



Eastern Kern APCD

Rule Development Public Workshop

May 17, 2022



Workshop Agenda

Rule 201.1, Permits to Operate for Sources Subject to Title V of the Federal Clean Air Act Amendments of 1990

Rule 210.1A, Major New and Modified Stationary Source Review (MNSR)

Rule 410, Organic Solvents

Rule 410.8, Aerospace Assembly and Coating Operations

Rule 432, Polyester Resin Operations



Amended Rule 201.1

**Permits to Operate for Sources
Subject to Title V of the Federal
Clean Air Act Amendments of 1990**



Rule 201.1 Overview

Rule 201.1 was originally adopted November 1, 1993.

Purpose of Rule 201.1 is to implement permitting requirements of Title V of the Federal Clean Air Act amendments of 1990 (CAA).

Title V requires issuance of operating permits for certain sources emitting regulated air pollutants, including attainment and non-attainment pollutants.

The primary reason for amending Rule 201.1 is to update the oxides of nitrogen (NO_x) and volatile organic compounds (VOC) Major Source threshold to meet the requirements of Severe Nonattainment pursuant to the 2008 Ozone NAAQS.



Ozone NAAQS

NO_x and VOCs are ozone precursor pollutants, that when emitted can form tropospheric ozone in the presence of light winds, high temperatures, and sunlight.

In 2008, EPA adopted a new 8-hour Ozone NAAQS of 75 parts per billion (ppb).

A portion of the District was classified as Serious Nonattainment and required to achieve attainment by the of end of 2020.

The District failed to meet the 75 ppb standard by the attainment date and was reclassified to Severe Nonattainment.



Severe Nonattainment

The Severe nonattainment Major Source threshold for NO_x and VOCs is 25 tons per year (tpy).

Therefore, the NO_x and VOC threshold of Rule 201.1 is being revised from 50 tpy to 25 tpy.

***Only the NO_x and VOC threshold is being revised.**

The threshold for “Any Regulated Air Pollutant, excluding GHGs” will remain at 100 tpy.

The HAP thresholds will remain at 10 tpy of one HAP, or 25 tpy of two or more HAP's.



2012 Amendment

Rule 201.1 was last amended January 12, 2012.

The 2012, amendment was a very extensive revision of the Rule.

EPA never acted on the 2012, submittal so the District has been enforcing the previous SIP approved amendment of Rule 201.1 (March 11, 2004).



2021 Amendment

The District proposed amendments to Rule 201.1 in 2021.

The 2021, amendments were based on the most recently adopted (2012) revision of the rule with the NO_x and VOC thresholds updated to match the Severe nonattainment requirements.

Upon completion of their review, EPA provided a Title V checklist that summarized many new Part 70 program requirements that were added since 2012.

The District updated Rule 201.1 to include all applicable new Part 70 program requirements (since 2012). This proposed amendment includes those requirements.



Rule 201.1 Definitions

Definitions for the following five terms have been added or revised in Rule 201.1:

- Alternative operating scenario (AOS)
- Approved Replicable Methodology (ARM)
- Regulated Air Pollutant
- Regulated pollutant (for presumptive fee calculation)
- Subject to Regulation



Administrative Procedures

Administrative procedures for the following conditions have been added:

- Transmission of Information to the Administrator (Section VI.E).
- Public Petitions to the Administrator (Section VI.H).



Permit Content Requirements

Language for Approved Replicable Methodology (ARM) has been added to Section VII.B.18.



Rule 201.1

Questions

Comments



Draft Rule 210.1A

Major New And Modified Stationary Source Review (MNSR)



Rule 210.1A Background

At EPA's request, Rule 210.1A was developed & adopted in 2018.

November 7, 2019, EPA published a proposed action that affirms the 2009 interpretation of when physical or operational changes should be combined into a single “project” for analysis of major NSR applicability.

Due to this action, portions of Rule 210.1A would not comply with EPA's current rule interpretation.

