# **APPENDIX B**

# **STAFF REPORT**

# PROPOSED AMENDMENTS TO RULE 74.2, ARCHITECTURAL COATINGS

**Ventura County Air Pollution Control District** 

669 County Square Drive Ventura, California 93003

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# **DISCLAIMER**

This report contains references to company and product names to illustrate product availability. Mention of these names is not to be considered an endorsement by the Ventura County Air Pollution Control District.

### **EXECUTIVE SUMMARY**

Staff is proposing to adopt amendments to Rule 74.2, Architectural Coatings, to reduce the reactive organic compound (ROC) emissions from the coating of structures and their appurtenances. This rule development is based on the current ROC limits on coatings and colorants adopted by the Air Resources Board 2019 Suggested Control Measure (SCM). A survey of architectural coatings in the county indicates that available coatings now meet current 2019 SCM ROC limits.

Ventura County is designated as a nonattainment area for the state ozone standard and a serious nonattainment area for the federal ozone standard. The California Clean Air Act requires areas designated as serious nonattainment for ozone to adopt control measures required in Sections 40913, 40914, and 40919 of the California Health and Safety Code (H & SC):

- Section 40913 requires districts to develop a plan to achieve California's ambient air quality standard by the earliest practicable date. Control Measure R-303-2020 in the District's 2016 Air Quality Management Plan references the architectural coatings rule. Rule 74.2 is being amended to implement this control measure.
- Section 40914 requires each district plan to demonstrate that the plan includes "every feasible measure." Districts must adopt the most effective and feasible control measures to reduce ROC emissions from architectural coatings. Amendments to Rule 74.2 are being proposed to meet this requirement.

Staff is proposing to reduce ROC emissions from architectural coating operations in Ventura County by reducing the ROC content of the following coating categories: nonflats; nonflat – high gloss; dry fog; fire resistive; floor; form release compounds; aluminum roof coatings; waterproofing membranes; and exterior stain coatings. Additionally, staff is proposing to further reduce ROC emissions or improve rule clarity by adding the following new specialty coating categories: Interior Stains; Building Envelope Coatings; Tile and Stone Sealers; and a Default category.

Proposed amendments to Rule 74.2 will affect many architectural coatings used on new structures and their appurtenances and used to maintain existing structures and appurtenances. This rule impacts

field-applied architectural coatings rather than those applied in a spray booth.

The estimated ROC emission reductions from the proposed amendments are approximately 22.12 tons per year emission reductions, or about 9 percent reduction from the current inventory.

Ventura County APCD staff included cost estimates provided by CARB's analysis found in the 2019 SCM. The cost-effectiveness ranged from -\$6 per pound of ROC reduced when switching to a compliant dry fog coating to over \$19 per pound of ROC reduced when switching to a compliant floor coating with an average cost effectiveness of \$1.85 per pound of ROC reduced. These cost increases only apply to one and five gallon specialty coating containers since one quart containers would continue to be exempt from rule requirements.

This report contains five additional sections: (1) Background, (2) Proposed Rule Requirements, (3) Comparison of Proposed Rule Requirements with Other Air Pollution Control Requirements, (4) Impact of the Proposed Rule, and (5) Environmental Impacts and Methods of Compliance. The first section provides background information including regulatory history, latest air pollution control technology and source description. The second section explains the key features of proposed amendments to Rule 74.2. The third section compares the proposed requirements with existing federal requirements and Best Available Control Technology (BACT). The fourth section is an analysis of the effect of the proposed rule on ROC emissions and socioeconomic impacts. The last section examines the environmental impacts of compliance methods and the mitigation of those impacts.

### **BACKGROUND**

### Introduction

Architectural Coatings are defined as any coating applied to a stationary structure and their appurtenances, to mobile homes, to portable buildings, to pavements, or to curbs. Architectural coatings are formulated with a variety of components including pigments, resins, solvents, and different additives such as driers, anti-skinning agents, anti-sag agents, dispersing agents, defoaming agents, preservatives and fungicides. The primary source of air emissions from architectural coatings is the solvent component in solvent-based coatings and the co-solvents from waterborne coatings.

