

Public Workshop for Proposed Amendments to the Consumer Products and the Aerosol Coatings Regulations

April 24, 2013



Workshop Agenda

- Background
- Consumer Products Regulation proposed amendments
- Aerosol Coatings Regulation proposed amendments
- Hairspray Credit Program proposed amendments
- Ongoing work
- Proposed changes to ARB Test Method 310
- Schedule

BACKGROUND

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Background

- ❑ Consumer Products
 - Chemically formulated
 - Used by household and institutional consumers
 - Include household, home and garden, personal care, aerosol paint, automotive maintenance products, etc.

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Background (Cont.)

- ❑ California Clean Air Act
 - Achieve the maximum feasible reduction in VOC emissions
 - Technologically and commercially feasible regulations
 - Must not eliminate a product form
- ❑ Assembly Bill 32 calls for reductions in greenhouse gases

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Consumer Products Regulation Proposed Amendments

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Agenda

- Proposed amendments
 - Definitions
 - VOC exemption
 - Aerosol Adhesives
 - Other
 - Multi-purpose Solvent and Paint Thinner

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Proposed New or Modified Definitions

Aerosol Adhesive	Lubricant
Screen Printing Adhesive	Dry Lubricant
General Purpose Cleaner	Multi-purpose
General Purpose Degreaser	Silicone-based
Hair Care	Multi-purpose Solvent
Hair Finishing Spray	Paint Thinner
Hair Styling Product	Special Purpose Cleaner
Hair Styling Gel	Special Purpose Degreaser
No Rinse Shampoo	Undercoating
Thermal Protectant	Volatile Organic Compound
	Waterproof

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Draft language: section 94508(a), beginning on page 1 Consumer Products: Definitions

Proposed New or Modified Definitions (Cont.)

- ❑ Aerosol Adhesive
 - Products that can be refilled meet the definition
 - Screen Printing Adhesive
- ❑ General Purpose Cleaner
 - Clarify that Special Purpose Cleaners are not included
- ❑ General Purpose Degreaser
 - Clarify that Special Purpose Degreasers are not included

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Draft language: section 94508(a), beginning on page 1 Consumer Products: Definitions

Proposed New or Modified Definitions (Cont.)

- ❑ Hair care
 - Hair “Finishing” Spray
 - “Hair Spray” category name modification to clarify that only spray products used to finish styled hair are included
 - Hair Styling Gel
 - Deletion of definition
 - Products included in “Hair Styling Product” category
 - Hair Styling Product
 - Include “Thermal Protectant” products making styling claims
 - “No Rinse Shampoo” product
 - Define and exclude from “Hair Styling Product” category
 - “Thermal Protectant” product
 - Define

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Draft language: section 94508(a), beginning on page 1 Consumer Products: Definitions

Proposed New or Modified Definitions (Cont.)

- Lubricant clarifications
 - Dry Lubricant
 - Multi-purpose Lubricant
 - Silicone-based Multi-purpose Lubricant

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Draft language: section 94508(a), beginning on page 1 Consumer Products: Definitions

Proposed New or Modified Definitions (Cont.)

- Special Purpose Cleaner
 - Exclusively labeled to clean a single object
 - A product that claims to clean a single appliance, counter, wall, cabinet or floor is a “General Purpose Cleaner”
- Special Purpose Degreaser
 - Exclusively labeled to degrease a single object

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Proposed New or Modified Definitions (Cont.)

- ❑ Undercoating
 - Solely for use on motor vehicles
 - Products making additional claims are “Flexible Coatings
- ❑ Volatile Organic Compound
 - Exclude Trans-1,3,3,3-tetrafluoropropene (HFO-1234ze)
- ❑ Waterproofer
 - Reinstate definition
- ❑ Other definitional cleanup

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Proposed VOC Exemption

- ❑ Trans-1,3,3,3-tetrafluoropropene (HFO-1234ze)
 - Nonflammable low global-warming potential (GWP) low reactive propellant
 - U.S. EPA exempted on June 7, 2012
 - Petition for VOC exemption submitted August 8, 2012, by Honeywell Specialty Materials

