

# Architectural Coatings

## Suggested Control Measure

### *First Public Workshop*

*December 12, 2006*

*Sacramento, CA*

# TODAY'S PRESENTATION

## BACKGROUND

- Ozone Status
- VOC Emissions

## ARCHITECTURAL COATINGS

- District Rules
- Emissions Data
- Categories of Interest
- Definition Revisions
- Other SCM Issues

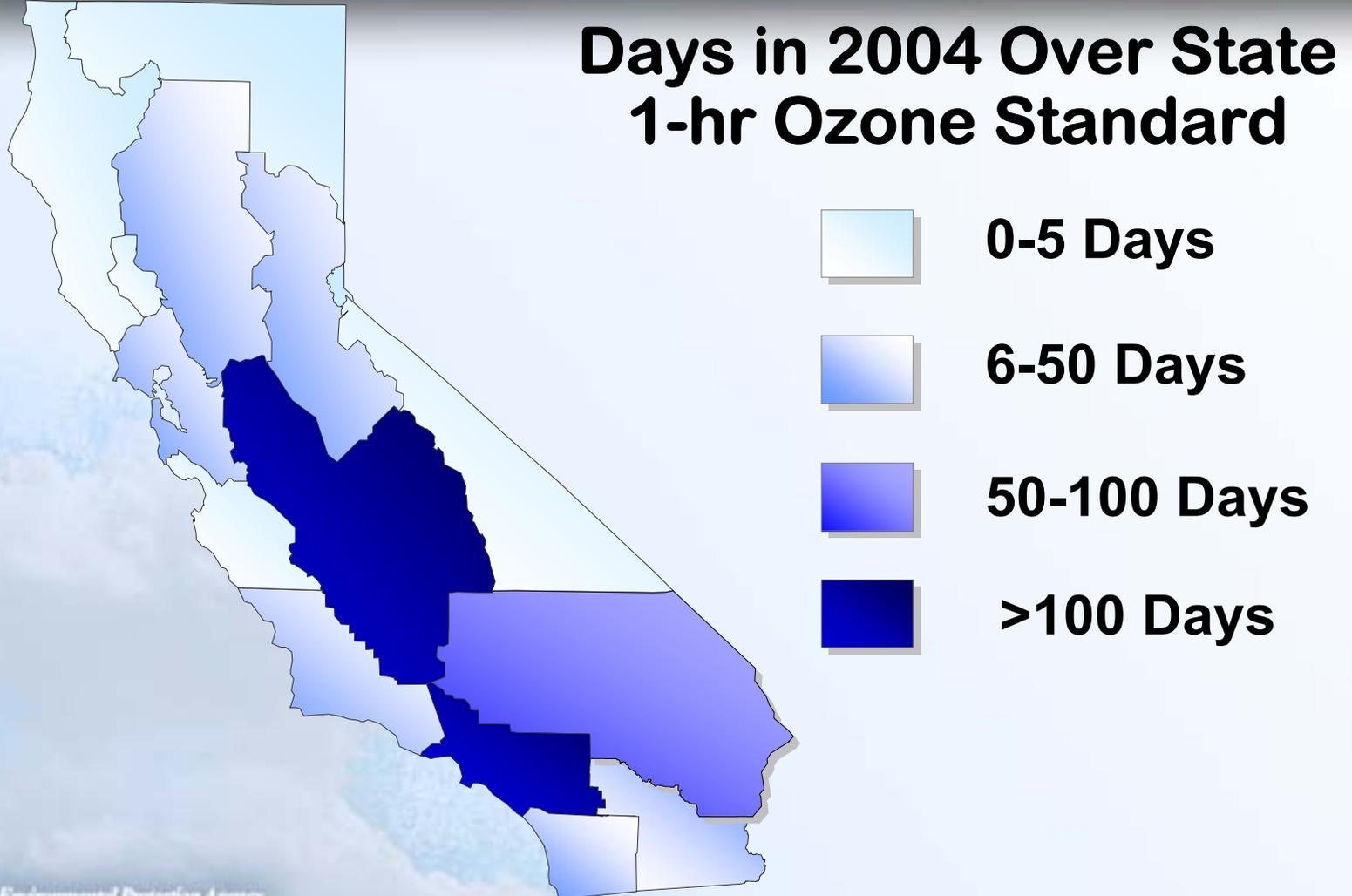
## SCM PROJECT STATUS

- Ongoing Tasks
