



# Proposed Amended Rule 1115 Motor Vehicle Assembly Line Coating Operations

**Public Workshop**  
January 6, 2022  
1:00 PM

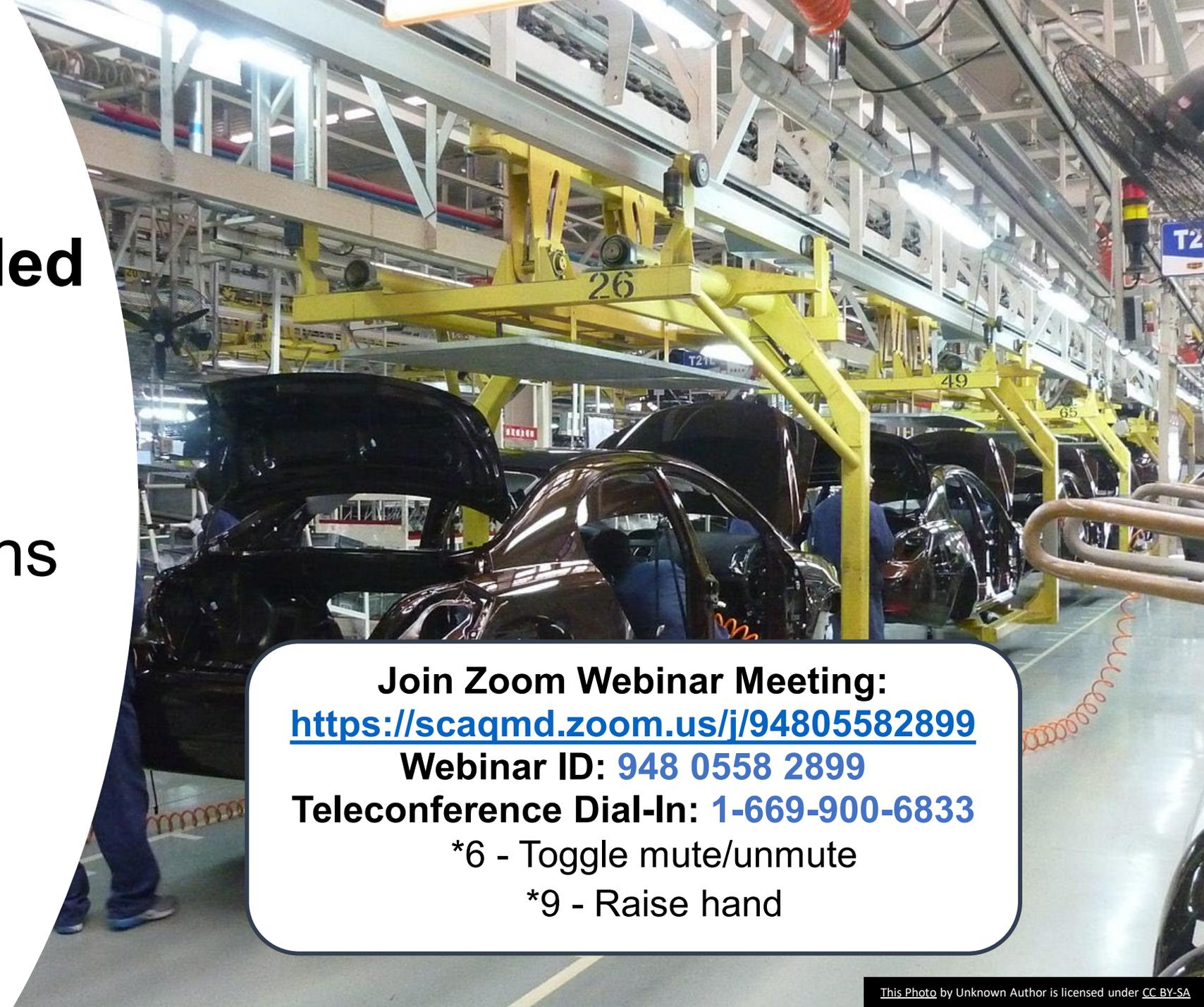
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# Agenda