EPA suggested the District rescind Rule 210.1A from its Rule Book and SIP submittal, rework the Rule to address all approvability issues, and adopt a new draft MNSR Rule that complies with EPA standards.



Background Continued

March 5, 2020, the District's Board approved Rescinding Rule 210.1A from the Rule Book and SIP submittal.

Over the past two years the District worked with EPA to address all deficiencies in the previous MNSR Rule.

The corrected MNSR draft rule is presented at this workshop and will be proposed for adoption at the July 28, 2022, Board meeting.

Draft Rule 210.1A will become effective upon adoption and will be submitted to EPA as a SIP revision.



Reasons for Rule 210.1A

- EPA found deficiencies in Rule 210.1 (NSR) concerning Major Stationary Source compliance with 2008, Ozone NAAQS.
- It was determined adopting a new NSR rule specifically designed for major sources and leaving the current NSR rule for all other sources to be the most streamlined approach.



Purpose of Rule 210.1A

- Rule 210.1A is intended for new major stationary sources, and major modifications of existing major stationary sources to:
 1. Provide for preconstruction review;
 2. Insure BACT is being proposed for each emission unit included; and
 3. Provide offsets for any significant net emissions increase of a nonattainment pollutant and its precursors.

Rule 210.1A Applicability

- Rule 210.1A is applicable to all major stationary sources which emit, or have PTE ≥ 100 tpy of any nonattainment pollutant, except when:
 1. Source is located in Ozone Severe nonattainment area with PTE ≥ 25 tpy of NO_x or VOCs.
 2. Source is located in PM₁₀ serious nonattainment area with PTE ≥ 70 tpy of PM₁₀ or its precursors.

Rule 210.1A Major Modification

- Major Modification is the physical change or change in method of operation of a major stationary source resulting in an increase in potential emissions of:
 1. 100 tpy of CO;
 2. 40 tpy of SO_x (as SO₂);
 3. 25 tpy of NO_x or VOCs;
 4. 15 tpy of PM₁₀, when aggregated with all other creditable decreases during last 5 calendar years.

Rule 210.1A Requirements

- No new major stationary source or major modification to an existing major stationary source, shall begin construction without first obtaining an ATC pursuant to Rule 210.1A, which include:


Calculations to Determine NSR Applicability	Best Available Control Technology
Projected Actual Emissions Test	Statewide Compliance
Secondary Emissions	Analysis of Alternatives
Application Submittal	Sources Impacting Class I Areas
Application Content	Application & Permit Fees

Emissions Offsets

- ❑ Pollutant-specific emissions shall be offset with ERCs or with internal emission reductions.
- ❑ ERCs from one or more source may be used alone or in combination with internal emission reductions.
- ❑ ERCs must be real, surplus, permanent, quantifiable, federally enforceable, & surplus at issuance of ATC.

Offset Ratios:

Area Designation	Pollutant	Offset Ratio
Severe Ozone Nonattainment Area	NOX or VOC	1.0 to 1.3
PM10 Nonattainment Area	PM10, SO _x or NO _x	1.0 to 1.0



Rule 210.1A

Questions

Comments



Amended Rule 410

Organic Solvents



Rule Background

- ❑ Adopted April 18, 1972 to reduce VOC emissions from solvent usage operations
- ❑ During the 70's, Rule 410 was the main Rule for regulating solvent usage.
- ❑ Last amended in 1979...

Background (continued)

- ❑ New source specific coating and solvent Rules developed starting in 1979 through 2014 including but not limited to the following:
 1. 410.1A, Architectural Coating Controls;
 2. 410.3, Organic Solvent Degreasing Operation
 3. 410.4, Metal, Plastic, and Pleasure Craft Parts and Products Coating Operations,
 4. 410.4A, Motor Vehicle and Mobile Equipment Refinishing Operations,
 5. 410.7, Graphic Arts;
 6. 410.8, Aerospace Assembly and Coating Operations;
 7. 410.9, Wood Products Surface Coating Operations;
 8. 432, Polyester Resin.
- ❑ Rule 410 is no longer applicable to operations regulated by Rules listed above.

