



# Consumer Products Regulations Overview and Proposed Amendments

September 26, 2013



*California Environmental Protection Agency*

**Air Resources Board**



# Overview



# Long Standing ARB Consumer Products Program

3

- Program requirements established in 1988
- Requires maximum feasible reduction in VOC emissions
- Regulations must be necessary to attain ambient air quality standards
- Regulations must be technologically and commercially feasible
- Must preserve product forms

# What Are Consumer Products?

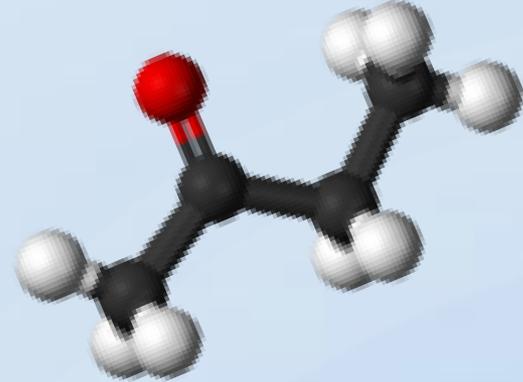
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- Used by household and institutional consumers
- Types of products include:
  - ❑ Cleaning Products
  - ❑ Aerosol Paints
  - ❑ Antiperspirants and Deodorants
  - ❑ Household Pesticides
  - ❑ Personal Care Products
  - ❑ Automotive Specialty Products



# Consumer Products Contain VOCs

5



- Active ingredients
- Solvents for active ingredients
- Propellants
- Fragrances

# State Implementation Plan (SIP)

6

- VOC reductions are needed to attain ozone air quality standards
- This rulemaking meets the reductions expected from consumer products in the 2007 SIP
- Consumer products continue to be a significant source of VOCs

# Program Implementation Activities

7

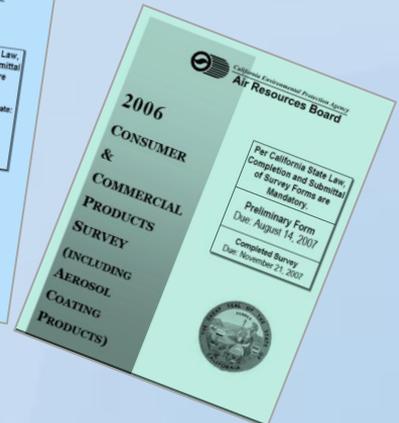
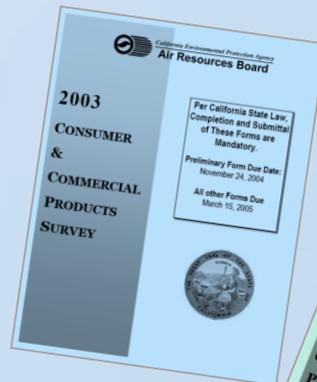
- Rule development and interpretation
- Laboratory testing to determine compliance
- Enforcement for noncomplying products
- Review and approval of compliance flexibility options
- Emissions inventory development
- Assist other jurisdictions
- Report to the Board



# Surveys of the Industry

8

- Guide regulatory development
- Define categories
- Collect information on:
  - Sales
  - VOC ingredients
  - Economic information
- Used to build emissions inventory



# VOC Control Approaches

9

- Mass-based
  - Limits on the *amount* of VOCs
  - Provisions for low vapor pressure VOCs (LVP-VOCs)
- Reactivity-based
  - Limits on the *types* of VOCs
  - VOCs have varying abilities to react to form ozone

# Low Vapor Pressure-VOCs (LVP-VOC)

10

- Slower evaporating, larger VOC compounds
- Exempt from compliance with VOC standards
- Some may be more volatile and contribute to ozone formation
- ARB funded research is underway to investigate air quality impacts
  - Data will be used to assess whether the LVP-VOC exemption should be modified

# Reactivity Considerations

11

- Reactivity of VOCs quantified and compared using the Maximum Incremental Reactivity (MIR) scale
- Proposed amendments to the Aerosol Coating Products Regulation



# Assessment of Upcoming Limits

12

- 3% VOC limits for Multi-purpose Solvent and Paint Thinner products take effect on 12/31/2013
- Technical assessment indicates 3% VOC limit is feasible and can be implemented as scheduled
- Will achieve ~4 tons per day reduction as expected

# District Authority

13

- Districts authorized to adopt consumer product standards if ARB has not regulated category
- District rule remains in effect if it predates ARB action
- Only South Coast Air Quality Management District (SCAQMD) has exercised this authority
  - Regulates few categories
- All but a few categories are regulated on a consistent statewide basis

# Program Success

14

<b>Control Measure</b>	<b>Categories Regulated</b>	<b>Emissions Reductions Achieved</b>
VOC limits	~130	~220 tons per day
Toxic Air Contaminants*	83	Over 13 tons per day
Greenhouse gases	10	~0.23 million metric tons of carbon dioxide equivalents per year

\*Methylene Chloride, Perchloroethylene, Trichloroethylene, Para-dichlorobenzene

# Proposed Amendments to the Consumer Products Regulations and ARB Test Method 310



# Overview of Proposal

16

- “General” Consumer Products Regulation
- Antiperspirants and Deodorants Regulation
- Aerosol Coating Products Regulation
- Hairspray Credit Program sunset
- ARB Laboratory Test Method 310
- Tables of Reactivity (MIR) Values
- Proposed Modifications

