOC content of coatings may be analyzed either by U.S. EPA Method 24 ~~or~~or SCAQMD Method 304-91 (Revised 1996), “Determination of Volatile Organic Compounds (VOC) in Various Materials”, “SCAQMD Laboratory Methods of Analysis for Enforcement Samples” (see Subsection VII.C.~~1~~2).

~~4~~5.VOC Content of Coatings: The VOC content of a coating shall be determined by U.S. EPA Method 24 as it exists in Appendix A of 40 Code of Federal Regulations (CFR) Part 60, “Determination of Volatile Matter Content, Water Content, Density, Volume Solids and Weight Solids of Surface Coatings” (see Subsection VII.C.~~1~~2).

~~5~~6.Methacrylate Traffic Marking Coatings: The VOC content of methacrylate multicomponent coatings used as traffic marking coatings shall be analyzed by procedures in 40 CFR Part 59, Subpart D, Appendix A, “Determination of Volatile Matter Content of Methacrylate Multicomponent Coatings Used as Traffic Marking Coatings”, ~~incorporated by reference in Subsection VII.C.3.~~ (This method has not been approved for methacrylate multicomponent coatings used for other purposes than traffic marking coatings or for other classes of multicomponent coatings).

~~6~~7.Flame Spread Index: The flame spread index of a fire retardant coating shall be determined by ASTM E 84-07, “Standard Test Method for Surface Burning Characteristics of Building Materials” (see Subsection ~~IV~~T., Fire Retardant Coating).

~~7~~8.Fire Resistance Rating: The fire resistance rating of a fire resistive coating shall be determined by ASTM E 119-07, “Standard Test Methods for Fire

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Tests of Building Construction Materials” (see Subsection ~~IV.S.~~, Fire Resistive Coating).

~~8.9.~~9.Gloss Determination: Gloss of a coating shall be determined by ASTM D 523-89 (1999), “Standard Test Method for Specular Gloss” (see Subsections ~~IV.U.~~, ~~IV.HH.~~, and ~~IV.KKII.~~ Flat Coating, Nonflat Coating, and Nonflat-High Gloss Coating).

~~9.10.~~10.Metal Content of Coatings: Metallic content of a coating shall be determined by SCAQMD Method 318-95, “Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction,” *SCAQMD Laboratory Methods of Analysis for Enforcement Samples* (see Subsections ~~IV.C.~~, ~~IV.R.~~, and ~~IV.HHFF~~; Aluminum Roof, Faux Finishing, and Metallic Pigmented Coating).

~~10.11.~~11.Acid Content of Coatings: The acid content of a coating shall be determined by ASTM D 1613-06, “Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediaries Used in Paint, Varnish, Lacquer and Related Products” (see Subsection ~~IV.PPNN.~~, Pretreatment Wash Primer).

~~11.12.~~12.Exempt Compounds: The content of compounds pursuant to U.S. EPA Method 24 shall be analyzed by SCAQMD Method 303-91 (Revised ~~1996~~1993), “Determination of Exempt Compounds”, “SCAQMD Laboratory Methods of Analysis for Enforcement Samples” (see Subsection ~~IV.KKKIII.~~, Volatile Organic Compound and Subsection VII.C.~~1~~2).

~~12.13.~~13.Exempt Compounds–Siloxanes: Exempt compounds that are cyclic, branched or linear completely methylated siloxanes, shall be analyzed as exempt compounds for compliance with Section VIII by BAAQMD Method 43, “Determination of Volatile Methylsiloxanes in Solvent-Based Coatings, Inks, and Related Materials”, “BAAQMD Manual of Procedures”, Volume ~~IVIII~~III, adopted 11/6/96 (see Subsection ~~IV.KKKIII.~~, Volatile Organic Compound and Subsection VII.C.~~1~~2).

~~13.14.~~14.Exempt Compounds– Parachlorobenzotrifluoride (PCBTF): The exempt compound parachlorobenzotrifluoride shall be analyzed as an exempt compound for compliance with Section VIII by BAAQMD Method 41, “Determination of Volatile Organic Compounds in Solvent-Based Coatings and Related Materials Containing Parachlorobenzotrifluoride”, “BAAQMD Manual of Procedures”, Volume ~~IVIII~~III, adopted 12/20/95 (see Subsection ~~IV.KKKIII.~~, Volatile Organic Compounds and Subsection VII.C.~~1~~2).

~~14.15.~~15.Hydrostatic Pressure for Basement Specialty Coatings: ASTM D7088-04, “Standard Practice for Resistance to Hydrostatic Pressure for Coatings Used in Below Grade Applications Applied to Masonry” (see section ~~IV.F.~~, Basement Specialty Coating).