Currently, architectural coatings in Ventura County are regulated by Rule 74.2, which was first adopted on June 19, 1979, and was based on the ARB's 1977 Model Rule. ARB and the air districts subsequently revised this model rule in 1985, 1989, 2000, and 2007. The 2007 Suggested Control Measure (SCM) was the basis for the last major revisions to this rule in 2010. VCAPCD attempted to amend Rule 74.2 again in 2017. However, due to comments received by industry, staff postponed rule development to allow ARB to adopt the 2019 SCM.

The need to revisit Rule 74.2 has arisen because of advances in coatings technology over the past ten years, the need for emission reductions to attain health-based air quality standards in Ventura County, an updated SCM by ARB, and the need for a contingency measure for potentially not meeting the 2008 federal ozone standard of 75 ppb. The proposed amendments to Rule 74.2 are based on the 2019 SCM developed by ARB.

As a neighboring air district to SCAQMD, Ventura County is part of the Southern California distribution network for architectural coatings. A recent survey of architectural coatings being sold in the county indicates that almost all of them were manufactured to meet the current ROC coating content limits required by SCAQMD Rule 1113 which are as stringent or exceed the ROC limits in the 2019 SCM. Thus, the proposed amendments to Rule 74.2 which adopt limits equal to or less stringent than SCAQMD should not impact the ability of coating retailers to provide compliant coatings. Currently, there are no paint manufacturing companies in the county.

Another important factor that allows Ventura County to adopt lower limits is that South Coast's Rule 1113 no longer contains averaging provisions that are used for compliance purposes. The use of these provisions required detailed reporting and recordkeeping requirements for industry, and intensive AQMD staff resources to review and approve these compliance plans. Today, coatings sold or applied in the South Coast district are required to meet their respective individual coating category ROC limit. Thus, these ROC coating limits are easily translated to being available in Ventura County without the need for resource-intensive averaging provisions that favor larger coating manufacturers with broad product lines necessary to take advantage of averaging allowances.

EPA promulgated the National Volatile Organic Compound Emission Standards for Architectural Coatings (National Architectural Coatings Rule) in 1998. Existing Rule 74.2 is more stringent than the national rule for all coating categories.

# **Emission Inventory**

The quantity of ROC emissions from the use of architectural coatings has been estimated at 0.75 tons of ROC per day from the latest ARB Survey (2013). The emissions reductions from proposed amendments to Rule 74.2 are about 9 percent of the inventory or 22.12 tons ROC per year.

#### PROPOSED RULE REQUIREMENTS

This section summarizes the major proposed requirements of proposed amendments to Rule 74.2. The proposed new ROC limits are listed in Table 1 and Table 2. In all cases, products are available today that comply with proposed new limits. The major changes are listed below:

- 1. Lowered the ROC limit for coating categories including: Nonflats; Nonflats-High Gloss; Dry Fog Coatings; Fire Resistive; Floor Coatings; Form-Release Compounds; Aluminum Roof Coatings; Exterior Stains; and Waterproofing Membranes. The limits will go into effect July 1, 2021.
- 2. Added the following new specialty coating categories: Interior Stains, Building Envelope Coatings, and Tile and Stone Sealers.
- 3. A new Default Coating Category at 50 g/l is any specialty coating that is not defined by a specified definition in the rule. This is for clarification purposes, as past versions required undefined coatings to comply with Flat, Nonflat or Nonflat-High Gloss limits.
- 4. In addition, the proposed amendments would include lower ROC content limits for colorants based on the same limits from the 2019 SCM. Colorant are defined as a concentrated pigment dispersion in water, solvent, and/or binder, that is added to an architectural coating after packaging in sale units to produce a desired color.

In order to more easily understand the applicability of the new coating categories, the important characteristics are summarized as follows:

Building Envelope Coatings: During 2019 SCM development ARB staff determined that this new category, formerly associated with Waterproofing Membranes, was commercially and technologically feasible to reduce ROC content beyond the parent category. Staff proposed Building Envelope Coatings have a reduced VOC limit of 50 grams per liter.

**Interior Stains**: Although exterior stains can comply with the proposed ROC content limit of 100 grams

per liter, interior stains will continue to be regulated at the current ROC content limit of 250 grams per liter. This is an example of creating a new specialty subcategory subject to existing ROC content limits because of the difficulty in complying with proposed new lower limits for the parent coating category (stains).