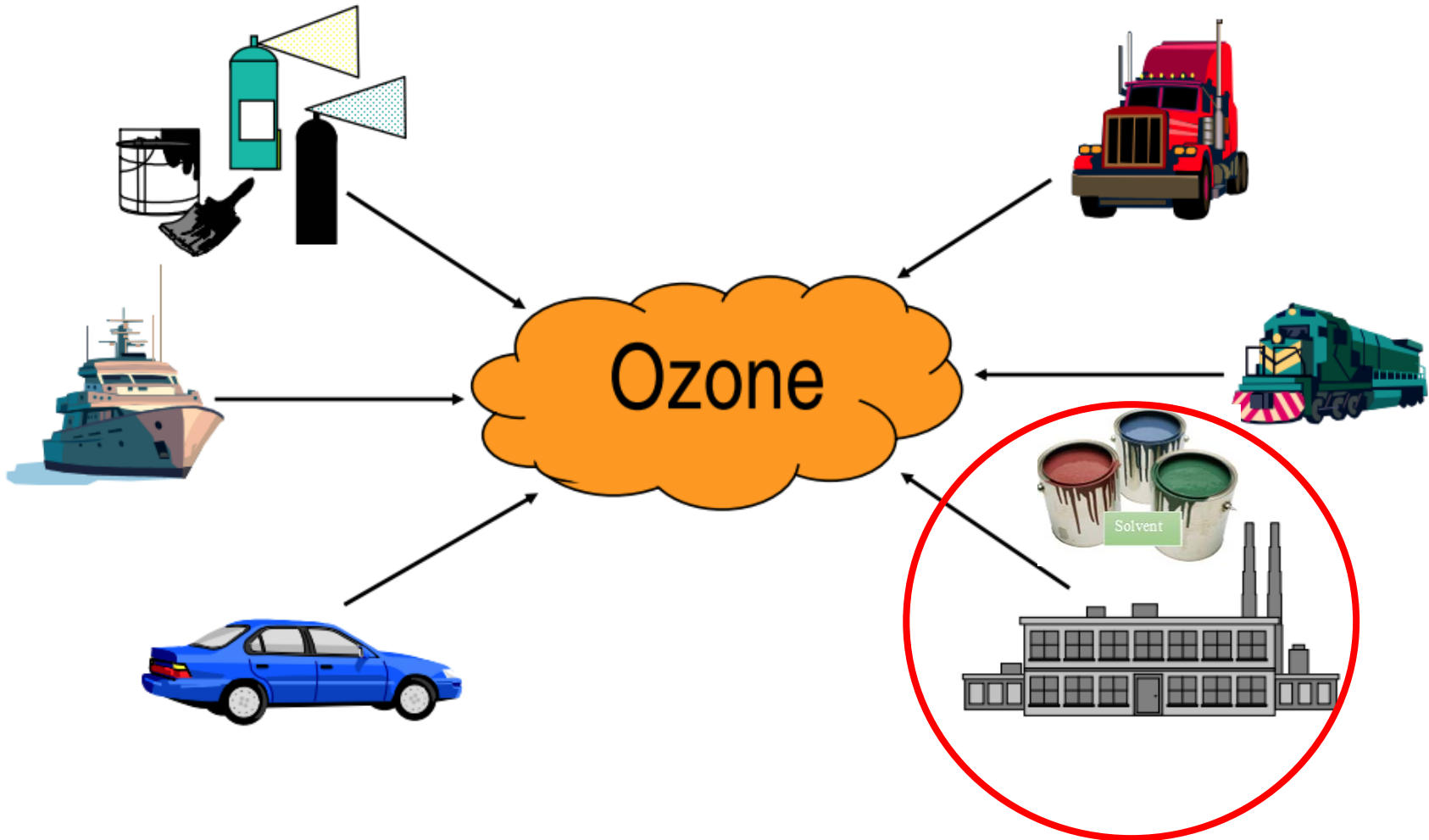
Applicability

- ❑ Rule 410: Regulate usage of miscellaneous solvents not regulated by source specific coating Rules including the following: coatings, resins, adhesives, inks, solvents, thinners, diluents, mold seal and release compounds, lubricants, cutting oils and quenching oils.
- ❑ Examples:
 1. Miscellaneous solvent cleaning operations not regulated by source specific Rules including surface preparation, wipe cleaning, degreasing equipment with surface area less than 1ft²
 2. Jet engine or rocket engine flushing operations using any solvent other than trichloroethylene are exempt from this rule.