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15. ~~Gonioapparent Characteristics for Coatings: ASTM E 284-07, “Standard Terminology of Appearance” (see section IV.X., Gonioapparent).~~
16. Tub and Tile Refinish Coating Adhesion: ASTM D 4585-99, “Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation” and ASTM D3359-02, “Standard Test Methods for Measuring Adhesion by Tape Test” (see section IV.~~HHH~~FFF., Tub and Tile Refinish Coating).
17. Tub and Tile Refinish Coating Hardness: ASTM D 3363-05, “Standard Test Method for Film Hardness by Pencil Test” (see section IV.~~HHH~~FFF., Tub and Tile Refinish Coating).
18. Tub and Tile Refinish Coating Abrasion Resistance: ASTM D 4060-07, “Standard Test Methods for Abrasion Resistance of Organic Coatings by the Taber Abraser” (see section IV.~~HHH~~FFF., Tub and Tile Refinish Coating).
19. Tub and Tile Refinish Coating Water Resistance: ASTM D 4585-99, “Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation” and ASTM D714-02e1, “Standard Test Method for Evaluating Degree of Blistering of Paints” (see section IV.~~HHH~~FFF., Tub and Tile Refinish Coating).
20. Waterproofing Membrane: ASTM C836-06, “Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course” (see section IV.~~OOO~~MMM., Waterproofing Membrane).
21. Mold and Mildew Growth for Basement Specialty Coatings: ASTM D3273-00, “Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber” and ASTM D3274-95, “Standard Test Method for Evaluating Degree of Surface Disfigurement of Paint Films by Microbial (Fungal or Algal) Growth or Soil and Dirt Accumulation” (see section IV.F., Basement Specialty Coating).
22. Reactive Penetrating Sealer Water Repellency: ASTM C67-07, “Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile”; or ASTM C97-02, “Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone”; or ASTM C140-06, “Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units” (see section IV.~~RR~~PP., Reactive Penetrating Sealer).
23. Reactive Penetrating Sealer Water Vapor Transmission: ASTM E96/E96M-05, “Standard Test Method for Water Vapor Transmission of Materials” (see section IV.~~RR~~PP., Reactive Penetrating Sealer).
24. Reactive Penetrating Sealer - Chloride Screening Applications: National Cooperative Highway Research Report 244 (1981), “Concrete Sealers for the

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| Protection of Bridge Structures” (see section IV.~~RR~~PP., Reactive Penetrating Sealer).

| 25. Stone Consolidants: ASTM E2167-01, “Standard Guide for Selection and Use of Stone Consolidants” (see section IV.~~DD~~BB., Stone Consolidant).

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**APPENDIX C:**  
**ADOPTED RULE 410.1A**  
**ARCHITECTURAL COATING CONTROLS**  
**RESPONSE TO COMMENTS**

## I. ARB & EPA COMMENTS

The California Air Resources Board (ARB) and U.S. EPA (EPA) had very similar comments regarding draft Rule 410.1A. Both ARB and the EPA supported each other's suggested changes to the Rule. KCAPCD incorporated ARB and EPA's comments and suggested changes into the revised version of draft Rule 410.1A.

In addition to minor typographical errors that have been addressed, the revised version of draft Rule 410.1A reflects the following changes made in response to the comments and suggested changes made by the ARB and EPA:

### Definitions

To maintain consistency with other districts adopting ARB's 2007 SCM for Architectural Coatings, the following provision has been added to Subsection V.R.4 of the Faux Finish Coating definition: *"A decorative coating used to create a metallic appearance that contains greater than 48 grams of elemental metallic pigment per liter of coating as applied (greater than 0.4 pounds per gallon) and which requires a clear topcoat to prevent the degradation of the finish under normal use conditions. The metallic pigment content shall be determined in accordance with SCAQMD Method 318-95, incorporated by reference in subsection VII.C.10."*

It was recommended to combine Subsections V.R.4 and V.R.5 of the Faux Finish Coating definition of into one Subsection. KCAPCD has combined the two sections. Subsection V.R.5 now reads: *"A clear topcoat to seal and protect a Faux Finishing coating that meets the requirements of subsection IV.R.1, IV.R.2, IV.R.3, or IV.R.4. These clear topcoats must be sold and used solely as part of a Faux Finishing coating system, and must be labeled in accordance with subsection VII.A.4."*

To maintain consistency with other districts adopting ARB's 2007 SCM for Architectural Coatings, the following changes have been made to Section V.T, Fire Retardant Coating: *"A coating labeled and formulated to retard ignition and flame spread, that has been fire tested and rated by a testing agency approved by building code officials for use in bringing building and construction materials into compliance with federal, state and local building code requirements. The fire-retardant coating and the testing agency must be approved by building code officials. The fire-retardant coating shall be tested in accordance with ASTM Designation E 84-07, incorporated by reference in subsection VII.C.7. Effective January 1, 2011, the Fire Retardant coating category is eliminated and Coatings coatings with fire retardant properties will be subject to the VOC limit of their primary category (e.g., Flat Nonflat, ECT.). Any fire retardant coating shall be tested in accordance with ASTM Designation E 84-99, incorporated by reference in Subsection VII.C.6."*

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As recommended, “airbrush” has been added to Section V.X, Graphic Arts Coating or Sign Paint.