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- Rule 1115 Background
- Reasonable Available Control Technology (RACT) Assessment
- Evaluation of Current Operations
- Proposed Amended Rule Language
- Impacts of PAR 1115
- Next Steps

# Rule 1115 Background

# Purpose and Applicability

- Purpose
  - To reduce Volatile Organic Compound (VOC) emissions from coating operations conducted on motor vehicle assembly lines
- Applicability
  - Coatings used in the assembly operations
  - Assembly line operations, both automatic and manual means
  - Does not apply to Rule 1151 operations – *Motor Vehicle and Mobile Equipment Non-Assembly Line Coating Operations*

# Regulatory History

- Adopted March 2, 1979
- Amended six times
- Last amended May 12, 1995
  - Reduced VOC limits to be in line with applicable CTG limits at the time as prepared by the U.S. EPA
  - Added the requirement to use U.S. EPA's "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operation"
  - Added U.S. EPA approved capture and control efficiency source test method

# RACT Assessment

# Changes to Ozone National Ambient Air Quality Standard

Changes to the Ozone National Ambient Air Quality Standard has prompted Rule 1115 to undergo a Reasonable Available Control Technology (RACT) assessment



# Reasonable Available Control Technology Assessment

- Purpose of a RACT demonstration is to review, and where applicable, update existing regulations to meet current state of the science and emission controls
- Compares existing South Coast AQMD rules with guidelines established by U.S. EPA and with similar regulations from other air agencies
- South Coast AQMD Rule 1115 was identified as not meeting RACT
  - An updated Control Techniques Guidelines (CTG) for Automobile and Light-Duty Truck Assembly Coatings was issued by U.S. EPA in 2008 and contains more stringent requirements than Rule 1115

# Comparison of Emission Limits

- U.S. EPA's 2008 CTG for Automobile and Light-Duty Truck Assembly Coatings

Category	U.S. EPA 2008 CTG			South Coast AQMD Rule 1115
	When solids turnover ratio ( $R_T$ ) > 0.16:	When $0.040 < R_T < 0.160$ :	When $R_T < 0.040$ :	No reference to turnover ratio
Electrodeposition primer (EDP) operations	0.7 lb/gal coating solids applied	$0.084 \times 350^{0.160 - R_T} \times 8.34$ lb/gal coating solids applied	No VOC emission limit	1.2 lb/gal of coating, less water and less exempt compounds

# Comparison of Emission Limits (continued)

Category	U.S. EPA 2008 CTG	South Coast AQMD Rule 1115
Primer-surfacer operations (including application area, flash-off area, and oven)	12.0 lbs VOC/gal deposited solids on a daily weighted average basis	15.0 lbs VOC/gal deposited solids
Topcoat operations (including application area, flash-off area, and oven)	12.0 lb VOC/gal deposited solids on a daily weighted average basis	15.0 lbs VOC/gal deposited solids
Final repair operations	4.8 lb VOC/gallon of coating less water and less exempt solvents on a daily weighted average basis or as an occurrence weighted average	4.8 lb VOC/gallon of coating less water and less exempt solvents
Combined primer-surfacer and topcoat operations	12.0 lb VOC/gal deposited solids on a daily weighted average basis	N/A

# Comparison of Emission Limits (continued)

## U.S. EPA 2008 CTG

VOC Content Limits for Miscellaneous  
Materials Used at Motor Vehicle  
Assembly Coating Operations

Rule 1115 currently **does not** have limits for  
miscellaneous materials

Material	VOC Emission Limit lb/gal
Glass Bonding Primer	7.5
Adhesive	2.1
Cavity Wax	5.4
Sealer	5.4
Deadener	5.4
Gasket/Gasket Sealing Material	1.7
Underbody Coating	5.4
Trunk Interior Coating	5.4
Bedliner	1.7
Weatherstrip Adhesive	6.3
Lubricating Wax/Compound	5.8

# Comparison of Emission Limits (continued)

## Summary of Rule 1115 Deficiencies

1. Not as stringent as U.S. EPA CTG emission limits for multiple categories
2. Does not contain limits for miscellaneous materials used at motor vehicle assembly coating operations