**Tile and Stone Sealers**: This new category has the same ROC content limit as the existing limit for concrete/masonry sealers. This additional category is included for clarification purposes.

Table 1. Proposed ROC Limits for Coatings

COATING CATEGORY	CURRENT	PROPOSED LIMIT
	LIMIT $(g/l)^{1,2}$	EFFECTIVE
		$1/1/2021 (g/1)^3$
DEFAULT		50
Flat Coatings	50	
Nonflat Coatings	100	50
Nonflat-High Gloss	150	50
SPECIALTY COATINGS		
Basement Specialty Coatings	400	
Bituminous Roof	50	
Bituminous Roof Primer	350	
Building Envelope Coating		50
Bond Breaker	350	
Concrete Curing Compounds	350	
Concrete/Masonry Sealers	100	
Driveway Sealers	50	
Dry Fog Coatings	150	50
Faux Finishing Coatings	350	
Fire Resistive Coatings	350	150
Floor Coatings	100	50
Form-Release Compounds	250	100
Graphic Arts-Sign Paints	500	
High Temperature Industrial Maintenance	420	
(IM) Coatings		
Industrial Maintenance Coatings	250	
Low Solids Coatings <sup>4</sup>	120	
Magnesite Cement Coatings	450	
Mastic Coatings	100	
Metallic Pigmented Coatings	500	
Multi-Color Coatings	250	

The specified limits remain in effect unless revised limits are listed in subsequent columns in the table.

Conversion factor: one pound ROC per gallon (U.S.) = 119.95 grams ROC per liter.

ROC limits, unless otherwise noted, are defined by 74.2.J.67 and 74.2.J.69.

Units for low-solid coatings are grams of ROC per liter (pounds of ROC per gallon) of coating, including water and exempt compounds.

Table 1 (continued) Proposed ROC Limits for Coatings

rable 1 (continued) Froposed NOC Limits for Coatings				
COATING CATEGORY	CURRENT	PROPOSED		
	LIMIT $(g/1)^{5,6}$	LIMIT		
		EFFECTIVE		
		1/1/2021		
		$(g/1)^7$		
Pretreatment Wash Primers	420			
Primers, Sealer & Undercoaters	100			
Reactive Penetrating Sealers	350			
Recycled Coatings	250			
Roof Coatings	50			
Roof Coatings, Aluminum	400	100		
Rust Preventative Coatings	250			
Shellacs - Clear	730			
Shellacs - Opaque	550			
Specialty Primers, Sealer & Undercoaters	100			
Stains: Exterior/Dual Use	250	100		
Interior Stains		250		
Stone Consolidants	450			
Swimming Pool Coatings	340			
Tile and Stone Sealers	100			
Traffic Marking Coatings	100			
Tub & Tile Refinish	420			
Waterproofing Membranes	250	100		
Wood Coatings	275			
Wood Preservatives	350			
Zinc-Rich Primers	340			

Table 2. Proposed ROC Limits for Colorants

COLORANT ADDED TO:	PROPOSED LIMIT EFFECTIVE 1/1/2021 (g/1) <sup>7</sup>	
Architectural Coating excluding I.M. Coating	50	
Solvent-Based I.M. Coating	600	
Waterborne IM Coating	50	
Wood Coating	600	

The specified limits remain in effect unless revised limits are listed in subsequent columns in the table.

Conversion factor: one pound ROC per gallon (U.S.) = 119.95 grams ROC per liter.

ROC limits, unless otherwise noted, are defined by 74.2.J.67 and 74.2.J.69.

# COMPARISON OF PROPOSED RULE REQUIREMENTS WITH OTHER AIR POLLUTION CONTROL REQUIREMENTS

H & SC Section 40727.2 requires districts to compare the requirements of a proposed revised rule with other air pollution control requirements. These other air pollution control requirements include federal regulations, Best Available Control Technology (BACT), and any other District's rule that applies to the same equipment or process. Proposed amendments to Rule 74.2 are more stringent than those in the United States Environmental Protection Agency's national rule and are based on the 2019 ARB Suggested Control Measure.