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Proposed VOC Exemption

- ❑ OEHHA screening RELs for HFO-1234ze
 - Acute: 1,600 ppm
 - Chronic: 2 ppm
- ❑ Exposure analyses conducted
- ❑ No potential adverse impacts identified
- ❑ Proposing exemption

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Proposed Amendments Pertaining to Aerosol Adhesive Products

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Proposed Standards for Aerosol Adhesives

Aerosol Adhesive Category Name	Proposed VOC standard (%)	VOC Reductions (tons/day)
Mist Spray Adhesive	30	0.22
Web Spray Adhesive	40	0.07
Screen Printing Adhesive	55	0.01
Total		0.30

- ❑ Global warming potential (GWP) limit of 150 for Mist Spray, Web Spray and Screen Printing adhesive categories
- ❑ Proposed effective date of 1/1/2017

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Other Proposals

- ❑ Multi-purpose Lubricant
 - Proposing to extend effective date for the 10% VOC limit from 12/31/15 to 12/31/2018
- ❑ Special Purpose Cleaner/Special Purpose Degreaser
 - Proposing to prohibit the use of methylene chloride, perchloroethylene, and trichloroethylene, effective 1/1/2017

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Proposed Amendments Pertaining to Multi-purpose Solvent and Paint Thinner Products

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2012 Technical Assessment Summary

Multi-purpose Solvents

	Total Companies	Total Products	Total Sales (TPD)	Total VOC (TPD)	Total LVP-VOC (TPD)	Total Exempt VOC (TPD)	Sales Weighted Average VOC (%)
3% VOC Products	13	59	6.3	0.03	0.2	6.1	0.5
Other Reported Products¹	8	37	0.9	0.6	0	0.3	66.7

¹ Includes 30% compliant products, sell-thru products, and aerosol products.

Paint Thinners

	Total Companies	Total Products	Total Sales (TPD)	Total VOC (TPD)	Total LVP-VOC (TPD)	Total Exempt VOC (TPD)	Sales Weighted Average VOC (%)
3% VOC Products	6	27	7.0	0.04	0.01	6.8	0.6
Other Reported Products²	6	123	8.5	3.4	2.4	2.4	40.3

² Includes 30% compliant products, sell-thru products, Industrial Maintenance Coating Thinners, and aerosol products.

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Summary of Proposed Amendments

- ❑ No longer proposing modifications to the LVP-VOC exemption
- ❑ Specify that Paint Thinners and Multi-purpose Solvents sold in the South Coast Air Quality Management District (SCAQMD) must comply with a 25 g/L VOC standard
 - Compliance to be determined using SCAQMD test methods

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Summary of Proposed Amendments (Cont.)

- ❑ Statewide requirements
 - Modify definitions
 - Products that display on the Principal Display Panel a specific chemical name are “Multi-purpose Solvents”
 - Strengthen criteria to qualify for specialty Paint Thinner exemption
 - VOC limits for aerosol products – 10% by weight
 - All other provisions apply
 - VOC limits for Paint Thinners and Multi-purpose Solvents would apply prior to any recommended dilution

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Multi-purpose Solvent Definition

- Proposing to specify that:
 - Products that display on the Principal Display Panel a specific chemical name are “Multi-purpose Solvents”
 - Examples include mineral spirits, ketone, turpentine, toluene, xylene(s), acetone, naphtha, or alcohol
 - All product forms included
 - Thinners for Industrial Maintenance Coatings, Zinc-Rich Primers, or High Temperature Coatings that meet certain criteria are excluded

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Paint Thinner Definition

- Proposing to specify that:
 - Any product that is designed or labeled to reduce the viscosity of coating compositions or components is included
 - Includes aerosol “edge blender” products
 - Excludes products that meet the definition for “Uniform Finish Coating” in section 94521(a)
 - All product forms included

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Paint Thinner Exemptions

- ❑ Artist Solvent/Thinner exemption applies to products labeled exclusively as such
- ❑ Exemption for thinners used with Industrial Maintenance Coatings, Zinc-Rich Primers, or High Temperature Coatings only applies if:
 - Responsible Party manufactures Industrial Maintenance Coatings, Zinc-Rich Primers, or High Temperature Coatings, and
 - Label states specific product or brand for which the thinner is used

