

# **Architectural Coatings**

## **Suggested Control Measure**

### ***Second Public Workshop***

***March 13, 2007***  
***Sacramento, CA***

# TODAY'S PRESENTATION

## BACKGROUND

- Reasons for Updating SCM
- Completed Tasks
- Workshop Objectives

## DISCUSSION OF COATING CATEGORIES

- No Changes – *at this time*
- Categories Proposed for Elimination
- Draft Definition Changes
- Proposed New Categories
- Draft VOC Limits

## SCM PROJECT STATUS

- Ongoing Tasks
- Project Timeline

# BACKGROUND

## *Reasons for Updating SCM*

### **Architectural Coating Emissions**

- **95 TPD in 2004 (coatings only)**
- **8% of VOC Emissions from Stationary & Area Sources in CA**
- **4% of VOC Emissions from All Sources in CA**

# BACKGROUND

## *Reasons for Updating SCM*

- **Local air districts have authority**
- **Some districts are updating SIPs with architectural coating measures**
- **ARB's Suggested Control Measure (SCM) helps districts revise their rules and meet emission reduction goals**

# BACKGROUND

## *Completed Tasks*

- **Draft Survey Report**
- **Draft Reactivity Analysis**
- **Meetings with Stakeholders**
- **First Workshop**
- **Draft Proposed VOC Limits & Definitions**

# BACKGROUND

## *Workshop Objectives*

- **Describe draft proposed VOC limits and definitions**
- **Explain ARB staff analysis**
- **Get comments and suggestions**

# DISCUSSION OF COATING CATEGORIES

## *No Changes – At This Time*

- |   |   |
|---|---|
| <ul style="list-style-type: none"><li>• <b>Bituminous Roof Primer</b></li><li>• <b>Bond Breakers</b></li><li>• <b>Concrete Curing</b></li><li>• <b>Form Release</b></li><li>• <b>Graphic Arts</b></li><li>• <b>High Temperature</b></li></ul> | <ul style="list-style-type: none"><li>• <b>Low Solids</b></li><li>• <b>Magnesite Cement</b></li><li>• <b>Multi-Color</b></li><li>• <b>Pre-Treatment Wash Primer</b></li><li>• <b>Wood Preservatives</b></li></ul> |
|---|---|

# DISCUSSION OF COATING CATEGORIES

## *Proposed Categories To Eliminate Now*

<b><i>Existing Category</i></b>	<b><i>SCM Category</i></b>
<b>Antenna</b>	<b>IM, Rust Prev</b>
<b>Antifouling</b>	<b>Marine Coating</b>
<b>Flow</b>	<b>IM</b>
<b>Quick Dry Enamel</b>	<b>Nonflat High Gloss</b>
<b>Quick Dry PSU</b>	<b>PSU, SPSU</b>
<b>Swimming Pool Repair/Maint</b>	<b>Swimming Pool</b>
<b>Temperature Indicator Safety</b>	<b>IM, High Temp</b>

# DISCUSSION OF COATING CATEGORIES

## *Proposed Categories To Eliminate in Future*

<b><i>Existing Category</i></b>	<b><i>SCM Category</i></b>
<b>Fire Retardant - Clear</b>	<b>Clear Wood Coating, Flat, Nonflat, PSU, etc.</b>
<b>Fire Retardant - Opaque</b>	<b>Flat, Nonflat, PSU, etc.</b>
<b>Mastic Texture</b>	<b>Concrete/Masonry Sealer, Flat, Industrial Maintenance</b>

# DISCUSSION OF COATING CATEGORIES

## *Draft Definition Changes – Same VOC*

- **Faux Finishing (350 g/l)**
  - Clarified to include metallic-looking coatings with pearlescent mica pigment
- **Fire Resistive (350 g/l)**
  - Clarified to include intumescent fire-resistive coatings category

# DISCUSSION OF COATING CATEGORIES

## *Draft Definition Changes – Same VOC*

- **Industrial Maintenance (250 g/l)**
  - Clarified to focus on “heavy industrial”
  - Removed general criteria for abrasion and exterior exposure of metal
  - Added criteria for structural steel, structural concrete, and heavy abrasion at designated facilities
  - Created separate Anti-Graffiti category

# DISCUSSION OF COATING CATEGORIES

## *Draft Definition Changes – Same VOC*

- **Recycled (250 g/l)**
  - Revised to be similar to Green Seal definition
- **Shellac (550 g/l & 730 g/l)**
  - Removed “thinned with alcohol”

# DISCUSSION OF COATING CATEGORIES

## *Draft Definition Changes - Same VOC*

- **Stains (250 g/l)**
  - Removed clear stains from definition
  - Clear stains will be included in Clear Wood Coatings category
- **Swimming Pool (340 g/l)**
  - Clarified to include repair & maintenance

# DISCUSSION OF COATING CATEGORIES

## *Draft Definition Changes – Lower VOC*

- **Clear Wood Coatings (275 g/l)**
  - **Combined Clear Brushing Lacquer, Lacquer, Sanding Sealer, and Varnish**
  - **Includes clear wood sealers, clear stains, wood conditioners**
  - **New definition for Pigmented (Opaque) Wood Coatings**

# DISCUSSION OF COATING CATEGORIES

## *Draft Definition Changes – Lower VOC*

- **Floor (100 g/l)**
  - Clarified to include garage floors
  - Clarified to exclude Clear Wood Coatings on floors, Industrial Maintenance, and Concrete/Masonry Sealers

# DISCUSSION OF COATING CATEGORIES

## *Draft Definition Changes – Lower VOC*

- **Metallic Pigmented (500 g/l)**
  - Created two new categories:
    - Aluminum Roof (400 g/l)
    - Zinc-Rich Primer (340 g/l)
- **Primer, Sealer, Undercoater (100 g/l)**
  - Combined separate definitions
  - Clarified that PSU doesn't include:  
Industrial Maint, Rust Prev, etc.