- Project Timeline

# BACKGROUND

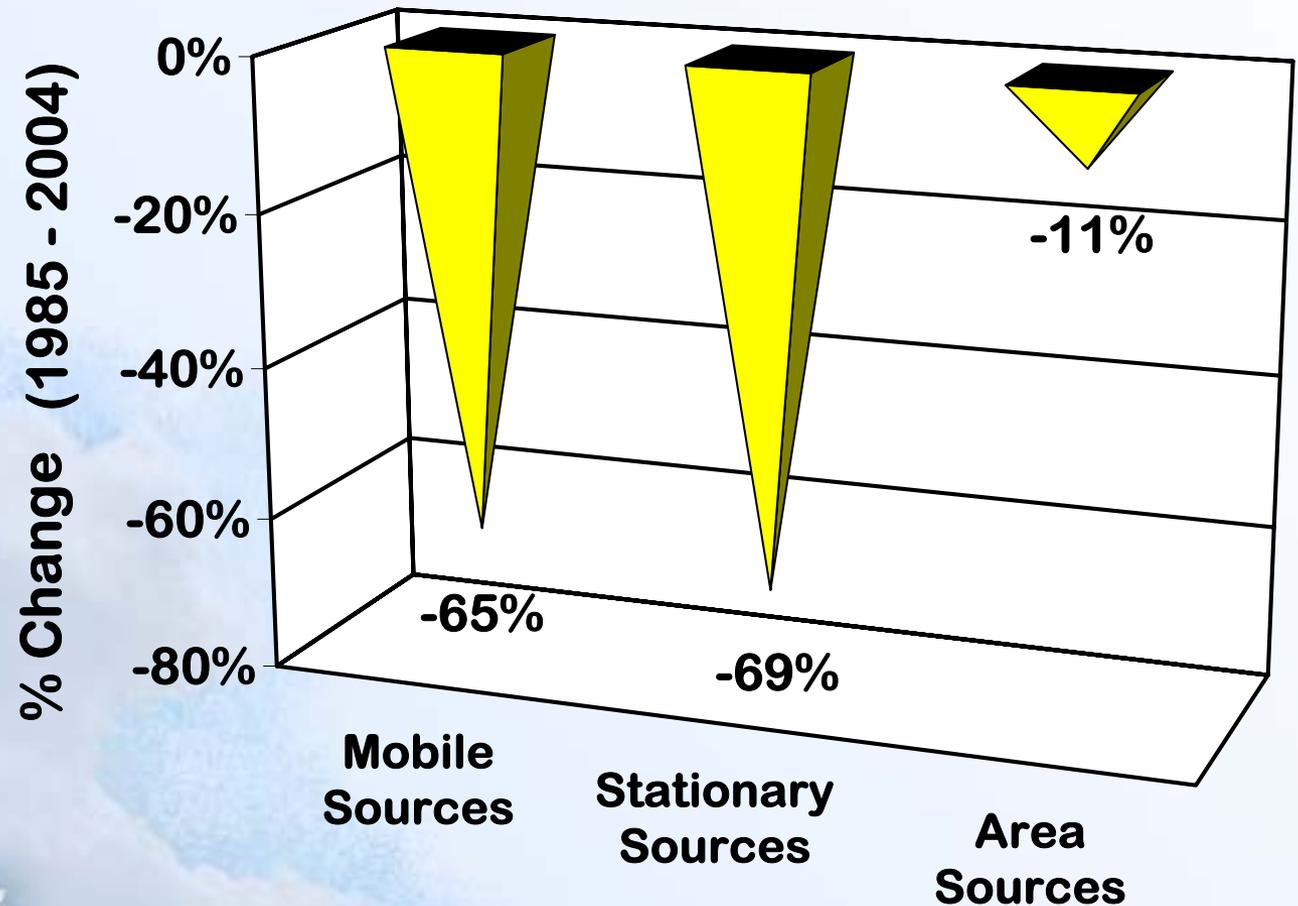


# BACKGROUND



# BACKGROUND

## *VOC Emissions Decline*



# ARCHITECTURAL COATINGS

## *Rules*

- **Local air districts have authority**
- **ARB's Suggested Control Measure (SCM)**
  - **Developed in 1977 as model rule**
  - **Updated in 1985, 1989, and 2000**
- **Some districts are updating SIPs with architectural coating measures**