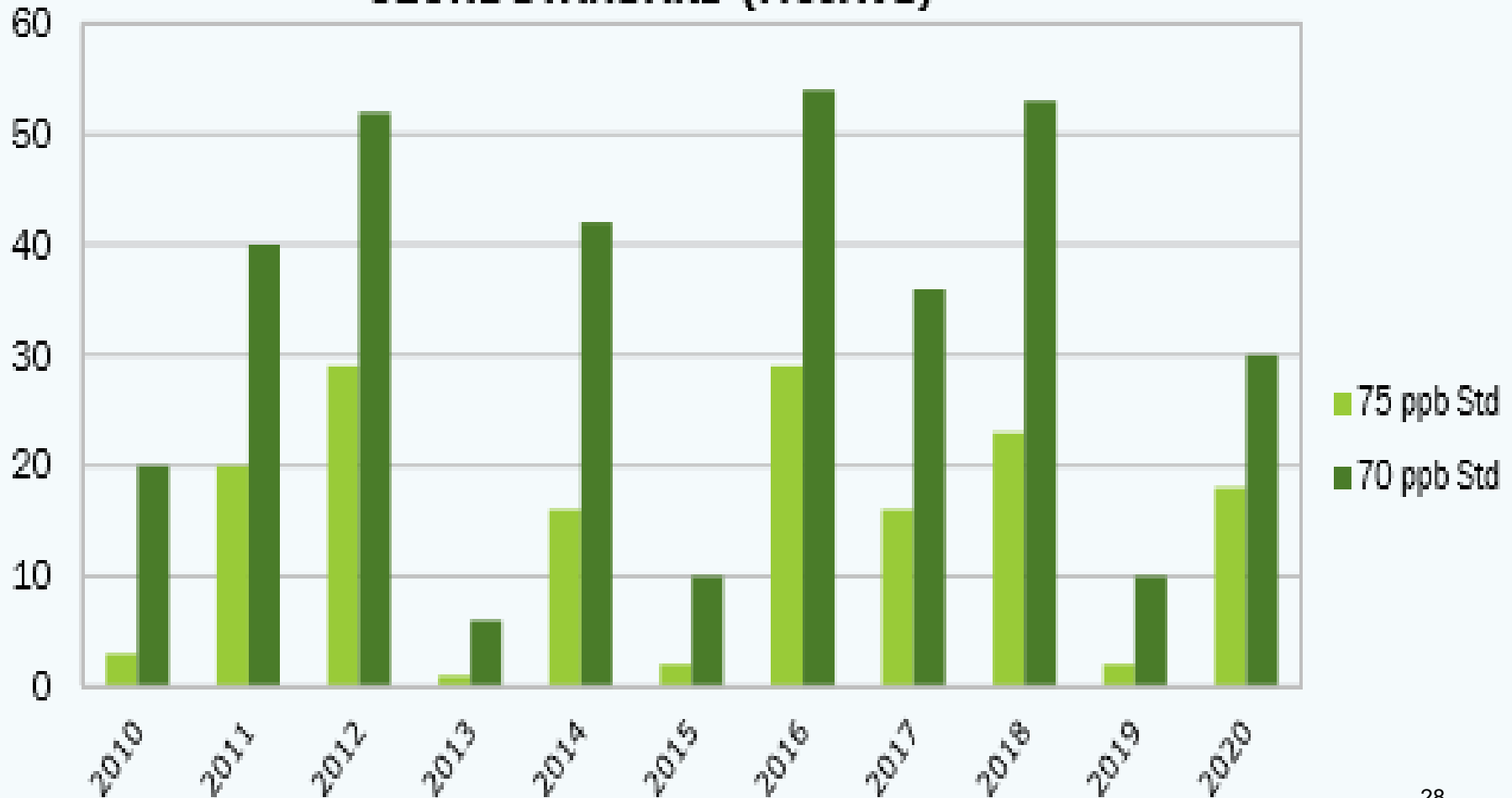
Main Contributors to Ozone

Sources of NO_x and Hydrocarbons (VOCs)



Air Quality Trends

DAYS EXCEEDING 8-HR OZONE STANDARD (MOJAVE)



Severe Nonattainment

- On July 7, 2021- Eastern Kern reclassified from serious to “severe” nonattainment area for the 2008 ozone National Ambient Air Quality Standards (NAAQS)
- Language requiring the District to attain the 2008 ozone NAAQS as expeditiously as practicable, no later than July 20, 2027
- RULES OBJECTIVE –adopt proposed Rules as contingency measures if District fails to meet Reasonable Further Progress (RFP) Milestones!



Current Rule 410 Requirements

- Solvents Subject to Heat: limited to 15 lbs/day (5475 lbs/year) unless reduced by 85%
- Photochemically Reactive Solvents: limited to 40 lbs/day (14,600 lbs/year) unless reduced by 85%
- Non-photochemically reactive solvent 3,000 lbs/day

Rule 410 Amendments

□ Section II-Definitions (16 total added):

- APCO:
- CARB:
- Baked:
- Dissolver:
- EPA:
- Exempt Compounds:
- Facility:
- Grams of VOC per Liter:
- Heat-Cured or Heat-Polymerized:
- Organic Solvent:
- Photochemically Reactive Solvent:
- SCAQMD:
- Solvent:
- Standard Conditions:
- Thinner or Viscosity Reducer:
- VOC:

□ Section III- Exemptions:

- Add source specific coating/solvent Rules



Section IV- Requirements

