Overview of SCAQMD Rules Affecting Metal Finishing and Plating

February 1, 2018

Sustainable Business Symposium for Metal Finishers

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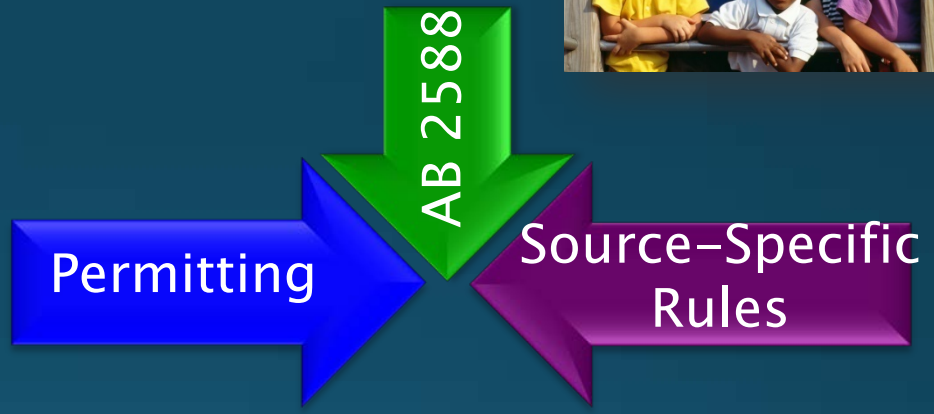
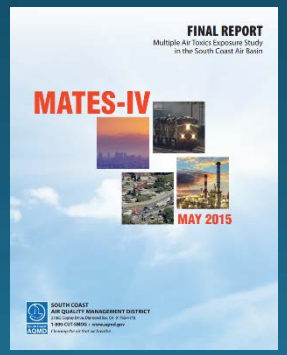
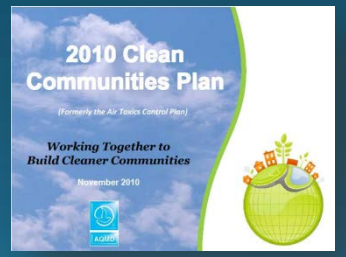
SCAQMD's Approach to Reducing Public Risk from Air Toxics

- #1 Objective: Protect public health
- Multifaceted Regulatory Approach
- Comprehensive
- Technology and Science Based
- Consideration of business impacts