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Standards for Aerosol Products: Statewide Requirements

- ❑ Proposing VOC limit for aerosol Multi-purpose Solvent and Paint Thinner products
 - 10% by weight VOC effective 1/1/16
 - All other existing provisions for Multi-purpose Solvent and Paint Thinner products would apply
 - Prohibition on use of compounds with Global Warming Potential (GWP) values of 150 or greater
 - Prohibition on use of methylene chloride, perchloroethylene, and trichloroethylene
 - 1% by weight Aromatic Compound content limit

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Paint Thinners and Multi-purpose Solvents Sold in SCAQMD

- ❑ Proposing to specify that nonaerosol Multi-purpose Solvent and Paint Thinner products sold in the SCAQMD do not meet the definition for another consumer product
 - Most Restrictive Limit would not apply
- ❑ Incorporate 25 g/L VOC standard into section 94509(p)
 - Effective date: 1/1/2015
 - VOC content determined using SCAQMD test procedures
- ❑ All other provisions of ARB's rule apply

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Aerosol Coatings Regulation Proposed Amendments

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Agenda

- ❑ Applicability
- ❑ Definitions
- ❑ Proposed reactivity limits
- ❑ Assignment of MIR values
- ❑ Administrative requirements
- ❑ Test methods and compliance verification

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Proposed Amendments

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Proposed Amendments

- ❑ Deletion of mass-based and expired provisions

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Section 94520, Applicability

- ❑ Proposing to clarify that all products are regulated, unless specifically exempted
- ❑ Reiterated in section 94522(a)(1)

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Section 94521, Definitions

- Proposing to clarify and/or align common definitions with Consumer Products Regulation
 - Adhesive
 - Anti-Static Product
 - High-Temperature Coating
 - Lubricant
- Minor modifications to several definitions

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Section 94521, Definitions (Cont.)

- Proposed new definitions:

Antimicrobial Compound	Pigment
Extender	Plasticizer
Flexible Coating	Resin
Fragrance	Uniform Finish Coating
Impurity	

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Section 94521, Definitions (Cont.)

- Proposed “Flexible Coating” definition
 - To provide a flexible, protective coating to various surfaces
 - Would exclude “Undercoating” as defined in Consumer Products Regulation
 - Deletion of “Automotive Underbody Coating” definition
- Proposed “Uniform Finish Coating” definition (Edge Blenders)
 - Products performing similar function but without resin would be Paint Thinners

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Section 94521, Definitions (Cont.)

- Proposed definitions:
 - “Antimicrobial Compound”
 - Ingredients added solely to prevent microbial growth
 - “Extender” definition
 - Ingredient added to increase solids
 - “Pigment”
 - Coating solid added to provide color, opacity, or corrosion inhibition
 - “Plasticizer”
 - Flexibility aid
 - “Resin”
 - Film-forming ingredients

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Section 94522, Reactivity Limits

- Proposing lower limits for most categories
 - Limits for 13 categories designed to provide reductions
 - Represent ~90% of ROC emissions
 - New limits for 3 categories
 - Limits for 21 categories 'capped'
 - Equivalent VOC reduction of 3.6 tpd
 - South Coast AQMD 1.6 tpd
- Proposal designed so focus of R&D efforts is on those categories where greatest air quality benefits are achieved

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Proposed Reactivity Limits

General Coating Category	Proposed PWMIR Limit (g O ₃ /g Product)	
	Initial	Revised
Clear Coating	0.80	0.85
Flat Paint Product	0.80	0.80
Fluorescent Coating	0.80	1.30
Metallic Coating	1.20	1.25
Nonflat Paint Product	0.80	0.95
Primer	0.60	0.70

Proposed Effective Date of 1/1/2017

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Proposed Reactivity Limits (Cont.)