# Evaluation of Current Operations

# Universe of Affected Facilities

- ❖ Staff identified nine facilities subject to Rule 1115
  - Amrep
  - El Dorado National
  - Fortress Resources, Royal Truck Bodies
  - Harbor Truck Bodies
  - Karma Automotive, Inc
  - Marathon Industries, Inc
  - Spartan Motors GTB
  - TABC, Inc
  - Taylor Dunn Manufacturing
- ❖ Facilities represent automatic and manual assembly line processes
- ❖ Higher volume facilities equipped with air pollution controls (i.e. thermal oxidizers)



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# Coatings in Current Use

Staff visited individual sites and observed:

- Current coatings used by facilities would comply with the U.S. EPA 2008 CTG
- Coatings are not single-sourced but manufactured by various vendors offering options to select material compliant under U.S. EPA 2008 CTG
- Large volume facilities are equipped with exhaust emissions control equipment to reduce overall VOC emissions
  - Use of emissions control equipment can be used to comply with VOC coating limits

Autocoat BT

North America Programmed System Technique (PST)  
Topcoat  
02/11/2020

## Topcoat

LV650 Topcoat is a state of the art, high performance, two-component high solids polyurethane single stage for original equipment and repairs of commercial vehicles. LV650 Topcoat provides easy application; good flow with superior gloss and durability. The ready to spray VOC is <3.5 lb/gal when reduced with the LV650 Reducers or <2.8 lb/gal when reduced with the LV650 Reducer Exempt or CV Exempt Reducer.

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**Safety Considerations**

- Use suitable personal protection.
- When exposed to paint or solvents AkzoNobel recommends the use of a fresh air supply respirator

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**Suitable Surfaces**

- Existing Finishes – Degreased, sanded with #P320 to #P400 grit paper dry, then cleaned.

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**Mix** **By Volume**

100 Parts LV650 Topcoat	10 Parts LV650 Hardener
40 Parts LV650 Reducer	Parts LV650 Reducer Medium, Slow, Extra Slow, Exempt, or CV Exempt Reducer
25	✓ Mix together thoroughly

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**Spray-Gun Set-Up:**

- 1.0 – 1.2mm HVLP Pressure Feed
- 1.2 – 1.4mm HVLP Gravity
- 10 – 14 ounces / minute fluid delivery.
- HVLP – 10 psi (<0.7 bar) at cap maximum.
  - Consult manufacturer specifications.

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**Application**

- Apply two single flowing coats (or until covered).
  - For metallic or effect colors increase gun distance by 3–4 inches on the second coat.

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**Flash Between Coats at 70°F (21°C)**

- Solid Colors – 5 minutes
- Metallic Colors – 15 to 20 minutes

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	LV650 Topcoat	With SuperTop Accelerator
<b>Dry to Handle at 70°F (20°C)</b>	24 hours	1 hour
<b>Dry to Handle at 100°F (38°C)</b>	2-½ hours	30 minutes
<b>Dry to Handle at 140°F (60°C)</b>	1 hour	20 minutes

Read the complete TDS and the product Safety Data Sheet (SDS) for detailed product information.

# Proposed Rule Language

# Proposed Rule Language Overview

Proposed rule amendments include:

- Harmonization with U.S. EPA 2008 CTG emission limits for coatings and miscellaneous materials used at motor vehicle assembly coating operations
- Additions and/or updates to definitions of terms
- Transfer efficiency requirements
- Updates to record keeping provisions
- Elimination of exemptions that are no longer applicable

## Proposed Rule Language (a) and (b) – Purpose and Applicability

- PAR 1115 separates Purpose and Applicability into two subdivisions, consistent with the format in current use for other South Coast AQMD source-specific rules

# Proposed Rule Language (c) – Definitions

PAR 1115 provides new and updated definitions:

- New definitions not previously included in the rule but now included because of provisions incorporated from the U.S. EPA 2008 CTG
- Updates to existing definitions, based on the U.S. EPA 2008 CTG
- Updates to existing definitions, based on other South Coast AQMD source-specific rules
- New definitions for terms contained in the rule but not previously defined

