

Metal Processing Facilities

Background

Metal processing facilities include a wide variety of operations such as metal finishing (e.g., plating, anodizing, metal spray coating), heat treating, plasma arc cutting, and other operations. These facilities produce parts that are commonly used in the automotive, aerospace, oil and gas, and other industries. There are 16 metal processing facilities in the East Los Angeles, Boyle Heights, West Commerce community. Certain operational activities at these facilities can be sources of toxic metal emissions.

Nine of the 16 metal processing facilities within the East Los Angeles, Boyle Heights, West Commerce community are metal finishing facilities. An example of the type of metal finishing

facilities that can be found in the East Los Angeles, Boyle Heights, West Commerce community is decorative chromium electroplating (or decorative chromium plating). One of the key processes at these facilities is placing parts into industrial baths that contain chromic acid (“chromium tanks”). A thin layer of chromium metal (measured in millionths of an inch) is deposited on the part, resulting in a decorative and protective metal finish (Figure 5-1). Examples of parts that are processed at these decorative chromium plating facilities include furniture parts, bathroom fixtures (e.g., handles, and faucets), and automotive bumpers and wheels. Decorative chromium plating facilities are subject to South Coast AQMD Rule 1469, which includes

provisions for reducing hexavalent chromium emissions from tanks used for decorative chromium electroplating. The rule also requires building enclosures, housekeeping, and best management practices that minimize the release of fugitive hexavalent chromium emissions. Other metal emissions (e.g., nickel and cadmium) from these facilities are addressed by South Coast AQMD Rule 1426. Additional information on metal processing facilities are available in the Appendix [available in the next draft release].

Figure 5d-1: Chrome Plated Car Parts



Community Air Quality Priority – Reduce Exposure to Fugitive Emissions

The East Los Angeles, Boyle Heights, West Commerce CSC identified exposure to fugitive emissions from metal processing facilities as a community air quality priority. To address this

priority, the CSC identified actions that could be effective at reducing the community's exposure to fugitive emissions from metal processing facilities, such as:

- Pursuing air monitoring and focused enforcement;
- Pursuing incentives for emission controls that reduce fugitive metal emissions; and
- Providing outreach to workers, business owners (especially small business owners), trade organizations, and community members about air quality and land use regulations that affect metal processing facilities.

Ongoing Efforts

South Coast AQMD has a set of existing rules to address toxic metal emissions from metal processing operations. Many of these rules include requirements for air pollution controls, building enclosures, and housekeeping practices. A list of the rules is provided below.ⁱ

- Rule 1407 – Control of Emissions of Arsenic, Cadmium, and Nickel from Non-Ferrous Metal Melting Operations
- Rule 1420 – Emission Standard for Lead
- Rule 1420.1 – Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead Acid Battery Recycling Facilities
- Rule 1420.2 – Emission Standards for Lead from Metal Melting Facilities
- Rule 1426 – Emissions from Metal Finishing Operations
- Rule 1430 – Control of Emissions from Metal Grinding Operations at Metal Forging Facilities
- Rule 1469 – Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations
- Rule 1469.1 – Spraying Operations Using Coatings Containing Chromium

Additionally, South Coast AQMD staff is currently working to develop new rulesⁱⁱ and amend existing rules that cover metal processing facilities, including:

- Proposed Amended Rule 1407 – Control of Emissions of Arsenic, Cadmium, and Nickel from Non-Ferrous Metal Melting Operations;
- Proposed Rule 1407.1 – Emissions of Toxics Air Contaminants from Chromium Alloy Melting Operations;
- Proposed Amended Rule 1426 – Reduction of Toxic Air Contaminants from Metal Finishing Operations;

ⁱ These rules are available at: <http://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/regulation-xiv>.

ⁱⁱ The latest updates for these rule development activities are available at: <http://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/proposed-rules>.

- Proposed Amended Rule 1430 – Control of Emissions from Metal Grinding Operations at Metal Forging Facilities;
- Proposed Rule 1435 – Control of Emissions from Metal Heat Treating Processes;
- Proposed Rule 1445 – Control of Toxic Emissions from Laser Arc Cutting;
- Proposed Amended Rule 1469.1 – Spraying Operations Using Coatings Containing Chromium; and
- Proposed Rule 1480 – Air Toxics Metals Monitoring

Opportunities for Action

The East Los Angeles, Boyle Heights, West Commerce CSC developed the actions below to address the air quality priorities for metal processing facilities.

Action 1: Identify Areas to Conduct Air Monitoring for Fugitive Toxic Metal Emissions from Metal Processing Facilities	
Course of Action(s):	
<ul style="list-style-type: none"> • Identify sources of elevated levels of toxic metal emissions • If persistent elevated levels of toxic metal emissions are detected at locations through air monitoring activities, conduct follow-up investigations at those locations using additional techniques • Determine if additional actions (e.g., focused enforcement and rule development) are needed to address elevated levels 	
Strategies:	
<ul style="list-style-type: none"> • Air Monitoring • Enforcement 	
Goal(s):	
<ul style="list-style-type: none"> • Determine where additional air sampling or investigation efforts may be needed • Identify locations of metal processing facilities in this community and make this data available to the public 	
Estimated Timeline:	
<ul style="list-style-type: none"> • Mobile Monitoring began July 1, 2019 • Mid- to Late-2019, begin monitoring near metal processing facilities that have been identified as potential concerns through mobile monitoring within this community • Mid-2020, identify and prioritize facilities that may require additional compliance investigation or follow up • Provide the CSC quarterly or biannual updates 	
Implementing Agency, Organization, Business or Other Entity:	
Name:	Responsibility:
South Coast AQMD	Conduct air monitoring and determine if additional enforcement action is needed. Provide updates to CSC.

Additional Information:

Action 2: Reduce Emissions from Metal Processing Facilities through Outreach, Best Management Practices and Incentives	
Course of Action(s):	
<ul style="list-style-type: none"> • Conduct targeted outreach to metal processing facilities in the community and provide information on the South Coast AQMD’s Small Business Assistance Program, permitting process, and applicable rules and regulations • Provide training to facility operators on best management practices and South Coast AQMD rules that address metal processing facilities • Pursue incentive funds to reduce emissions from metal processing facilities (e.g., transitioning hexavalent chromium electroplating operations to trivalent chromium or installing air pollution controls to reduce emissions where emission reductions exceed rule requirements) 	
Strategy:	
<ul style="list-style-type: none"> • Public Information and Outreach • Rules and Regulations • Incentives 	
Goal:	
<ul style="list-style-type: none"> • Facilitate three training sessions to educate business owners and workers on applicable facility rules and best management practices • Distribute information about the Small Business Assistance Program through targeted outreach to facilities and through community based events • Provide the CSC with biannual or quarterly updates on public outreach events and incentive opportunities 	
Estimated Timeline:	
<ul style="list-style-type: none"> • Mid-2020 through 2022, conduct training sessions for business owners on source-specific rules and best management practices • Mid-2020 through 2022, engage in outreach events to distribute information about Small Business Assistance Program • Mid-2020, provide quarterly updates to the CSC on these activities 	
Implementing Agency, Organization, Business or Other Entity:	
Name:	Responsibility:
South Coast AQMD	<ul style="list-style-type: none"> • Prepare and deliver training materials for facility owners and operators

	<ul style="list-style-type: none">• Provide outreach materials to business owners on Small Business Assistance Program, best practices, and available incentives• Conduct training and outreach events
Additional Information:	
South Coast AQMD Small Business Assistance Program: http://www.aqmd.gov/home/programs/business/business-detail?title=small-business-assistance	

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