# ARCHITECTURAL COATINGS

## *Rules (contd.)*

- **Before 2000, air districts' rules were inconsistent with the SCM**
- **Districts adopted rules based on 2000 SCM (20 to date)**
- **Rules cover 95% of CA's population**

# ARCHITECTURAL COATINGS

## *Definition*

### Architectural Coatings

**Coatings applied to stationary structures and their appurtenances, including:**

- **Paints**
- **Stains**
- **Industrial Maintenance Coatings**
- **Traffic Coatings**

**Does *not* include aerosol paints**

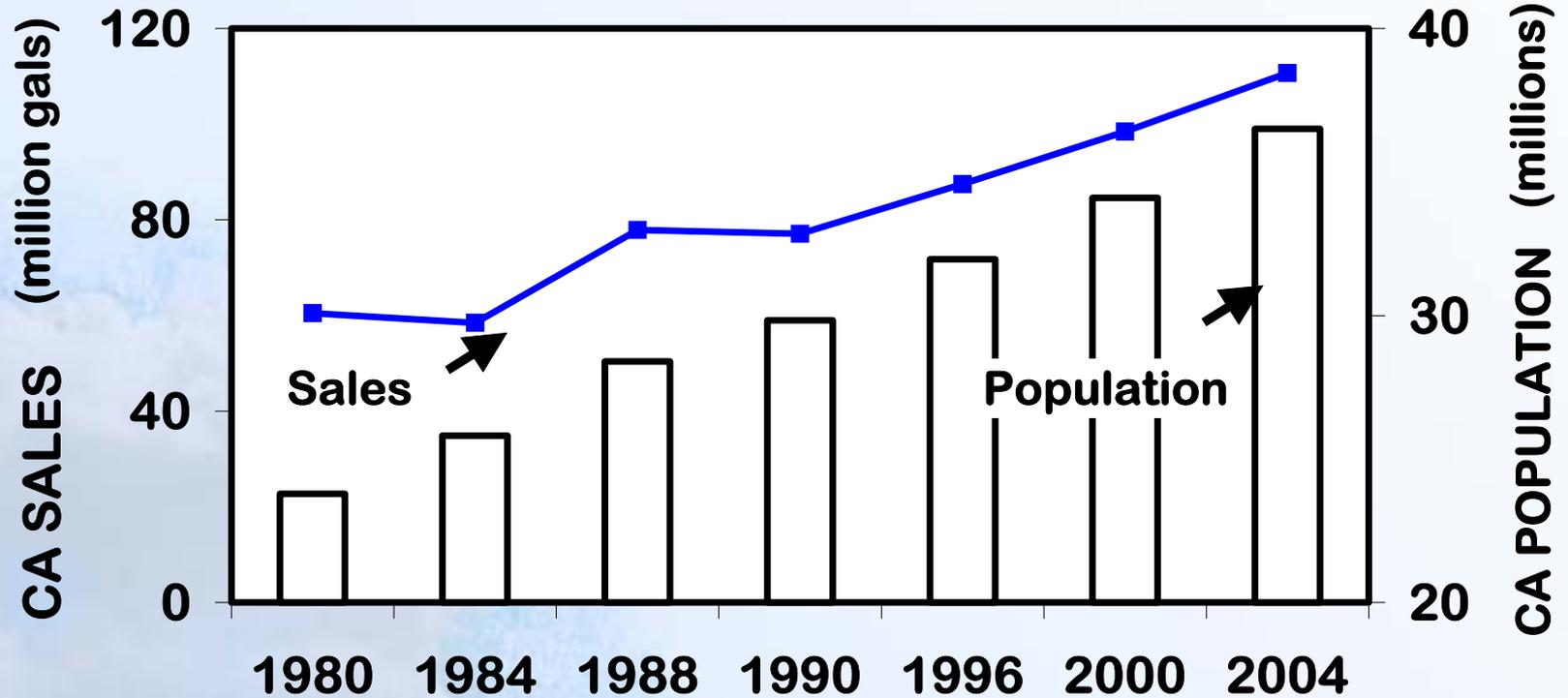
# ARCHITECTURAL COATINGS

## *Emissions*

- **119 TPD in 2004**
- **10% of VOC Emissions from Stationary Sources in CA**
- **5% of VOC Emissions from All Sources in CA**
- **More VOC Emissions than Petroleum Refining & Marketing**