# “General” Consumer Products Regulation



# Consumer Products Amendments

18

- Lower limits for Aerosol Adhesives
- Multi-purpose Solvent and Paint Thinner Requirements
  - Address SCAQMD issues
  - Include aerosols
- Additional proposals
- Update definitions
- Achieves additional 0.4 tons per day VOC emission reduction

# Aerosol Adhesives Requirements

19

- Lower or new VOC limits for three Aerosol Adhesive categories
- Prohibit use of three toxic air contaminants
- Limit the types of greenhouse gases used

# Multi-purpose Solvent (MPS) and Paint Thinner (PT) Rule Issues

20

- SCAQMD Rule 1143 in 2009
- ARB Regulation in 2010
- Amendments are being proposed to fully achieve expected benefits of these rules

# Why Rule Benefits Are Not Fully Achieved Now

21

- Introduction of aerosol forms
- Proliferation of Industrial Maintenance Coating Thinners
- Products relabeling to avoid compliance with district's rule

# Label Demonstrates Problem

Front Panel



Instructions  
:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Warning:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

A-Z SUPPLIES  
BRAND



Odorless  
**Mineral  
Spirits**

100% From  
Nature:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Cleanup:  
\_\_\_\_\_  
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# Label Demonstrates Problem

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Back Panel



**Instructions:**

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**Warning:**

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**A-Z SUPPLIES  
BRAND**



**Odorless  
Mineral  
Spirits**

**100% From Nature:**

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**Cleanup:**

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**Category:  
General Purpose  
Degreaser**



A-Z Supplies Brand  
Odorless Mineral  
Spirits, Great for  
thinning, cleaning,  
stripping, window  
cleaning, Degreasing,  
dissolving gunk, etc.



# MPS and PT Proposals

24

- Specify VOC limits for nonaerosol products sold in SCAQMD
- Set new VOC limits for aerosol products
- Strengthen exemption criteria for Industrial Maintenance Coating Thinners
- Extend safety labeling provisions
- Specify that VOC limits for nonaerosol products apply prior to recommended dilution

# New Requirements for *Aerosol* MPS and PT Products

25

- Set new 10% by weight VOC limit, effective 1/1/2016
- Prohibit use of three toxic air contaminants
- Limit the types of greenhouse gases used
- Set 1% by weight Aromatic Compound content limit

# Requirements for MPS and PT Products Sold in SCAQMD

26

- Regardless of claims made on the label, *nonaerosol* MPS or PT products must comply with district's rule
- Establish 25 g/L VOC standard identical to SCAQMD's VOC limit
- All provisions of State's regulation apply in SCAQMD
- Allows district to fully achieve expected benefits

# Fuel Products

27

- Fuels are not regulated under ARB's consumer products regulation as long as they are prominently and predominantly labeled as 'Fuel,' and no other claims are made or implied that the fuel is suitable for use as another regulated consumer product category

# Label Distinguishes Fuels from Consumer Products

28

Consumer Product



Fuel



# Changes to VOC Definition

29

- Request to exempt HFO-1234ze (Trans-1,3,3,3-tetrafluoropropene)
- Exclude from the VOC definition
- Also exclude from the Antiperspirants and Deodorants Regulation

# Additional Proposals

30

- Prohibit use of three toxic air contaminants in Single Purpose Cleaner and Single Purpose Degreaser
- Extend effective date for the 10% VOC limit for Multi-purpose Lubricant

# Aerosol Coating Products Regulation



# New Reactivity Limits

32

- New Reactivity Limits will reduce ozone forming potential of VOCs
- Definitions and administrative requirements
- Assignment of MIR values
- Test methods and compliance verification

# Proposed Reactivity Limits

33

- New or lower Reactivity Limits for 16 categories
  - These categories represent over 90% of aerosol coating products emissions
- Reactivity Limits set for very small categories designed to 'cap' ozone forming potential

# Aerosol Coating Products: Emissions Benefits

34

- Equivalent VOC reduction of 3.7 tons per day statewide
- 1.6 tons per day in SCAQMD

# Changes to ARB Laboratory Test Method 310



# Key Changes to ARB Laboratory Test Method 310

36

- Paint Thinner and Multi-purpose Solvent products sold in SCAQMD
  - Add analytical testing procedures
  - Designed to closely align with procedures currently used by the SCAQMD
- Aerosol Coating products
  - Add Hydrocarbon Solvent(s) analysis procedures

# Impacts



# Environmental Impacts

38

- VOC reduction of ~4.0 tons per day
- Fully realize benefits from previously adopted provisions for Multi-purpose Solvent and Paint Thinner products
- Precludes use of certain toxics and types of greenhouse gases
- No significant adverse impacts identified

# Economic Impacts

39

- Average annual increased cost to the consumer is \$0.10 to \$1.60
- Cost-effectiveness is \$1.82 per pound of VOC reduced which is comparable with other consumer products rulemakings
- Manufacturers' cost is \$5.3 million per year for 5 years

# Proposed Modifications

40

- Provide clarification on calculation of VOC content for Multi-purpose Solvent and Paint Thinner products sold in SCAQMD
- Correct errors in Test Method 310 language

# Recommendation

41

- Approve adoption of the proposed amendments to the Consumer Products Regulations and ARB Laboratory Test Method 310 with staff's suggested modifications





## **ARB Agenda Item 13-8-3**

# **Proposed Amendments to the Consumer Products Regulations**