No other District rules have air pollution control requirements that would conflict with Rule 74.2 requirements. Wood coatings applied in a shop or wood product fabrication facility are subject to VCAPCD Rule 74.30, Wood Coatings, instead of Rule 74.2. Similarly, metal products coated in a shop are subject to Rule 74.12, Metal Parts and Products.

## Comparison with National Rule

There are many differences between proposed amendments to Rule 74.2 and the national architectural coatings rule, which became effective on September 13, 1999. The national rule only applies to manufacturers and importers of architectural coatings while Rule 74.2 applies to manufacturers, distributors, retailers, and users of architectural coatings. The national rule also has generally less restrictive ROC limits than Rule 74.2. For example, the proposed ROC limits in the national rule for the three largest categories (flats, non-flats, and industrial maintenance coatings) are 250, 380, and 450 grams per liter, respectively. This compares with the ROC limits of 50 grams per liter for flats and nonflats, and 250 grams per liter for industrial maintenance coatings in proposed amendments to Rule 74.2. The national rule also includes 30 additional specialty categories not included in proposed amendments to Rule 74.2. The "national" categories are regulated by one of the existing coating categories in Rule 74.2. Air Resources Board (ARB) staff analyzed these additional national categories and found it was not necessary to add most of them to the 2019 SCM because: there are complying products that may be regulated under other coating categories in existing district rules; they

are not architectural coatings; or they are not sold in California. Staff has also analyzed the additional coating categories in the national rule and concluded that for all of the categories except one coating category (Calcimine Recoater Coating), they are not needed because they would be subject to another coating category in the proposed rule or to another district coating rule. Staff has also determined that the Calcimine Recoater Coating is unique to the New England area and, therefore, this category is not necessary for the proposed rule.

### Comparison with BACT

SCAQMD Rule 1113 ROC Limits could be Best Available Control Technology (BACT) because it would be the most effective emission control device, emission limit, or technique that has been required or used for this type of equipment. Unlike SCAQMD Rule 1113, the proposed amendments to VCAPCD Rule 74.2 do not include SCAQMD provisions to eliminate the small container exemption. Although small architectural coating containers (1 quart or smaller) represent only one percent of the sales, they represent 20 percent of the ROC emission inventory. For this reason, SCAQMD Rule 1113 may still represent Best Available Control Technology.

# Comparison of Air Pollution Control Requirement Elements

Health and Safety Code Section 40727.2.(c) requires the district review the following elements in the comparative analysis between proposed amendments to Rule 74.2 and federal and BACT rules:

- Operating parameters and work practice requirements.
- Monitoring, reporting and recordkeeping requirements, including test methods, format, content and frequency.
- Any other element the district determines warrants review.

The coating (emission) limits in proposed amendments to Rule 74.2 are stated as grams of ROC per liter of coating less water and less exempt organic compounds. These units are identical to the units in both the national rule and SCAQMD Rule 1113.

There are no air pollution control requirements involving operating parameters in any of the rules subject to this analysis. Proposed amendments to Rule 74.2 include a work practice requirement that calls for closing coating and solvent containers when not in use. Similar requirements are found in the national rule and SCAQMD Rule 1113.

There are no monitoring or recordkeeping requirements in proposed amendments to Rule 74.2.

Test Methods that have been included in proposed Rule 74.2 are needed to determine ROC content and other coating characteristics. These test methods do not conflict with test methods cited in the national rule or SCAQMD Rule 1113. District staff has determined there are no other air pollution control requirement elements that warrant review in this comparative analysis.

#### IMPACT OF THE PROPOSED RULE REVISIONS

### **ROC Emissions Impacts**

The emission reduction potential of proposed amendments to Rule 74.2 is estimated at 22.12 tons of ROC per year, or about 9 percent ROC emission reductions from the current emission inventory. This estimate is based on the impact from the ROC content limit reductions for all the affected coating categories and colorants provided in the 2019 ARB SCM Staff Report.

### Socioeconomic Impacts Analysis

H & SC Section 40728.5 requires a district to perform an assessment of the socioeconomic impacts before adopting, amending, or repealing a rule that will significantly affect air quality or emission limitations. The district board is required to actively consider the socioeconomic impact of the proposal and make a good faith effort to minimize adverse socioeconomic impacts.