- ❑ Limit VOC emissions to 833 lbs/month (27 lb/day or 10,000 lbs per year) per facility unless a VOC emission control system with 90% capture and 95% control efficiency is installed.
- ❑ Contingency provision: Limit VOC emissions to 450 lbs/month (15 lbs/day or 5400 lbs/year) per facility unless a VOC emission control system with 90% capture and 95% control efficiency is installed.
- ❑ Methods of Compliance:
 - Product reformulation or substitution;
 - Process changes;
 - Improvement of operation efficiency;
 - Development of innovative technology;



Rule 410 Amendments

- ❑ Section V:
 - ❑ Outlines administrative and recordkeeping requirements
- ❑ Section VI:
 - ❑ Outline District approved VOC test methods and Determination of VOC emissions

Additional Language to Rule 410

RULE 410.2 Disposal and Evaporation of Solvents - Adopted 4/18/72, Amended 1/9/79,
Renumbered 5/89

I. A person shall not during any one day dispose of a total of more than 1 1/2 gallons of any photochemically reactive solvent as defined in Rule 410.X., or of any material containing more than 1 1/2 gallons of any such photochemically reactive solvent into the atmosphere.

- Language in Rule 410 will prohibit the disposal of organic solvent via intentional evaporation.
- Rule 410.2 to be rescinded and repealed.
- Specific language for Solvent Disposal Requirements also added to Rule 410.



