

Architectural Coatings Suggested Control Measure

Public Workshop

February 26, 2020

Sacramento, California



Outline

- Background
- Proposed Changes to the Suggested Control Measure (SCM) for Architectural Coatings
- Emissions Impacts
- Schedule

Background

Photovoltaic Coatings Evaluation

- Worked with industry to assess the coating category
- Discussed regulatory concepts with air districts and U.S. EPA

Benefits of Using Photovoltaic Coatings

- Applying the coating to existing uncoated solar panels increases electricity generation
- Increased electricity generation leads to avoided criteria pollutants and GHG emissions
- Panels remain cleaner longer

Proposed SCM Changes

Staff is considering a proposal to:

- Add new category for Photovoltaic Coatings
 - Add new definition
 - New category would sunset (1/1/2024)
- No small container exemption for this category
- VOC Content Limit is 600 g/l expressed as VOC Actual
- Notification and reporting requirements
- Coating volume limits by air district

Photovoltaic Coatings Definition



Photovoltaic Coatings Are

- Applied to solar photovoltaic modules already installed
- Applied as a single layer with film thickness of 200 nanometers (nm) or less
- Not applied to photovoltaic modules in shop applications

Notification Requirements

Prior to Use of Any Photovoltaic Coatings, the Coating Manufacturer shall complete and submit a notification to the local air district:

- Source name, location, contact, and telephone number
- The owner (name)
- Description of the business activity

Notification Requirements, Cont.



- Identify the period the Photovoltaic Coatings will be applied, including an estimate of
 - Start date
 - Completion date
 - Increments of progress

Notification Requirements, Cont.



- Estimate of emissions from Photovoltaic Coatings during the period, including the calculations used
- Estimate of materials used in gallons of photovoltaic coatings

Annual Reports

Annual report shall include, at the least:

- Source name, location, contact and telephone number
- Ownership status
- Description of business activity
- When coatings were applied, including the
 - Start date, completion date, and increments of progress

Annual Reports, Cont.

- The actual emissions from Photovoltaic Coatings during the period (including the calculations used)
- The actual gallons from Photovoltaic Coatings during the period

Proposed Coating Volume Limits



Coating Volume Limits For Photovoltaic Coatings

Air District	Annual Volume Limit (Gallons)	Effective Date
Antelope Valley AQMD	9,900	6/1/2020 – 12/31/2023
Eastern Kern APCD	5,400	6/1/2020 – 12/31/2023
Imperial County APCD	9,900	6/1/2020 – 12/31/2023
Mojave Desert AQMD	9,900	6/1/2020 – 12/31/2023
Monterey Bay ARD	4,000	6/1/2020 – 12/31/2023
Sacramento Metropolitan AQMD	3,200	6/1/2020 – 12/31/2023

Proposed Coating Volume Limits, Cont.



Coating Volume Limits For Photovoltaic Coatings

Air District	Annual Volume Limit (Gallons)	Effective Date
San Joaquin Valley APCD	3,900	6/1/2020 – 12/31/2023
San Luis Obispo APCD	9,900	6/1/2020 – 12/31/2023
Santa Barbara APCD	1,300	6/1/2020 – 12/31/2023

Estimated Emissions Impacts

Air District	Annual Volume Limit (Gallons)	VOC Emissions Increase (Tons/Day)
Antelope Valley AQMD	9,900	0.07
Eastern Kern APCD	5,400	0.04
Imperial County APCD	9,900	0.07
Mojave Desert AQMD	9,900	0.07
Monterey Bay ARD	4,000	0.03
Sacramento Metropolitan AQMD	3,200	0.02

Estimated Emissions Impacts, Cont.



Air District	Annual Volume Limit (Gallons)	VOC Emissions Increase (Tons/Day)
San Joaquin Valley APCD	3,900	0.03
San Luis Obispo APCD	9,900	0.07
Santa Barbara APCD	1,300	0.01

Schedule



Next Steps

- Comments due to CARB staff
March 11, 2020
- Board package released
April 24, 2020
- Board hearing
May 28-29, 2020

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