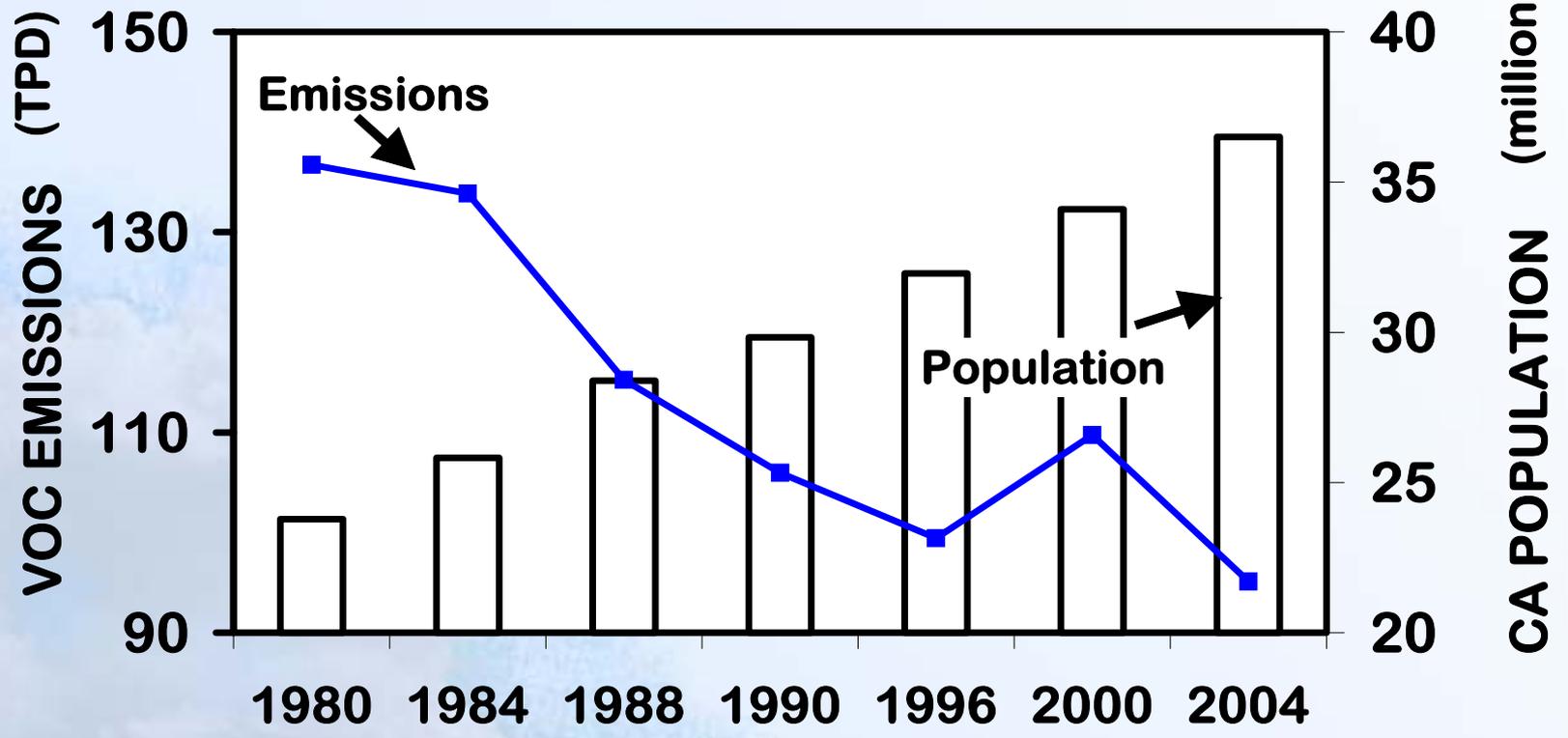
# ARCHITECTURAL COATINGS

## Sales Increase With Population



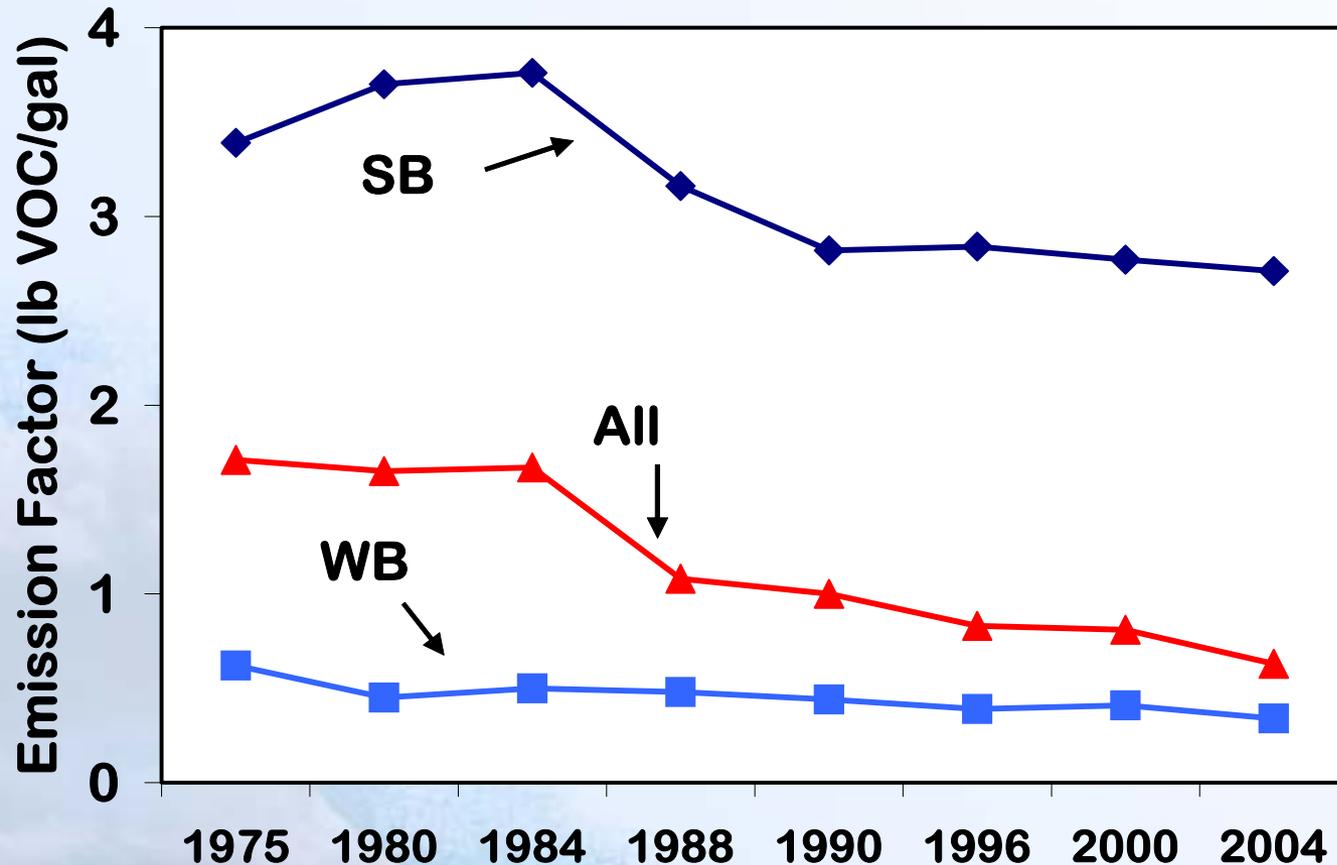
# ARCHITECTURAL COATINGS

## Emissions Decline As Population Increases