Rule 410

Questions

Comments

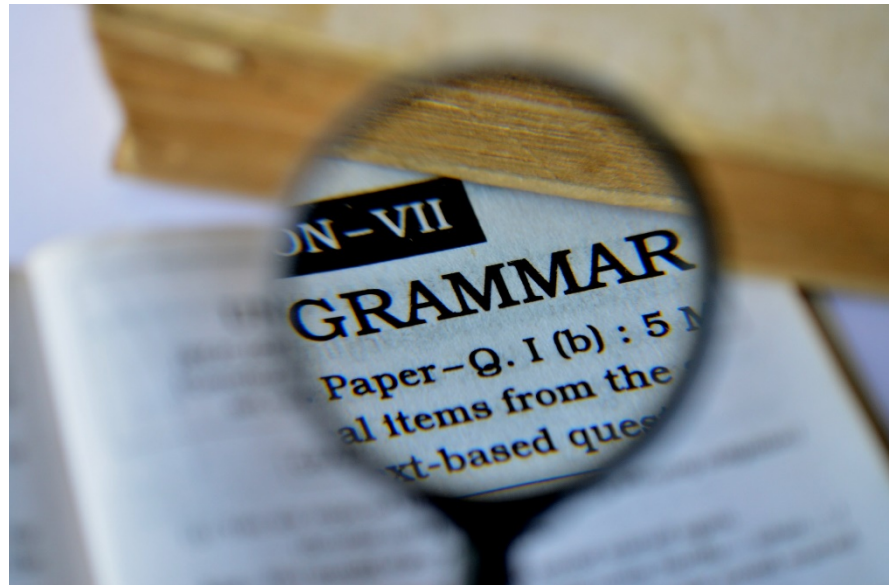


Amended Rule 410.8

Aerospace Assembly and Coating Operations

Non-Contingency Measure Changes

- VOC definition revised to incorporate 40 CFR 51.100 by reference
- General grammar cleanup



Section IV-Exemptions

Reduction of threshold for the “low usage coating” exemption from VOC content requirements (Subsection G.1)

- Currently 50 gallons per formulation/yr, up to 200 gal/yr total (same as aerospace NESHAP)

Review of other air district rules:

- Antelope Valley, Mojave Desert, Santa Barbara County, South Coast, Ventura County – 20 gallons per formulation/yr, 200 gal/yr total
- Sacramento Metropolitan – 55 gal/yr non-rocket motor adhesive, 200 gal/yr including rocket motor adhesive
- San Joaquin Valley – 1 gal/day, 20 gal/yr
- Imperial County – 20 gallons per formulation/year, 50 gal/yr total

Section IV-Exemptions

Proposed Threshold Reductions

- 50 gallons per formulation/year → 20 gallons per formulation/year
- 200 gal/year total → 50 gal/year total



Section V-VOC Content Limits

Category	Eastern Kern (2014)		Bay Area (1995)		San Joaquin Valley (2011)		South Coast (2001)		San Diego (1997)		Imperial (2010)	
	g/L	lb/gal	g/L	lb/gal	g/L	lb/gal	g/L	lb/gal	g/L	lb/gal	g/L	lb/gal
Primers												
Commercial Exterior Aerodynamic Structure Primer	650	5.4	N/D	N/D	350	2.9	N/D	N/D	N/D	N/D	N/D	N/D
Coatings												
Adhesion Promoter	850	7.1	N/D	N/D	850	7.1	250	2.1	N/D	N/D	N/D	N/D
Antichafe Coating	600	5.0	N/D	N/D	600	5.0	420	3.5	600	5.0	N/D	N/D
Flight Test Coating (except missiles or single-use target craft)	840	7.0	N/D	N/D	600	5.0	840	7.0	840	7.0	N/D	N/D
High-Temperature Coating	850	7.1	720	6.0	850	7.1	850	7.1	850	7.1	N/D	N/D
Metallized Epoxy Coating	740	6.2	N/D	N/D	740	6.2	700	5.8	N/D	N/D	N/D	N/D
Rain Erosion Resistant Coating	800	6.7	N/D	N/D	800	6.7	800	6.7	690	5.8	N/D	N/D
Adhesives												
Structural - Nonautoclavable Sealants	850	7.1	N/D	N/D	850	7.1	850	7.1	250	2.1	250	2.1
Fastener	675	5.6	N/D	N/D	600	5.0	675	5.6	N/D	N/D	N/D	N/D
Maskants												
Bonding	1,230	10.3	N/D	N/D	N/D	N/D	N/D	N/D	600	5.0	N/D	N/D
Line Sealer	750	6.3	N/D	N/D	N/D	N/D	N/D	N/D	650	5.4	N/D	N/D