H & SC Section 40728.5 defines "socioeconomic impact" as the following:

- 1. The type of industry or business, including small business, affected by the rule.
- 2. The impact of the rule on employment and the economy of the region.
- 3. The range of probable costs, including costs to industry or business, including small business.
- 4. The availability and cost-effectiveness of alternatives to the proposed rule.
- 5. The emission reduction potential of the rule.
- 6. The necessity of adopting the rule to attain state and federal ambient air standards.

The South Coast Air Quality Management District (SCAQMD) amended their architectural coating Rule

1113 in 1996, 1999, 2001, 2002, 2003, 2004, 2006, 2007, 2011, 2013 and 2016. SCAQMD routinely runs regional economic models to determine socioeconomic impacts of their rule adoptions and did so for their Rule 1113 adoptions.

Traditionally, Ventura County APCD has not used regional economic models in their socioeconomic analyses and is not proposing to do so in this rule development. ARB staff has indicated that it is not necessary for the districts to use a regional economic model to perform the economic analysis for the purpose of adopting amendments to Rule 74.2 because the cost increase associated with the proposed amendments are small in comparison with the regional economy.

# Types of Affected Business and Industry Including Small Business

Proposed amendments to Rule 74.2 would potentially impact: (i) industries engaged in manufacturing paint, varnishes, enamels and allied products (SIC 2851); (ii) end users of architectural coatings, including doit-yourself consumers, painting contractors (SIC 1721) that may be small businesses, and maintenance personnel; and (iii) suppliers, sellers, and solicitors of architectural coatings (SIC 5198, 5231). New construction and maintenance of the following may be impacted by this proposal: buildings; transportation infrastructure; industrial structures such as aboveground tanks; and any stationary structure or appurtenance. At the current time, there are no coating manufacturers operating in the county.

# Economic Impacts and Range of Probable Costs

<u>Introduction:</u> Since there are no coating manufacturers in the county, staff has focused on the costs increases that are being passed on to the end user from switching from an oil-based paint to a

waterborne or exempt solvent-based coating. This cost analysis does not take into account the many benefits of using waterborne coatings including greater convenience, an easier cleanup with water, lower odor, and less exposure to hazardous chemicals.

A survey was made of published prices by ARB staff comparing existing high-ROC oil-based coatings in areas subject to the 2007 SCM ROC content limits to the reduced ROC limits found in the 2019 SCM. This survey provides a range of cost-effectiveness (computed in dollars per pound of ROC reduced) depending upon the coating category and the type of solvent used for reformulation purposes.

The cost-effectiveness ranged from a cost savings of \$6.51 to costing an additional \$19.93 per pound of ROC reduced when switching to a coating compliant with the proposed limits. These cost increases only apply to one and five gallon specialty coating containers since one quart containers would continue to be exempt from rule requirements, and this exemption would mitigate the cost for small users. Finally, there would be no additional costs from proposed amendments for your typical flat and nonflat house paints, since these water-reducible coatings have been widely used in Ventura County for many years.

On the basis of these limited cost increases, staff has determined that proposed amendments to Rule 74.2 will not have an unacceptable adverse impact on employment and the economy in Ventura County.

2019 SCM Analysis: Based on available information, ARB staff estimated that the 2019 SCM ROC standards would result in maximum price increases for future complying coatings of up to 24 percent. The average cost increase for consumers is expected to be 11 percent. The price determinations for complying coatings were supported by information received by them from resin suppliers and coating manufacturers in a product survey.

Conclusion: Although the maximum expected price impacts on consumers are significant, the actual cost impacts are likely to be small because of competitive pricing pressures from existing complying coatings. It should also be noted that compliant coatings with the proposed limits already exist and have been marketed in the South Coast district for some time now. Because of the manufacturers' preference to distribute their products uniformly across geographic regions, many of these compliant products are already been marketed in Ventura County as well.

Therefore, it is reasonable to assume that most of the estimated cost impacts above have already been absorbed by the local market and that the actual net cost to the consumer moving forward to be significantly less than what is estimated.

### Cost to Small Business

The costs of the proposal to small businesses including painting contractors were evaluated based on studies performed by ARB. Staff believes that these studies are applicable to Ventura County because the economic factors affecting architectural coating wholesalers, retailers and painting contractors are similar across areas of California.