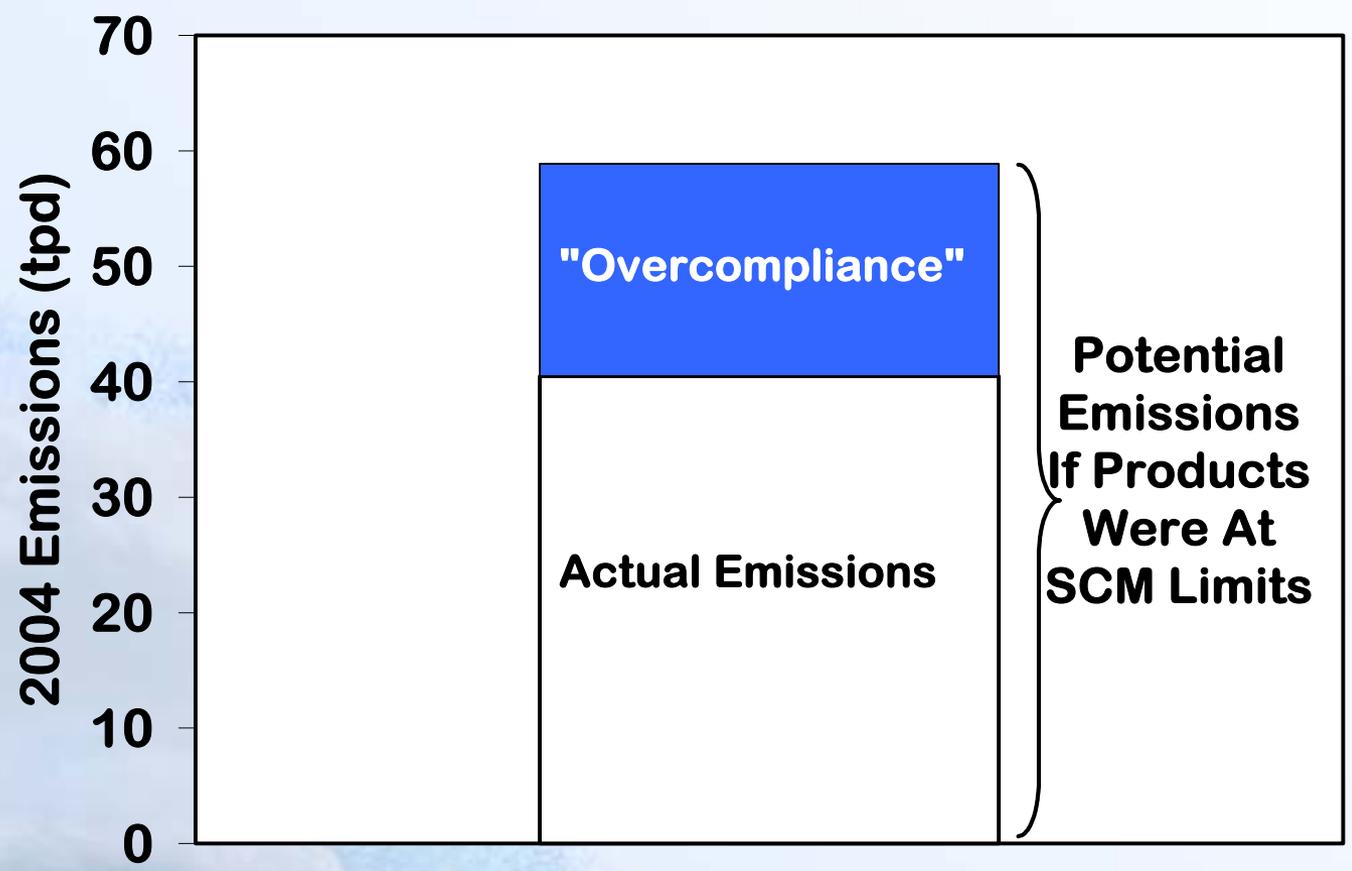
# ARCHITECTURAL COATINGS

## Emission Factor Trends



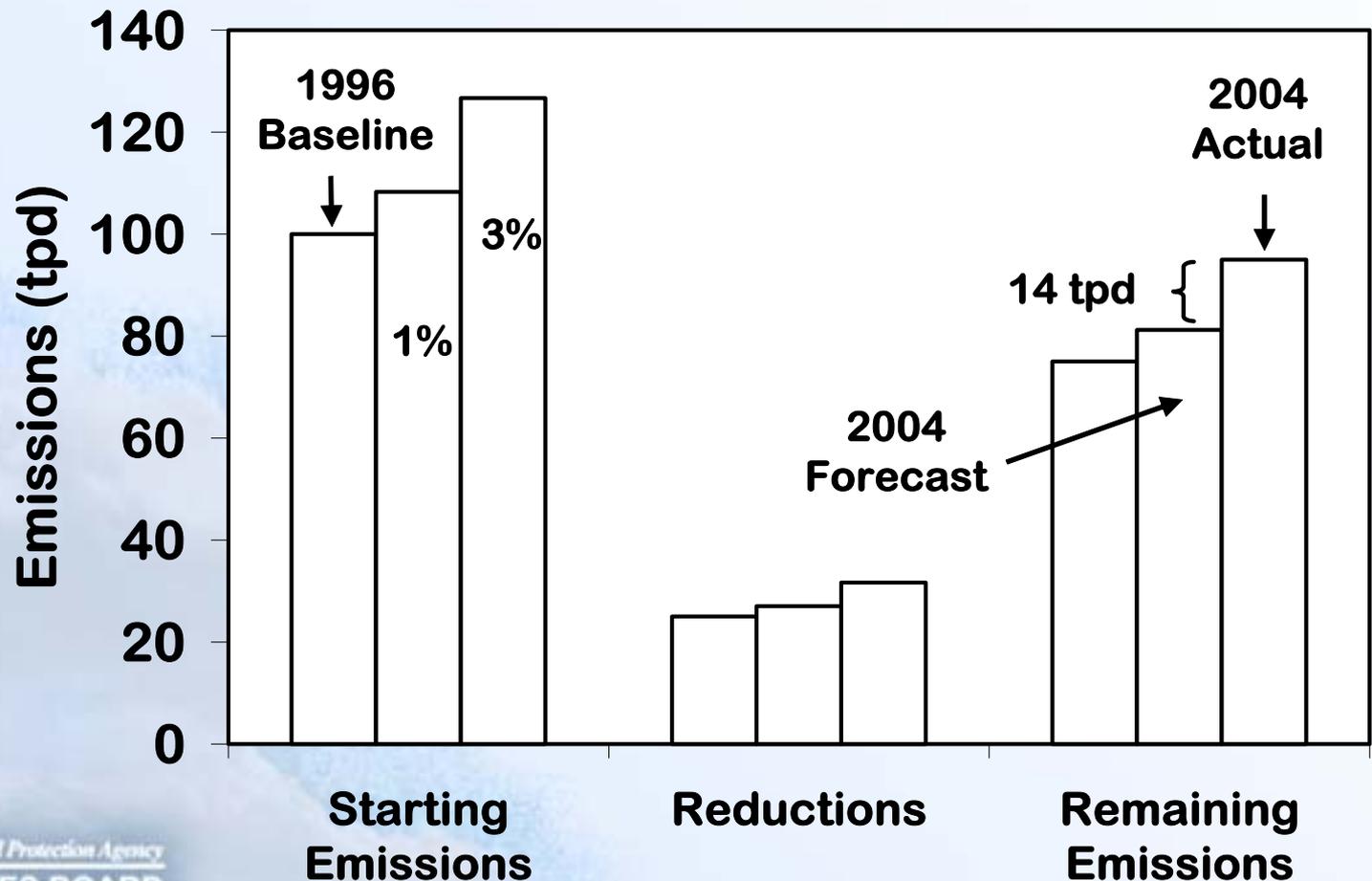
# ARCHITECTURAL COATINGS

## “Overcompliance” in Some Categories



# ARCHITECTURAL COATINGS

## Sales Growth Higher Than Expected



# ARCHITECTURAL COATINGS

## *Major SCAQMD Categories*

	<b>Final Limit</b>	<b>SWA VOC</b>	<b>Comply %</b>
<b>Flats</b>	<b>50</b>	<b>81</b>	<b>7%</b>
<b>Nonflat – Low Gloss</b>	<b>50</b>	<b>118</b>	<b>3%</b>
<b>Nonflat – Med. Gloss</b>	<b>50</b>	<b>127</b>	<b>4%</b>
<b>Nonflat – High Gloss</b>	<b>50</b>	<b>148</b>	<b>4%</b>
<b>Primer, Sealer, Und.</b>	<b>100</b>	<b>126</b>	<b>37%</b>