As recommend, Section V.Z, Industrial Maintenance Coating has been changed as follows: “*High performance architectural coatings including ~~antenna, antifouling, intermediate coats, primers, sealers, undercoaters, intermediate coats, and topcoats, and undercoaters~~ formulated for application to substrates, including floors, exposed to one or more of the following extreme environmental conditions listed in Subsections V.Z.1. through V.Z.5. and labeled as specified in Subsection VII.A.5.”*

As recommend, Section V.NN, Pre-Treatment Wash Primer Coating has been changed as follows: “*A primer that contains a minimum of 0.5 percent acid, by weight, when tested in accordance with ASTM Designation D 1613 ~~96 06~~, incorporated by reference in Subsection VII.C.11. labeled and formulated for application directly to bare metal surfaces to provide corrosion resistance and to promote adhesion of subsequent topcoats.*”

To maintain consistency with other districts adopting ARB's 2007 SCM for Architectural Coatings, Sections IV.X, Gonioapparent, and IV.GG, Metallic have been deleted.

As recommended, “Calculation” has been deleted from the title of Section V.KKK, VOC Content Calculation. Section V.KKK now reads “*VOC Content.*”

As recommended, the word “substances” has been replaced with the word “substrates” in Section V.NNN, Wood Coatings. The first sentence of Section V.NNN now reads: “*Coatings labeled and formulated for application to wood substrates only.*”

To maintain consistency with other districts adopting ARB's 2007 SCM for Architectural Coatings, “*accordance with the labeling requirements in*” has been added to Subsection V.QQQ.3 of the Zinc-Rich Primer definition. Subsection V.QQQ.3 now reads: “*Coating is intended for professional use only and is labeled as such, in accordance with the labeling requirements in subsection VII.A.12.*”

### **Exemptions**

To maintain consistency with other districts adopting ARB's 2007 SCM for Architectural Coatings, Subsection IV.A.2 “*Provisions of this Rule shall not apply to any aerosol coating product*” has been added to Section IV Exemptions.

### **Administrative Requirements**

To maintain consistency with other districts adopting ARB's 2007 SCM for Architectural Coatings, “clear topcoat” has been added to Subsection VII.A.4,

Faux Finishing Coatings. Subsection VII.A.4 now reads: *“The labels of all clear topcoat Faux Finishing coatings shall prominently display the statement ‘This product can only be sold or used as part of a Faux Finishing coating system.’”*

To maintain consistency with other districts adopting ARB's 2007 SCM for Architectural Coatings, the following provision has been added to Subsection VII.C.1 Test Methods: *“Calculation of VOC Content: For the purpose of determining compliance with the VOC content limits in the Table of Standards, the VOC content of a coating shall be determined as defined in subsection V.JJJ, V.KKK, or V.LLL. The VOC content of a tint base shall be determined without colorant that is added after the tint base is manufactured. If the manufacturer does not recommend thinning, the VOC content must be calculated for the product as supplied. If the manufacturer recommends thinning, the VOC content must be calculated including the maximum amount of thinning solvent recommended by the manufacturer. If the coating is a multi-component product, the VOC content must be calculated as mixed or catalyzed. If the coating contains silanes, siloxanes, or other ingredients that generate ethanol or other VOCs during the curing process, the VOC content must include the VOCs emitted during curing.”*

Section VII.C.15, Gonioapparent Characteristics for Coatings has been deleted from the Rule because it is no longer needed after deleting Section IV.X, Gonioapparent.

## II. INDUSTRY COMMENTS

KCAPCD evaluated all comments and suggested changes made by the Coatings Industry in regarding draft Rule 410.1A. Many of the comments were very similar to what ARB and EPA proposed. Industry comments and suggested changes to the Rule that are similar in nature to those previously addressed in the ARB EPA Comments section of Appendix C, will not be mentioned again in this section.

Suggested changes that would aid the Coatings Industry with compliance without modifying the intent or VOC Content Limits of the Rule were incorporated into draft Rule 410.1A. Some of Industry's suggested changes were not incorporated into the Rule because they were: infeasible and would alter the intent of the Rule, inapplicable to the Rule, or KCAPCD believed there was no benefit in making the change.

An industry official at the workshop stated that creating and adopting a new architectural coatings rule instead of amending the current rule may create confusion and allow sources to decide which rule to follow. KCAPCD does not believe that this will be an issue of concern because the current architectural rule, Rule 410.1 will sunset when the new rule, Rule 410.1A becomes effective. Sources will not have the choice of which rule to follow because there will only be one architectural coatings rule in effect at any given time.