ARB staff analyzed the cost impacts to painting contractors in their analysis of amendments to the SCM. Based on data from industry sources, the estimated average annual cost of their ROC limits across the state was \$3 million dollars annually to consumers including painting contractors (SIC 1721). According to ARB staff, consumers such as painting contractors can choose not to purchase reformulated coatings, opting to buy existing compliant coatings at current prices. The competition from the existing compliant coatings will constrain any price increases for the reformulated coatings. As a result, manufacturers would have the inability to pass all costs to consumers, which will result in less impact than provided in the analysis.

Conclusion: An estimate of cost impacts to painting contractors in Ventura County was made by assuming that the cost breakdown (consumer vs. painting contractor) is similar to what is found across the state. This is a reasonable assumption because the type and quantity of work performed by painting contractors is expected to be similar to other consumers on a per capita basis. Using the data provided by ARB staff, Ventura county would see an annual cost impact to Ventura County area painting contractors of \$117,435. However, as stated above, the actual net cost of the amendment to the contractors moving forward is expected to be much less because most of these costs have already been absorbed by the market.

#### Emission Reduction Potential of the Rule

The emission reduction potential of proposed amendments to Rule 74.2 is estimated at 22.12 tons of ROC per year. This estimate is based on an analysis of current coating emission inventories reduced by approximately 9 percent, which is the

estimate of the impact of proposed changes to ROC coating content limits. Table 3 shows the breakdown

of ROC emission reductions by coating category.

Table 3 ROC Emission Reductions by Coating Category

COATING CATEGORY	ROC Emission Reductions (Tons/Year)	
Aluminum Roof Coatings	2.86	
Building Envelope Coatings	0.14	
Dry Fog Coatings	0.43	
Fire Resistive Coatings	0.29	
Floor Coatings	0.14	
Form Release Compounds	1.14	
Nonflat – High Gloss Coatings	0.29	
Nonflat Coatings	5.86	
Stains (Exterior/Dual)	6.14	
Waterproofing Membranes	1.57	
Colorants	2.00	
TOTAL	22.12 <sup>8</sup>	

### Cost-Effectiveness

ARB's 2019 SCM staff included cost-effectiveness calculations in their staff report. This report includes cost-effectiveness values for each of the major coating categories that are proposed for amendment.

ARB staff estimated \$1.85 per pound of ROC reduced for implementing the 2019 SCM over the years 2020-2025 (in 2019 Dollars).

Conclusion: The cost-effectiveness of proposed amendments to Rule 74.2 was calculated based on cost surveys comparing oil-based coating costs to their low-ROC counterparts, either waterborne or exempt solvent-based. The ROC emission reductions are anticipated to be 22.12 tons per year. The cost-effectiveness ranges from -\$6.51 to \$19.93 per pound of ROC reduced depending upon the coating category and the coating container size and averaged \$1.85 per pound of ROC reduced. This is much less than the \$15 per pound of ROC reduced that is required for Best Available Control Technology for new stationary sources in the county. Furthermore, small one quart containers will continue

to be exempt from this proposal, which will means no cost increases from this proposal for small projects.

### Incremental Cost-Effectiveness Analysis

H & SC Section 40920.6(a) requires districts to identify one or more potential control options that achieve at least the same benefit as the proposed rule, assess the cost-effectiveness of those options, and calculate the incremental cost-effectiveness. An alternative that achieves at least the same benefit is the adoption of final ROC limits from South Coast AOMD Rule 1113 including elimination of the small container exemption. Proposed amendments to Rule 74.2 are based strictly on the state SCM. The costeffectiveness of the ROC limits in Rule 1113 plus the new requirements for small containers per pound adopted in 2016 was estimated at \$5.44 per pound of ROC reduced. The incremental cost-effectiveness is calculated by dividing the incremental annualized costs in the district by the incremental annual emission reductions in the district. The incremental cost-effectiveness for this control option is \$6.80 per pound of ROC reduced. These calculations are summarized in Table 4.

Total is different due to rounding differences in summary provided by ARB in 2019 SCM Staff Report.