Section V-VOC Content Limits

Category	Eastern Kern (2014)		Sac Metro (2008)		Ventura (2012)		Santa Barbara (2012)		Antelope Valley (2013)		Mojave Desert (2020)	
	g/L	lb/gal	g/L	lb/gal	g/L	lb/gal	g/L	lb/gal	g/L	lb/gal	g/L	lb/gal
Primers												
Commercial Exterior Aerodynamic Structure Primer	650	5.4	N/D	N/D	N/D	N/D	350	2.9	650	5.4	650	5.4
Compatible Substrate Primer	780	6.5	N/D	N/D	N/D	N/D	350	2.9	780	6.5	780	6.5
Cryogenic Flexible Primer	645	5.4	N/D	N/D	N/D	N/D	350	2.9	645	5.4	645	5.4
Elevated Temperature Skydrol Resistant Commercial Primer	740	6.2	N/D	N/D	N/D	N/D	350	2.9	740	6.2	740	6.2
Flexible Primer	640	5.3	N/D	N/D	N/D	N/D	350	2.9	640	5.3	640	5.3
Coatings												
Adhesion Promoter	850	7.1	N/D	N/D	850	7.1	250	2.1	850	7.1	850	7.1
Antichafe Coating	600	5.0	N/D	N/D	600	5.0	420	3.5	420	3.5	420	3.5
Chemical Agent Resistant Coating	550	4.6	N/D	N/D	N/D	N/D	N/D	N/D	550	4.6	500	4.2
Clear Topcoat	520	4.3	520	4.3	520	4.3	520	4.3	520	4.3	420	3.5
Conformal Coating	750	6.3	600	5.0	750	6.3	N/D	N/D	750	6.3	750	6.3
Electric/Radiation Effect Coating	800	6.7	600	5.0	800	6.7	800	6.7	800	6.7	800	6.7
Electrostatic Discharge/EMI Coating	800	6.7	612	5.1	N/D	N/D	800	6.7	800	6.7	800	6.7

Section V-VOC Content Limits

Category	Eastern Kern (2014)		Sac Metro (2008)		Ventura (2012)		Santa Barbara (2012)		Antelope Valley (2013)		Mojave Desert (2020)	
	g/L	lb/gal	g/L	lb/gal	g/L	lb/gal	g/L	lb/gal	g/L	lb/gal	g/L	lb/gal
Coatings (cont.)												
Fire Resistant (Interior) Coating, Civilian	650	5.4	600	5.0	650	5.4	600	5.0	650	5.4	650	5.4
Flight Test Coatings (except missiles or single-use target craft)	840	7.0	N/D	N/D	600	5.0	600	5.0	840	7.0	840	7.0
High-Temperature Coating	850	7.1	420	3.5	850	7.1	720	6.0	850	7.1	720	6.0
Metallized Epoxy Coating	740	6.2	N/D	N/D	N/D	N/D	700	5.8	700	5.8	700	5.8
Mold Release Coating	780	6.5	762	6.4	N/D	N/D	780	6.5	780	6.5	780	6.5
Rain Erosion Resistant Coating	800	6.7	600	5.0	420	3.5	600	5.0	800	6.7	600	5.0
Wet Fastener Installation Coating	675	5.6	620	5.2	N/D	N/D	675	5.6	675	5.6	675	5.6
Adhesives												
Structural - Nonautoclavable	850	7.1	N/D	N/D	850	7.1	850	7.1	850	7.1	700	5.8
Sealants												
Fastener	675	5.6	N/D	N/D	675	5.6	600	5.0	675	5.6	675	5.6