Specialty Coatings (A)	Proposed PWMIR Limit (g O ₃ / g Product)	
	Initial	Revised
Auto Body Primer	0.95	0.95
Ground Traffic/Marking Coating	0.80	0.85
Exact Match Finish: Automotive/Engine/Industrial	0.90	0.95

Proposed Effective Date of 1/1/2017

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Proposed Reactivity Limits (Cont.)

Specialty Coatings (A)	Proposed PWMIR Limit (g O ₃ / g Product)	
	Initial	Revised
Electrical/Electronic/Conformal	2.00	2.00
Flexible Coating	1.60	1.60
Mold Release Coating	1.10	1.10
Uniform Finish Coating	1.30	1.30

Proposed Effective Date of 1/1/2017

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Categories with Proposed 'Cap' Limits

Art Fixatives or Sealant	Pleasure Craft Finish Primer/ Surfacer/Undercoater
Automotive Bumper and Trim Product	Pleasure Craft Topcoat
Aviation or Marine Primer	Polyolefin Adhesion Promoter
Aviation Propeller Coating	Shellac Sealer
Corrosion Resistant Brass, Bronze, or Copper Coating	Slip-Resistant or Non-Slip Grip Coating
Floral Coating	Spatter/Multicolor/ Stucco Coating
Glass Coating	Vinyl/Fabric/Leather/ Plastic Polycarbonate Coating
High Temperature Coating	Webbing/Veiling Coating
Hobby/Model/Craft Coating:	Weld-Through Primer
Enamel	Wood Stain
Lacquer	Wood Touch-Up/Repair/ Restoration Coating
Clear or Metallic	
Marine Spar Varnish	
Photograph Coating	

Proposed effective date of 1/1/2015

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Section 94522, Sell-Through

- ❑ Proposing to align provisions with Consumer Products Regulation
 - Provisions for multi-unit packages
 - Notification requirements for products sold during sell-through period

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Section 94522(i), Assignment of MIR Values

- Proposing to assign MIR Values as follows:
 - “Coating Solids,” “Extenders,” and “Plasticizer” are assigned a MIR value of 0.0
 - Antimicrobial Compounds,” or “Fragrance” in amounts of up to 0.25 % by weight assigned a MIR value of 0.0
 - Any fragrance amount >0.25 % by weight shall use the MIR value for terpinolene (6.36)
 - Compound not listed
 - If isomer listed, MIR value for listed isomer shall be used
 - If more than one isomer listed, highest MIR shall be used
 - For ROC not listed in the Table of MIR values, the MIR value for 1,2,3,-trimethyl benzene (11.97) shall be used

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Section 94522, Assignment of MIR Values (Cont.)

- Other proposed MIR provisions
 - Values will be good until at least January 1, 2020
 - 2010 MIR values shall begin being used 30 days after filing the amendments with the Secretary of State
 - Reorganize “Oxygenated Organics” section of the Table of MIR values (section 94700)

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Section 94523, Exemptions

- ❑ Proposing to delete exemptions for
 - Electrical Coatings
 - Mold Release products

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Section 94524, Administrative Requirements

- ❑ Clarify that manufacturer is responsible for labeling products with coating category and limit
- ❑ Proposing modifications to the product dating requirements to align with Consumer Products Regulation
 - Date code options
 - Multi-unit packages
- ❑ Proposing to clarify the types of data to be reported

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Section 94526, Test Methods

- ❑ Proposing to expand Test Methods section to include compliance verification processes
- ❑ Proposing modifications, clarifications, and additions to the analytical/compliance process
 - Increase the number of days from 10 to 20 days to supply formulation data
 - Clarify what constitutes formulation data
 - Clarify that incorrect formulation data or providing no data are violations
 - Require initial filing of contact information for Responsible Party and update when changed

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Section 94526, Test Methods

- ❑ CARB Method 310 is primary method to verify compliance
 - New Hydrocarbon Solvent(s) analysis method will be part of Method 310
 - Analytical results will override if in conflict with formulation data
- ❑ Specify MIR values to be applied to results of Hydrocarbon Solvent(s) analysis

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Section 94526, Test Methods and Compliance Verification (Cont.)

