

**State of California
Air Resources Board
Board Item Summary**

Item # 23-5-2: Public Hearing to consider the Proposed Amendments to the Airborne Toxic Control Measure for Chromium Electroplating and Chromic Acid Anodizing Operations

Staff Recommendation:

Staff recommends that the California Air Resources Board (CARB or Board) approve the Proposed Amendments to the Airborne Toxic Control Measure for Chromium Electroplating and Chromic Acid Anodizing Operations (Proposed Amendments). This hearing is the second of two public hearings on the Proposed Amendments. The first public hearing was held on January 27, 2023, when staff first presented the Proposed Amendments. Pursuant to Board direction at the first public hearing, staff proposed modifications to the original proposal and noticed these modifications for a 15-day public review and comment period. At the May 25, 2023, hearing, staff will present the revised proposal for Board consideration.

Discussion:

CARB is proposing amendments to the Airborne Toxic Control Measure for Chromium Electroplating and Chromic Acid Anodizing Operations (Chrome Plating ATCM). There are two types of facilities covered by the Proposed Amendments: (1) decorative chrome plating facilities, and (2) functional chrome plating facilities, which include both hard chrome plating facilities and chromic acid anodizing facilities (collectively referred to as “chrome plating facilities”). The Proposed Amendments will eliminate the use of hexavalent chromium in chrome plating operations to further reduce health risks in communities located near chrome plating facilities. Reducing emissions of hexavalent chromium, which is a highly toxic air contaminant, will help in continuing to address the cumulative risk burden experienced by overburdened and disadvantaged communities.

The Proposed Amendments will result in the most stringent regulation of hexavalent chromium emissions from the chrome plating industry (compared to federal standards and District rules), with the goal of eliminating toxic hexavalent chromium emissions from chrome plating operations in California. Due to the high level of toxicity of hexavalent chromium, the potential health impacts of exposure to hexavalent chromium, the proximity of chrome plating facilities to sensitive receptors, and their location within disadvantaged communities, the Proposed Amendments phase out the use of hexavalent chromium from chrome plating operations.

To ensure an open and transparent rulemaking, CARB staff have engaged in an extensive public process throughout the development of the Proposed Amendments. On June 8, 2018, CARB staff issued a regulatory notice to inform the public of the start of the rulemaking process to amend the 2007 Chrome Plating ATCM. Since that time, CARB staff conducted seven technical workgroup meetings and two public workshops to solicit feedback from industry, community members, and other interested parties, and discuss regulatory concepts, costs, technology alternatives, emission inventory estimates, health and environmental impacts, compliance, and source testing results. Staff posted information regarding these technical workgroup meetings and workshops and any associated materials on the Chrome Plating website and distributed notice of these meetings through the Chrome Plating List Serve, which includes over 3,400 recipients.

In addition, CARB staff conducted numerous meetings and phone calls with members of impacted communities, environmental justice advocates, local air districts, industry stakeholders (including owners and operators of chrome plating facilities, chemical fume suppressants suppliers, equipment manufacturers (OEMs), and trade associations). CARB staff also had discussions with other state agencies, local air pollution control agencies, the U.S. Environmental Protection Agency, and other interested parties. CARB staff visited over 30 chrome plating facilities to learn more about their business operations, and to better understand potential implementation challenges associated with the Proposed Amendments and the impacts chrome plating facilities have on communities.

Summary and Impacts:

The primary benefits of the Proposed Amendments are reductions in hexavalent chromium emissions from chrome plating facilities, which will result in reductions in cancer risk for people in nearby communities. CARB staff estimated the emissions reductions (not including fugitive emissions) of hexavalent chromium over the lifetime of the Proposed Amendments. For decorative chrome plating operations, CARB staff estimated hexavalent chromium emissions reductions of 18.4 pounds (lbs). For hard chrome plating operations, staff estimated total emissions reductions of 96.4 lbs. For chromic acid anodizing operations, staff estimated total emissions reductions of 2.3 lbs. While there is no current methodology to quantify a monetized health benefit for the reduction of cancer risk, the phase out is expected to decrease cancer risk from exposure to hexavalent chromium from chrome plating operations to zero by the year 2039.

The phase out of hexavalent chromium is intended to protect public health and encourage the development of safer alternatives to hexavalent chromium in chrome plating operations. As more facilities begin using safer technologies, such as trivalent chromium, industry acceptance of these technologies is expected to improve. Although alternative technologies are not currently available to replace all applications in functional chrome plating operations, the Proposed Amendments are anticipated to encourage design, research, engineering, construction, and project management firms to improve trivalent chromium technologies and develop new alternative technologies. As part of the implementation process, CARB staff will conduct two technology reviews and report on the progress of the development of alternatives to using hexavalent chromium for functional chrome plating.

In addition, as a co-benefit, the usage and emissions of Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) containing fume suppressants in chrome plating operations are expected to be reduced to zero by the time the Proposed Amendments are fully implemented due to the transition to existing alternative technologies that do not use PFAS-containing fume suppressants. Exposure to some PFAS chemicals in the environment may be linked to harmful health effects in humans and animals. These toxic substances can be found in many places such as: water, air, fish, soil, wildlife, and different consumer, commercial, and industrial products. Chrome plating facilities that use PFAS-containing fume suppressants are one potential source of exposures.

The businesses directly impacted by the Proposed Amendments are decorative chrome plating facilities, hard chrome plating facilities, and chromic acid anodizing facilities. The total unamortized costs to these facilities, inclusive of additional sales tax over 20 years, are estimated to be approximately \$44 million for the decorative platers, \$525 million for the hard platers, and \$123 million for the chromic acid anodizing facilities, totaling \$692 million. The amortized costs to these facilities for the same period totals approximately \$590 million. There are no direct costs on individuals due to the Proposed Amendments. However, there may be indirect costs to individuals to the extent that compliance costs are passed through to consumers of chrome plated products.

CARB is the lead agency for the Proposed Amendments and has prepared a Final Environmental Analysis (Final EA) pursuant to its certified regulatory program (Cal. Code Regs., tit. 17, §§ 60000–60008) to comply with the requirements of the California Environmental Quality Act (CEQA). The Final EA provides a programmatic environmental analysis of a reasonably foreseeable compliance scenario that could result from implementation of the Proposed Amendments. To determine whether the Proposed Amendments will have a potential adverse effect on the environment, CARB evaluated the potential physical changes to the environment resulting from a reasonable, foreseeable compliance scenario.

The Final EA concluded that implementation of the Proposed Amendments could result in: less-than-significant or no impacts to aesthetics, agriculture and forestry resources, air quality (long-term operational-related), biological resources, cultural resources (long-term operational-related), energy, geology and soils, greenhouse gas emissions, hydrology and water quality, land use and planning, mineral resources, noise and vibration (long-term operational-related), population and housing, public services, recreation, transportation, tribal cultural resources, utilities and service systems, and wildfire; and potentially significant adverse impacts to air quality (short-term construction-related health impacts), cultural resources (short-term construction-related), hazards and hazardous materials, and noise and vibration (short-term construction-related). It is expected that many of the potentially significant impacts can be feasibly avoided or mitigated to a less-than-significant level, due to project-specific environmental review processes associated with compliance responses and compliance with local and state laws and regulations. However, the Final EA takes the conservative approach in its post-mitigation significance conclusions (i.e., tending to overstate the risk that feasible mitigation may not be sufficient to mitigate an impact to be

less than significant or may not be implemented by other parties) and discloses, for CEQA compliance purposes, that potentially significant environmental impacts may be unavoidable.