# Proposed Rule Language (d) - Requirements

PAR 1115 incorporates U.S. EPA 2008 CTG limits

- Establishes Electrodeposition Primer limit based on solids turnover ratio ( $R_T$ )
- Reduces emission limits for Primer-Surfacer and Topcoat operations from 15.0 lbs of VOC per gallon of solids deposited to 12.0 lbs of VOC per gallon of solids deposited
- Establishes emission limits for miscellaneous materials
- No change in emission limit for final repair operations

# Proposed Rule Language (d) – continued

Assembly Coating Process	VOC Emission Limit		
Electrodeposition Primer operations (including application area, spray/rinse stations, and curing oven)	When Solids Turnover Ratio ( $R_T$ ) $\geq 0.16$	When $0.040 \leq R_T < 0.160$	When $R_T < .040$
	0.7 lb/gal of solids deposited	$0.084 \times 350^{0.160 - R_T} \times 8.34$ lb/gal of solids deposited	No VOC emission limit
Primer-Surfacer operations (including application area, flash off area, and oven)	12.0 lb VOC/gal of solids deposited		
Topcoat operations (including application area, flash-off area, and oven)	12.0 lb VOC/gal of solids deposited		
Combined Primer-Surfacer and Topcoat operations	12.0 lb VOC/gal of solids deposited		
Final Repair operations	4.8 lb VOC/gal of Coating less water and less exempt solvents		

# Proposed Rule Language (d) – continued

Material	VOC Emission Limit, as applied lbs/gal
Glass Bonding Primer	7.5
Adhesive	2.1
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# Proposed Rule Language (d) - continued

PAR 1115 includes new requirements for transfer efficiency:

- ❖ To apply coatings, one of the following methods shall be used:
  - electrostatic application
  - high-volume, low-pressure (HVLP) spray
  - brush, dip, or roller
  - spray gun application, provided the owner or operator demonstrates that the spray gun meets the HVLP definition
  - any other approved application methods that is HVLP equivalent
  
- ❖ Application equipment operated according to manufacturer's recommended procedures and in compliance with any applicable permit conditions



# Proposed Rule Language (e) – Recordkeeping

PAR 1115 updates recordkeeping requirements:

❖ Recordkeeping for VOC Emissions

- Maintain records of automotive coating to demonstrate compliance with emission limits
- Include the following information:
  - material name and manufacturer
  - current manufacturer specification sheets
  - safety data sheets
  - technical data sheets, or air quality data sheets, which list the actual VOC and regulatory VOC
  - automotive coating components
  - VOC content for each solvent

❖ Recordkeeping for Emission Control Systems

An operator using an emission control system shall maintain records of key system operating parameters

# Proposed Rule Language (f) – Methods of Analysis

PAR 1115 includes a method to determine transfer efficiency, for equipment that needs to demonstrate HVLP equivalency:

- South Coast AQMD method "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989," and
- South Coast AQMD "Guidelines for Demonstrating Equivalency With District Approved Transfer Efficiency Spray Gun September 26, 2002."

# Proposed Rule Language (h) – Exemptions

- General exemption for other coating operations removed because of inclusion of miscellaneous coatings in U.S. EPA 2008 CTG
- PAR 1115 eliminates exemptions from emission limits for the following coatings, consistent with the U.S. EPA 2008 CTG:
  - Trunk Coatings
  - Interior Coatings
  - Sealers and Deadeners
  - Accent and Stripe Coatings

# Impacts of PAR 1115

# Expected Costs

- No additional costs expected
- Current coatings available in the market compliant to proposed amended limits
- HVLP-compliant spray equipment available in the market

# California Environmental Quality Act (CEQA)

- The proposed project (PAR 1115) does not have any project elements requiring physical modifications that would cause a significant adverse effect on the environment.
- The proposed project is exempt from CEQA and a Notice of Exemption will be prepared pursuant to:
  - CEQA Guidelines Section 15061 (b)(3) – Common Sense Exemption, which exempts activities where it can be seen with certainty that there is no possibility that the activities may have a significant adverse effect on the environment

# Socio

## □ California Health and Safety Code Section 40440.8

Requires socioeconomic impact assessment for proposed rule or rule amendment which “will significantly affect air quality or emissions limitations”