# DISCUSSION OF COATING CATEGORIES

## *Draft Definition Changes – Lower VOC*

- **Rust Preventative (250 g/l)**
  - Limited to Direct-to-Metal primers and coatings that can be applied over rusty surfaces
  - Removed “non-industrial use”
- **Specialty PSU (100 g/l)**
  - Limited to blocking water-soluble stains (fire / smoke / water damage)

# DISCUSSION OF COATING CATEGORIES

## *Draft Definition Changes – Lower VOC*

- **Waterproofing Sealer & Waterproofing Concrete/Masonry Sealer**
  - **Combined Waterproofing Sealer & Waterproofing Concrete/Masonry Sealer into one category**
  - **Created 3 new categories:**
    - **Concrete/Masonry Sealer (100 g/l)**
    - **Basement Waterproofer (400 g/l)**
    - **Waterproofing Membrane (250 g/l)**

# DISCUSSION OF COATING CATEGORIES

## *Proposed New Categories*

<b>Aluminum Roof</b>	<b>400 g/l</b>
<b>Anti-Graffiti</b>	<b>150 g/l</b>
<b>Basement Waterproofer</b>	<b>400 g/l</b>
<b>Concrete/Masonry Sealer</b>	<b>100 g/l</b>
<b>Driveway Sealer</b>	<b>50 g/l</b>
<b>Pigmented Wood Coatings</b>	<b>275 g/l</b>
<b>Waterproofing Membrane</b>	<b>250 g/l</b>
<b>Zinc-Rich Primer</b>	<b>340 g/l</b>

# DISCUSSION OF COATING CATEGORIES

## *Draft VOC Limits*

	<b>Current</b>	<b>Proposed</b>	<b>Comply %</b>
<b>Bituminous Roof</b>	<b>300</b>	<b>50</b>	<b>85%</b>
<b>Clear Wood Coat</b>	<b>-</b>	<b>275</b>	<b>48%</b>
<b>Dry Fog</b>	<b>400</b>	<b>150</b>	<b>42%</b>
<b>Fire Retardant CI</b>	<b>650</b>	<b>50</b>	<b>0%</b>
<b>Fire Retardant Op</b>	<b>350</b>	<b>50</b>	<b>9%</b>

# DISCUSSION OF COATING CATEGORIES

## *Draft VOC Limits (contd.)*

	<b>Current</b>	<b>Proposed</b>	<b>Comply %</b>
<b>Flat</b>	<b>100</b>	<b>50</b>	<b>7%</b>
<b>Floor</b>	<b>250</b>	<b>100</b>	<b>83%</b>
<b>Mastic Texture</b>	<b>300</b>	<b>100</b>	<b>82%</b>
<b>Nonflat</b>	<b>150</b>	<b>100</b>	<b>28%</b>
<b>Nonflat Hi Gloss</b>	<b>250</b>	<b>125</b>	<b>13%</b>

# DISCUSSION OF COATING CATEGORIES

## *Draft VOC Limits (contd.)*

	<b>Current</b>	<b>Proposed</b>	<b>Comply %</b>
<b>Primer / Sealer</b>	<b>200</b>	<b>100</b>	<b>36%</b>
<b>Roof</b>	<b>250</b>	<b>50</b>	<b>83%</b>
<b>Rust Preventative</b>	<b>400</b>	<b>250</b>	<b>14%</b>
<b>Specialty PSU</b>	<b>350</b>	<b>100</b>	<b>22%</b>
<b>Traffic Marking</b>	<b>150</b>	<b>100</b>	<b>74%</b>

# DISCUSSION OF COATING CATEGORIES

## *Draft Emission Reductions*

	Reductions TPD		Reductions TPD
Aluminum Roof	0.18	Flat	3.13
Bituminous Roof	0.28	Floor	0.08
Clear Wood Coat	1.21	Mastic Texture	0.10
Concrete/Masonry	0.61	Nonflat	2.45
Dry Fog	0.31	Nonflat – HG	1.12
Fire Retardant	0.37	Pigmented Wood	0.20

*Reductions do not include SCAQMD.*

# DISCUSSION OF COATING CATEGORIES

## *Draft Emission Reductions (contd.)*

	Reductions TPD		Reductions TPD
PSU	1.13	Traffic Marking	0.09
Roof	0.07	WP Membrane	0.09
Rust Preventative	1.57	Zinc-Rich Primer	0.01
Specialty PSU	2.63		
		<b>TOTAL</b>	<b>15.6 TPD</b>

*Reductions do not include SCAQMD.*

# SCM PROJECT STATUS

## *Ongoing Tasks*

- **Research Categories**
- **Conduct Economic Survey**
- **Finalize Reactivity Analysis**
- **Finalize Survey Report**
- **Develop Proposed Revisions for SCM Regulatory Language**

# SCM PROJECT STATUS

## *Ongoing Tasks*

- **Conduct Economic Survey**
  - ARB staff will send survey to coating manufacturers
  - Need data to compare costs of current vs. future formulations
  - Survey will be used to determine economic impacts of proposed SCM revisions

# SCM PROJECT STATUS

## *Timeline*

<b>First Workshop</b>	<b>Dec. 12, 2006</b>
<b>Second Workshop</b>	<b>Mar. 13, 2007</b>
<b>Third Workshop</b>	<b>May/Jun, 2007</b>
<b>Board Hearing</b>	<b>Sept. 27, 2007</b>

# CONCLUSION

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**For more information, visit the ARB's  
architectural coatings web site at:**

**[www.arb.ca.gov/coatings/arch/arch.htm](http://www.arb.ca.gov/coatings/arch/arch.htm)**