

California Environmental Protection Agency  
**Air Resources Board**

Airborne Toxic Control Measure for Chromium  
Plating and Chromic Acid Anodizing Facilities  
Public Workshop  
Sacramento

January 10, 2013

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## Overview

- Background
- Chrome Plating Inventory
- Existing ATCM Requirements
- U.S. EPA Chrome Plating NESHAP
- Proposed Regulatory Concepts
- Issues
- Next Steps



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## Background

- In 1988 ARB adopted the Hexavalent Chromium Airborne Toxic Control Measure (ATCM)
  - Reduced emissions from facilities by 95 percent, and for largest facilities by 99 percent
- Amended regulation in 2006 to further address near source risk
  - Required best available control technology, more stringent emission limits, and certified fume suppressants for certain facilities
  - Resulted in over 90 percent of facilities having cancer risk of less than 10 per million



## California Chrome Plating Inventory

- 186 facilities
  - Decorative: about 50 percent
  - Hard: about 25 percent
  - Anodizing, trivalent, and mixed: about 25 percent
- Facility locations
  - About 75 percent located in South Coast
  - About 10 percent located in Bay Area
  - Remaining 15 percent located in seven air districts



## ATCM Requirements Existing Facilities

Distance	Ampere-Hour	Emissions Limitation
≤ 330 feet	≤ 20,000	Use of specific chemical fume suppressants
≤ 330 feet	> 20,000	0.0015 mg/amp-hr with add-on control
> 330 feet	≤ 50,000	Use of specific chemical fume suppressants
> 330 feet	> 50,000 and ≤ 500,000	0.0015 mg/amp-hr
> 330 feet	> 500,000	0.0015 mg/amp-hr with add-on control



## ATCM Requirements New Facilities

- Emission limit of 0.0011 mg/amp-hr
- HEPA add-on air pollution control device
- Cannot operate within 1000 feet of:
  - Area zoned residential or mixed use
  - School or school under construction
- Must conduct a site-specific risk analysis



## ATCM Requirements Modified Facilities

- Emission limit of 0.0015 mg/amp-hr
- Add-on air pollution control device
- Must conduct a site-specific risk analysis if emissions are expected to exceed 15 grams/yr



## Other ATCM Requirements

- Surface tension limits
  - Cannot exceed 45 dynes/cm (stalagmometer)
  - Cannot exceed 35 dynes/cm (tensiometer)
- Monitoring and recordkeeping
- Housekeeping
- Training every two years
- Performance test



## U.S. EPA Chrome-Plating NESHAP

- Adopted in September 2012
- Major requirements
  - More stringent emission limits
    - Vary based on facility size and type of facility
  - Allows facilities to meet emission limits OR surface tension limits
  - More stringent surface tension requirements
    - 40 dynes/cm (stalagmometer) or 33 dynes/cm (tensiometer)
    - New and modified sources must comply at start-up
    - Existing sources must comply by September 19, 2014
  - PFOS phase-out
    - New and modified sources must comply at start-up
    - Existing sources must comply by September 21, 2015



## Proposed ATCM Amendments

- Phase-out of PFOS
  - Environmental benefit
  - FS manufacturers would need to go through ARB certification program
    - Certified FS only required for certain categories of chrome plating
- Align surface tension limits with U.S. EPA
  - Current ATCM specifies limit of 45 dynes/cm (stalagmometer), 35 dynes/cm (tensiometer)
  - U.S. EPA specifies limit of 40 dynes/cm (stalagmometer), or 33 dynes/cm (tensiometer)



## Proposed ATCM Amendments

- 93102.3: Add definition for PFOS
- 93102.4, 93102.8, 93102.9, 93102.12: Change limits to 40 dynes/cm (stalagmometer) and 33 dynes/cm (tensiometer)
  - beginning September 19, 2014 (existing facilities)
  - upon start-up (new or modified facilities)
- 93102.8: Revise table of approved FS and revise language to prohibit use of PFOS
  - beginning September 21, 2015 (existing facilities)
  - upon start up (new or modified facilities)
- Other minor changes may be needed for equivalency



## Issues

- Availability of non-PFOS FS
  - Non PFOS FS used in Europe and other states
    - U.S. EPA determined new surface tension limits can be met with non-PFOS FS
    - Staff is currently working with FS manufacturers to determine non-PFOS availability and surface tension limits
- ARB Certification Program
  - FS manufacturers will need to conduct testing to meet the 0.01 mg/amp-hr for non-PFOS products
  - Currently no non-PFOS FS manufacturers have been certified by ARB or South Coast Air Quality Management District



## Issues (Con't)

- Implementation costs
  - Possible minor cost increase to meet new surface tension limits
  - Possible minor cost increase in the cost of non-PFOS FS
  - Possible minor cost increase to certify new FS
- Environmental Impacts
  - No adverse environmental impacts identified



## Next Steps

- Continue to work with FS manufacturers on the availability of non-PFOS FS and ability to meet new surface tension limits
- Taking comment from industry and other interested parties on proposed amendments
- Develop specific regulatory language
- March 2013 – workshop as needed
- Summer 2013 - Board consideration
- Followed by equivalency submittal to U.S. EPA



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Chrome plating web pages - <http://www.arb.ca.gov/toxics/chrome/chrome.htm>  
From the webpage, join the email list serve to get important notices and updates