Section V-Coating Application Equipment Cleaning Solvents

- Rule does not currently set a VOC content limit for these solvents
- 4 air districts found to limit VOC content of equipment cleaning solvents to 25 g/L (0.21 lb/gal)
 - South Coast – VOC content not to exceed 25 g/L
 - Sac Metro – VOC content not to exceed 25 g/L
 - Santa Barbara – VOC content not to exceed 25 g/L, or use of an enclosed cleaning system
 - Ventura – enclosed spray gun washer, or solvent composite partial pressure less than 5 mmHg @ 20°C (68°F), or 25 g/L VOC content

Section V-Coating Application Equipment Cleaning Solvents

Proposed Changes to Coating Application Equipment Cleaning Solvent Requirements

- Use enclosed equipment cleaning device; or
- Outside of an enclosed cleaning device:
VOC content of 25 g/L or less, or a
composite partial pressure less than 5
mmHg @ 20°C



VOC Control Device Requirement

Cost to install VOC controls (carbon adsorption) assessed

1. Carbon required – based on highest hourly emission rate of permitted sources
2. Estimate of total capital investment for control equipment
3. Estimate of direct & indirect annual costs associated with operation of control device

Total annual cost estimated at \$66,500/yr over life of control equipment



VOC Control Device Requirement

- Re-assessment of District cost effectiveness threshold
 - Last adjustment to District VOC cost-effectiveness threshold in 1998
 - Ozone nonattainment status has increased for District (Moderate/Serious → Severe/Extreme)
 - San Joaquin Valley APCD (extreme ozone nonattainment) threshold of \$22,600/ton VOC selected for “cost-effectiveness cutoff”

VOC Control Device Requirement

- Necessary reductions to be cost effective: 2.95 ton/year
 - Minimum control efficiency of carbon adsorption: 85.5%
 - Uncontrolled emissions of 3.50 ton/year or more would be cost-effective to implement VOC controls





Rule 410.8

Questions

Comments



Amended Rule 432

Polyester Resin Operations



Reasons for Amending Rule 432

- Rule 432 was initially adopted in 2014.
- Designed to reduce VOC emissions from polyester resin use.
- Adopting Rule 432 was one component of the 2008, Ozone Attainment Plan.
- District did not attain the 2008, Ozone NAAQS by 2020.
- Clean Air Act requires implementing contingency measures if an ozone non-attainment area fails to attain or does not meet Reasonable Further Progress (RFP) milestone dates.
- Rule 432 was included in a contingency commitment letter approved by CARB.



Proposed Amendments

Low VOC content polyester resins are readily available, and already required by Rule 432. Using the same technology to generate additional emission reductions will not be effective.

Therefore, the District is proposing to eliminate the 20-gallons per month exemption.

The definition of VOC is also being revised to incorporate 40 CFR 51.100 by reference.



Similar Rules in Other Districts

18 of the 35 California air districts currently have a Polyester Resin rule.

Of these 18, only 8 districts still have the less than 20 gallon exemption.

VOC Reductions

CARB's emissions inventory for the District shows 0.05 tons per day of VOCs for this source category.

Removing the exemption will make additional facilities subject to requirements of Rule 432.

A 6% VOC reduction in the source category is expected from this amendment.

This results in 0.003-tons/day of VOC reductions:

0.05-tons/day X 0.06 = 0.003-tons/day of emission reductions



Rule 432

Questions

Comments



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