Proposed MIR Values for Hydrocarbon Solvent Fraction

Hydrocarbon Solvent Fraction	MIR Value (October 2, 2010)
<i>Alkanes</i>	
Alkane(s) containing 5 carbons	1.45
Alkane(s) containing 6 carbons	1.27
Alkane(s) containing 7 carbons	1.41
Alkane(s) containing 8 carbons	1.27
Alkane(s) containing 9 carbons	1.09
Alkane(s) containing 10 carbons	0.90
Alkane(s) containing 11+ carbons	0.66
<i>Aromatic Compounds</i>	
Xylene isomers, Ethyl benzene	7.64
Aromatics containing 9 carbons	7.99
Aromatics containing C10+carbons	6.95

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Hairspray Credit Program Proposed Amendments

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Hairspray Credit Program Regulation

- ❑ Proposing to rescind because no longer applicable (sections 94560-94575)
- ❑ Rationale:
 - Regulation to provide incentive for early or over-compliance with 55% VOC Hair Finishing Spray standard
 - January 1, 2005: Ability to generate credits expired
 - No applications received for Hairspray Emission Reduction Credits (HERC)
 - January 1, 2010: Ability to use HERCs expired

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Ongoing Work

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State Implementation Plan (SIP)

- ❑ U.S. EPA set 8-hour Ozone Standard of 0.075 ppm in 2008
- ❑ Expect to submit SIP for the 8-hour Ozone Standard in 2015

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Low Vapor Pressure Volatile Organic Compound (LVP-VOC) Research

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ARB LVP-VOC Research

- ❑ Two research projects are planned by ARB to start in July-August of this year.
- ❑ Proposals are currently being reviewed by the Research Screening Committee (RSC) of ARB.
- ❑ The proposals will be presented to the RSC for approval on May 17, 2013.
- ❑ If approved by the RSC, the proposals will be presented in the ARB Board meeting in June for Board approval.

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Air Quality Impacts of LVP-VOCs

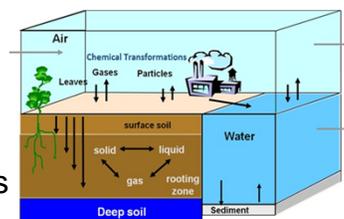
- ❑ PI: Dr. David Cocker from UC Riverside
- ❑ Proposed funding: \$400,000
- ❑ Tasks:
 - Laboratory measurements of the volatilization rates of LVP-VOCs
 - Environmental chamber studies of ozone and SOA impacts of LVP-VOCs



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Environmental Fate of LVP-VOCs from Consumer Products: a Modeling Approach

- ❑ PI: Dr. Deborah Bennett from UC Davis
- ❑ Proposed funding: \$200,000
- ❑ Tasks:
 - Development of multimedia mass balance model for LVP-VOCs
 - Apply the multimedia environmental fate model to determine the fraction of emitted LVP-VOCs that is available for potential formation of ozone



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Schedule

- ❑ May 17 – RSC Meeting
- ❑ June 27/28 – Funding Resolution to Board
- ❑ July 1 – start of 2013-2014 fiscal year
- ❑ Late July, early August – contracts approved
- ❑ Conference call approximately 1 month after contract start date – Kick-off meetings at which PIs will present work plans. Discussion of role of Technical Advisory group.

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Research Division Contacts

- ❑ Dr. Jin Xu, jxu@arb.ca.gov, 916-327-1511
- ❑ Dr. Eileen McCauley, emccaule@arb.ca.gov, 916-323-1534

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Proposed Changes To ARB Test Method 310

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Proposed Changes to Method 310

- ❑ Update analytical procedures for:
 - Fabric Softener-Single Use Dryer Products
 - Aerosol Coatings
 - Paint Thinner and Multi-purpose Solvent products sold in SCAQMD

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Schedule

- ❑ Asking for comments on proposal by May 8, 2013
 - Send Comments to:
 - Irina Malkina imalkina@arb.ca.gov
- ❑ Board Meeting July 26, 2013, Sacramento
 - 45-Day Notice June 7, 2013

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