Environmental Justice Initiatives

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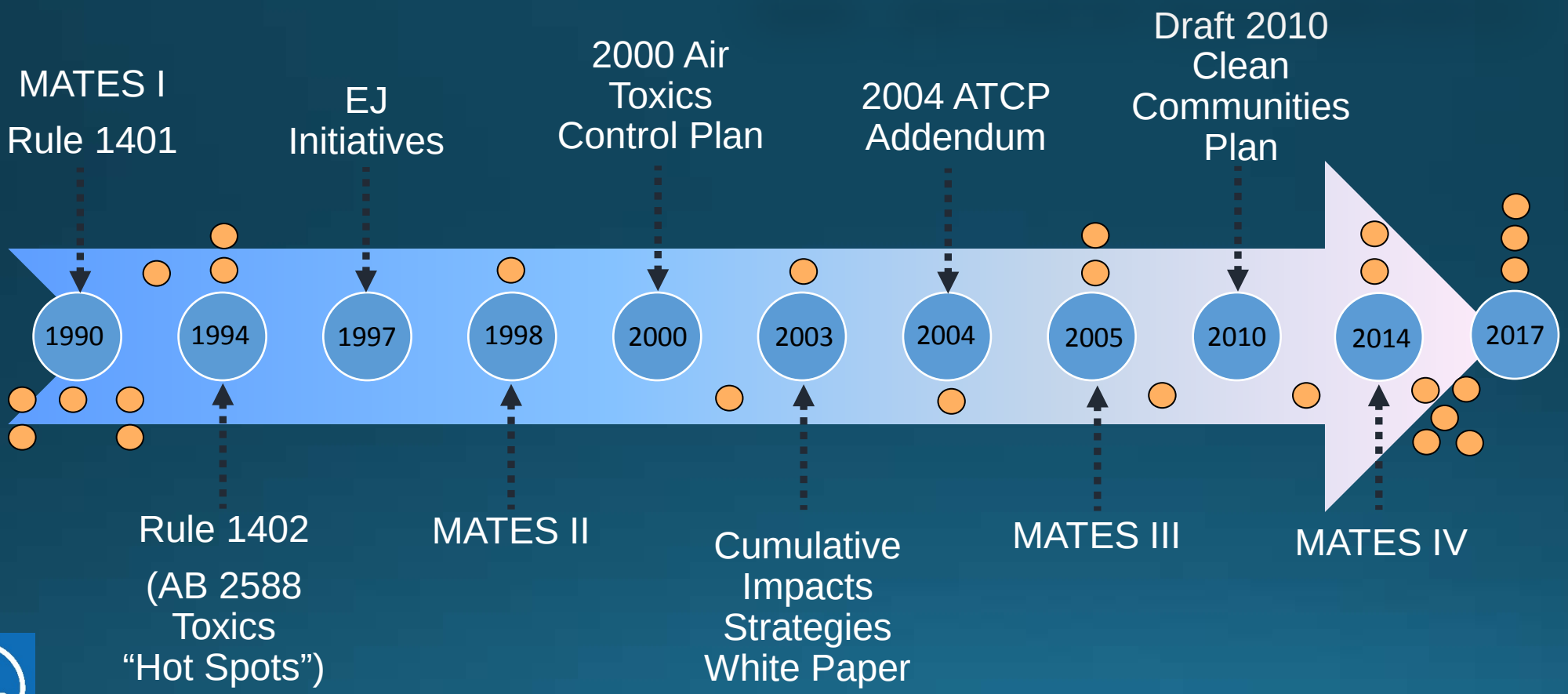
SCAQMD's Air Toxics Program



● Represents adoption of a stationary source-specific toxic rule

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Recent SCAQMD Rulemaking for Metal Finishing and Plating

Rule 1430 – Control of Emissions from Metal Grinding Operations at Metal Forging Facilities

- Adopted March 3, 2017

Rule 1420 – Emissions of Lead

- Amended November 3, 2017

Proposed Amended Rule 1469 – Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations

- Scheduled for Adoption on April 6, 2018

Proposed Amended Rule 1407 – Control of Emissions from Arsenic, Cadmium and Nickel from Non-Ferrous Metal Operations

- Proposal anticipated in 3rd Quarter of 2018

Proposed Rule 1435 – Control of Emissions from Metal Heat Treating Processes

- Proposal anticipated in 4th Quarter of 2018

Proposed Rule 1445 – Control of Toxic Emissions from Laser Arc Cutting

- Proposal anticipated in 4th Quarter of 2018

Proposed Amended Rule 1426 – Emissions from Metal Finishing Operations

- Proposal anticipated in 4th Quarter of 2018

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Recently Adopted Rule for Metal Finishing – Rule 1430

- Prohibition on grinding and cutting operations in the open air beginning March 3, 2017
- Grinding Operations to be conducted within a building enclosure
  - September 3, 2017 if upgrading existing building used for grinding/cutting
  - March 3, 2018 if building a new structure
- Total Enclosure with Negative Air required if facility is:
  - Within 300 feet of a sensitive receptor, or
  - Within 1,000 feet of a school
- Vent Grinding Operations to Emission Controls
- Housekeeping Requirements
- Odor Contingency Measures

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Metal Plating Rules in Development – Proposed Amended Rule (PAR) 1426

- **Purpose** – Information gathering rule for metal finishing/plating operations; housekeeping practices for nickel, cadmium lead and copper storage, handling, and transport
- **Applicability –** Chromium, nickel, cadmium, lead or copper electroplating operations, or chromic acid anodizing; process tanks containing sulfuric acid, nitric acid, hydrochloric acid, and sodium hydroxide
- **Affected Sources** – Approximately 180 identified
- **Industry Description –** Facilities that conduct electroplating and anodizing for decorative purposes, electroforming, electronics, and aerospace
- **Proposed Concepts** – Considerations for emissions control of nickel, cadmium, lead, and/or copper electroplating operations; best management practices