# Table 4 Calculation of Incremental Cost-Effectiveness for SCAQMD Small Container Option

I. OPTION CONTROL EFFICIENCY = 33% AND COST-EFFECTIVENESS = \$5.44		
II. Baseline Inventory = 0.67 tons/day for Ventura County Arch. Coatings		
III. Annualized Cost for Proposal = 0.0606 tons/day X \$1.85/lb X 365days/year= \$81,844		
IV. Option Emission Reductions =0.67 tons/day X 33% X 365 days/year = 161,403 lbs/year		
V. Option Annualized Cost = Cost-Effectiveness X Emis. Reductions		
= \$5.44 X 161,403 lbs/yr = \$878,032		
VI. Incremental Annualized Cost = \$878,032 - \$81,844 = \$796,188		
VII. Incremental Annual Emis. Reductions =161,403 – 44,240 = 117,163 lbs/yr		
VIII. Incremental Cost-Effectiveness = \$796,188 / 117,163 = \$6.80 per pound		

# **ENVIRONMENTAL IMPACTS OF METHODS OF COMPLIANCE**

California Public Resources Code Section 21159 requires the District to perform an environmental analysis of the reasonably foreseeable methods of compliance. The analysis must include the following information on proposed amendments to Rule 74.2:

- (1) An analysis of the reasonably foreseeable environmental impacts of the methods of compliance.
- (2) An analysis of the reasonably foreseeable mitigation measures.
- (3) An analysis of the reasonably foreseeable alternative means of compliance with the rule or regulation.

Table 4 lists some reasonably foreseeable compliance methods, the environmental impacts of those methods, and measures that could be used to mitigate the environmental impacts. A more detailed environmental analysis will be found in the staff environmental impact report for proposed amendments to Rule 74.2.

Table 5
Environmental Impacts and Mitigations of Methods of Compliance

Compliance Methods (including all reasonably foreseeable alternative means of compliance)	Reasonably Foreseeable Environmental Impacts	Reasonably Foreseeable Mitigation Measures
Reformulation of architectural coatings	Air Quality Impacts: Reformulation may result in the use of toxic materials.	Operators may use reformulated coatings with less or no toxic materials.
	Water Impacts: Improper disposal of coatings may cause water impacts.	Compliance with wastewater discharge standards and waste disposal requirements will mitigate these impacts.
	Human Health Impacts: Coatings may be replaced with products containing more toxic compounds.	Compliance with OSHA safety guidelines (e.g., personal protective equipment, prevention and response, emergency first aid procedures) reduces these impacts.

### OTHER FACTORS

# Technological Feasibility:

The ROC limits proposed in the amendments to Rule 74.2 are based on ROC limits fully analyzed by ARB in the 2019 SCM. Currently, coatings that meet and exceed the proposed ROC limits are being manufactured and sold in California.

# Enforceability

Labeling requirements, reporting requirements, and testing procedures have been included in the proposed rule to increase its enforceability.

# **Public Acceptability**

Staff is soliciting comments, but expects the rule and any associated costs to be acceptable to affected manufacturers and users for the following reasons:

- A three-year sell-through provision will allow suppliers, retailers, and users to deplete existing coating inventories without penalty and without creating a hazardous waste problem.
- High-performance coatings are available now from many companies that comply with the proposed ROC limits.
- Coating price increases as a result of this proposal are not expected to be significant.

 Estimated profitability impacts on coating manufacturers are not expected to be significant.

### **Environmental Compliance and Review**

Proposed amendments to Rule 74.2 strengthen the ROC content limits for architectural coatings. The rule creates new lower standards for specified coating categories. The rule may have a potentially adverse environmental impact. Pursuant to county administrative supplement to state CEQA Guidelines, the District staff will propose reusing the 2009 Environmental Impact Report prepared for the 2020 amendments to Rule 74.2.

# **Future Technology Assessments**

SCAQMD has published Rule 1113 status reports on their website (aqmd.gov) for the following years: 2000, 2001, 2002, 2003, 2004, 2005, 2007, 2011, 2013, and 2016. This review by SCAQMD staff showed all proposed limits are feasible. However, the District's rulemaking process is flexible enough for staff to revisit the rule and to make any appropriate changes to the rule as needed in the future.

### **REFERENCES**

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