## Exemptions

KCAPCD was commended by industry for updating the Exempt Compounds list in Rule 102 Definitions to include Tertiary Butyl Acetate (t-butyl acetate) informally known as TBAC or TBAC along with Dimethyl Carbonate and Propylene Carbonate which are compounds used in various coatings.

As requested, the Exemptions Section has been moved up from Section V to Section IV, immediately after Severability and directly before Definitions.

## Requirements

Industry noted an inadvertent error in the Section VI.C. "Sell-Through" provision. As written, the condition that a coating must have "complied with the standards in effect at the time the coating was manufactured" relates only to that part of the provision allowing coatings to be "applied at any time," and not to that part allowing coatings to be "sold, supplied, or offered for sale..."

Section VI.C has been changed to the following: Sell-Through/Existing Stock of Coatings: A coating manufactured prior to the VOC Content limit effective date(s) specified for that coating in the Table of Standards, that complied with the VOC Content limit in effect at the time the coating was manufactured, may be sold, supplied, or offered for sale for up to three years after the specified VOC Content limit effective date(s) listed in the Table of Standards. Such a coating may be applied at any time, both before and after the specified effective date. This subsection VI.C does not apply to any coating that does not display the date or date-code required by subsection VII.A.1.

## Table of Standards

It was recommended that KCAPCD push the VOC Content limit requirements for certain coatings back one year to give manufacturers extra time to develop formulas that would comply with the regulation. KCAPCD sought ARB's input on this matter and received this response from ARB: *"We (ARB) would not support Dunn-Edwards' request to delay the flat and PSU effective dates. We believe the SCM VOC limits are feasible without averaging. In fact, that's why we have higher limits than the SCAQMD's rule 1113 in some categories. We believe a 36% complying market share for PSUs back in 2004 is good evidence that the limit is feasible without averaging. And although the flat complying market share was low in 2004 (7%), there is significant consensus that that is the easiest category to formulate at low VOC levels. They have made this request to both BAAQMD and SJVAPCD and both districts decided against their request".*

It has been suggested that the effective date of several categories of coatings (Tub and Tile Refinish; Stone Consolidants; Reactive Penetrating Sealers and

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Basement Specialty Coating among others) be set at the time of adoption since these are new and needed “niche” categories. As such, these categories have higher VOC content limits than the default categories and are currently only available in small containers.

KCAPCD has decided not to include a provision that would allow the VOC Content limits of The Table of Standards to become effective at the date of adoption for the following reasons:

1. Rule 410.1 (the current architectural coatings rule) is not being amended to include “New Categories”;
2. Proposed Rule 410.1A along with the VOC Content Limits listed in the Table of Standards is structured to not go into effect until 1/1/2011 regardless of an earlier Rule adoption date.

The Table of Standards and Effective Dates of the VOC Content limits will be unchanged and remain the same as originally stated in the September 21, 2009 draft of Rule 410.1A, Architectural Coatings Controls.

### **Administrative Requirements**

As requested, KCAPCD added the terms “Not for residential use” or “Not intended for residential use” to Section VII.A.5, Industrial Maintenance Coatings. Section VII.A.5 now reads: *“The labels of all Industrial Maintenance coatings shall prominently display the statement “For industrial use only” or “For professional use only” or “Not for residential use” or “Not intended for residential use.”*”

### **III. PUBLIC COMMENTS**

There were no comments made by the general public.

### **IV. ARB & EPA RULE REVIEW RESULTS**

KCAPCD submitted the Final Revised Draft of Rule 410.1A Architectural Coating Controls to ARB and EPA for a 30-day review period. At the close of the 30-day review period ARB and EPA each stated that there were no additional comments.

### **V. UPDATE TO SECTION VII.A.12, ZINC RICH PRIMERS**

After public notice was give for Rule adoption, the American Coatings Association (ACA) requested that KCAPCD update Section VII.A.12, Zinc Rich

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Primers of Rule 410.1A to include the following provisions: “Not For Residential Use”, “Not Intended For Residential Use” or “For Industrial Use Only.” KCAPCD considered this change to be a minor correction to the rule that was overlooked in the draft and will not be a significant change. ARB staff has been consulted and agrees.

KCAPCD added the terms “Not For Residential Use” or “Not Intended For Residential Use” or “For Industrial Use Only” to Section VII.A.12, Zinc Rich Primers. Section VII.A.12 now reads: *“The labels of all Zinc Rich Primers shall prominently display one of the following the statements “For Professional Use Only” “Not For Residential Use” or “Not Intended For Residential Use” or “For Industrial Use Only” or “For professional use only.”*”

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