# ARCHITECTURAL COATINGS

## *Major SCAQMD Categories (contd.)*

	<b>Final Limit</b>	<b>SWA VOC</b>	<b>Comply %</b>
<b>Industrial Maint.</b>	<b>100</b>	<b>206</b>	<b>21%</b>
<b>Lacquers</b>	<b>275</b>	<b>459</b>	<b>28%</b>
<b>Rust Preventative</b>	<b>100</b>	<b>362</b>	<b>0%</b>
<b>Specialty PSU</b>	<b>100</b>	<b>283</b>	<b>22%</b>
<b>Stains–C/S, Ext/Dual</b>	<b>100</b>	<b>276</b>	<b>0%</b>

# ARCHITECTURAL COATINGS

## *Major SCAQMD Categories (contd.)*

	<b>Final Limit</b>	<b>SWA VOC</b>	<b>Comply %</b>
<b>Waterproofing Concrete/Masonry Sealers</b>	<b>100</b>	<b>205</b>	<b>23%</b>
<b>Waterproofing Sealers</b>	<b>100</b>	<b>187</b>	<b>31%</b>

# ARCHITECTURAL COATINGS

## *Other SCAQMD Categories*

	<b>Final Limit</b>	<b>SWA VOC</b>	<b>Comply %</b>
<b>Bituminous Roof</b>	<b>50</b>	<b>37</b>	<b>85%</b>
<b>Concrete Curing</b>	<b>100</b>	<b>166</b>	<b>35%</b>
<b>Dry Fog</b>	<b>150</b>	<b>235</b>	<b>42%</b>
<b>Floor</b>	<b>50</b>	<b>104</b>	<b>5%</b>

# ARCHITECTURAL COATINGS

## *Other SCAQMD Categories (contd.)*

	<b>Final Limit</b>	<b>SWA VOC</b>	<b>Comply %</b>
<b>Roof</b>	<b>50</b>	<b>46</b>	<b>83%</b>
<b>Traffic</b>	<b>100</b>	<b>101</b>	<b>74%</b>
<b>Varnishes - Clear</b>	<b>275</b>	<b>308</b>	<b>36%</b>
<b>Varnishes – Semi.</b>	<b>275</b>	<b>292</b>	<b>77%</b>

# ARCHITECTURAL COATINGS

## *Other Possible Categories*

- **Form Release Compounds**
- **Mastic Texture**
- **Metallic Pigmented**
- **Shellacs**

# ARCHITECTURAL COATINGS

## *Problem Definition Categories*

- **Clear Wood Finishes: Lacquers, Varnishes**
- **Fire Retardant**
- **Floor**
- **Rust Preventative**
- **Specialty Primer, Sealer, Undercoater**
- **Waterproofing Sealer**
- **Waterproofing Concrete/Masonry Sealer**

# ARCHITECTURAL COATINGS

## *Other SCM Areas of Concern*

- **Most Restrictive Limit**
- **Category Name on Label**
- **Colorants**
- **Sell-Through**
- **Low Solids**
- **Lacquer Blushing**

# ARCHITECTURAL COATINGS

## *Other Topics*

- **Reactivity**
- **TBAc**
- **VOC Test Method**

# SCM PROJECT STATUS

## *ARB Staff - Current Tasks*

- **Research Categories**
- **Prepare Draft Reactivity Analysis**
- **Finalize Survey Report**
- **Develop Proposed SCM Regulatory Language & VOC Limits**

# SCM PROJECT STATUS

## *Timeline*

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

# CONCLUSION

## *Contact Information*

**Jim Nyarady: (916) 322-8273**  
***jnyarady@arb.ca.gov***

**Monique Davis: (916) 324-8182**  
***mdavis@arb.ca.gov***

**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)**