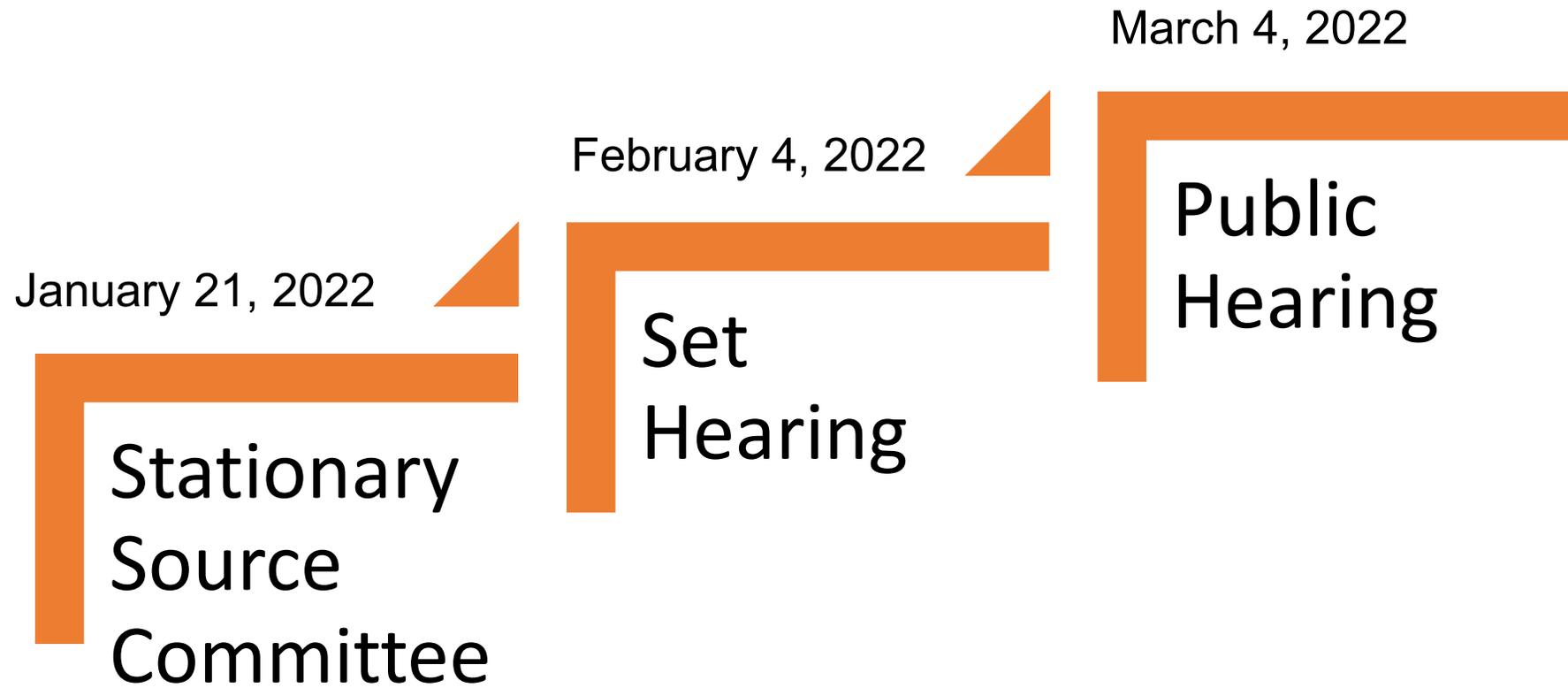
Socioeconomic impact assessment shall consider:

1. Type of affected industries, including small businesses
2. Range of probable costs, including costs to industry or business
3. Impact on employment and regional economy

No adverse socioeconomic impacts are anticipated from proposed amendments to Rule 1115

# Next Steps

# Next Steps



# Contacts

Please contact the following South Coast AQMD staff members with any questions or comments



## PAR 1115 Questions

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Additional information for rules that are actively in rule development or have recently been proposed and/or amended can be accessed at:  
<http://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/proposed-rules#>