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Metal Plating Rules in Development – PAR 1469

- **Purpose** – Control hexavalent chromium emissions from chromium electroplating and chromic acid anodizing operations
- **Applicability** – Facilities performing chromium electroplating or chromic acid anodizing
- **Affected Sources** – 117 facilities
- **Industry Description** – Products for aerospace/defense, automotive, electronics, fixtures, and machinery/industrial equipment
- **Current Requirements** – Requires controls, housekeeping, and best management practices for chromium electroplating and chromic acid anodizing tanks

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PAR 1469 – Background

- Elevated ambient hexavalent chromium levels near some Rule 1469 facilities were also found to be attributed to building openings and cross-draft conditions
- Emissions testing showed that certain tanks that were not currently regulated used in the process, can be a significant source of hexavalent chromium emissions depending on the:
  - Hexavalent chromium concentration in the bath and
  - Operating conditions such as temperature and mixing technique
- An example is the heated dichromate seal tanks

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Key Proposed Amendments to PAR 1469

- Requirements for Tier II Hexavalent Chromium-Containing Tanks*
  - Add-on Air Pollution Controls
  - Emission Standards
- Building Enclosures
- Enhanced Housekeeping and Best Management Practices
- Periodic Source Testing
- Additional Parameter Monitoring of Add-on Air Pollution Controls
- Hexavalent Chromium Phase-Out Plan
- Enhanced Certification Process for Chemical Fume Suppressants

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*tank with a specific hexavalent chromium concentration that is electrolytic, air sparged, and/or heated to a specific temperature that leads to hexavalent chromium emissions

Hexavalent Chromium Phase-Out Plan

- Facilities committing to eliminate or reduce hexavalent chromium concentrations from Tier II Tanks can submit a phase out plan to SCAQMD for approval
- Facilities with approved plans will not be subject to requirements to install add-on air pollution controls if increments of progress are met
- Implementation of the plan must be completed within 2 years of plan approval
- Facilities that are unable to eliminate or reduce emissions according to the approved plan must comply with an accelerated timeline to install add-on air pollution controls for the subject tank

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OEHHA Toxicity Reviews of non-PFOS Chemical Fume Suppressants

- 2012 federal NESHAP for chrome plating banned the use of chemical fume suppressants containing perfluorooctonate sulfonate (PFOS)
- Rule 1469 requires the use of chemical fume suppressants certified by CARB
  - Since September 2016, CARB and SCAQMD has certified 4 non-PFOS fume suppressants which are currently in use at some facilities
- OEHHA conducted toxicity reviews of the non-PFOS chemical fume suppressants which show potential to produce adverse impacts in children
- Environmental and community groups have recently examined the OEHHA toxicity reviews and are requesting that PAR 1469 include requirements to phase out the use of the non-PFOS chemical fume suppressants
- The scope of PAR 1469 was recently broadened to include considerations for a potential phase out of the non-PFOS chemical fume suppressants

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Certification Process for Chemical Fume Suppressant

- Beginning July 1, 2022, facilities shall only use chemical fume suppressants that are certified through a new process conducted by SCAQMD and CARB
- New certification process may consider factors such as:
  - Toxicity reviews of chemicals contained in chemical fume suppressants
  - Emission rate of chemical fume suppressant
  - Additional hexavalent chromium emissions testing
- SCAQMD will notify facilities no later than July 1, 2020 of the availability of chemical fume suppressants that are rule-compliant
- If notification indicates that a rule-compliant chemical fume suppressant will not be available by July 1, 2022, facilities will be required to:
  - Implement air pollution control techniques by July 1, 2022 to meet emission limits; or
  - Submit to the SCAQMD no later than January 1, 2021, a written and signed commitment to phase out the use of hexavalent chromium in the subject tank by July 1, 2023

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SCAQMD Rules
1426, 1430, 1435, 1469

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For additional information, go to http://www.aqmd.gov/home/rules-compliance/rules/proposed-rules