

# Proposed Amendments to the Airborne Toxic Control Measure for Chromium Electroplating and Chromic Acid Anodizing Operations

## Resolution 23-16

May 25, 2023

Agenda Item No.: 23-5-2

Whereas, sections 39600 and 39601 of the Health and Safety Code authorize the California Air Resources Board (CARB or Board) to adopt standards, rules, and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

Whereas, in Health and Safety Code section 39650, the Legislature finds and declares that it is the public policy of the State that emissions of toxic air contaminants should be controlled to levels that prevent harm to the public health;

Whereas, section 39650 et seq. of the Health and Safety Code established the Toxic Air Contaminant Identification and Control Program, which created a two-phase process for identification and control of toxic air contaminants by the Board;

Whereas, on January 23, 1986, the Board identified hexavalent chromium as a toxic air contaminant pursuant to article 3 (commencing with section 39660), chapter 3.5, part 2, division 26 of the Health and Safety Code;

Whereas, the Board identified hexavalent chromium as a compound that has the potential to cause cancer with no associated threshold for cancer initiation, meaning there is no level of emissions below which exposure to hexavalent chromium would be considered safe;

Whereas, hexavalent chromium has the second highest cancer potency of identified toxic air contaminants (second only to dioxin) and is about 500 times more toxic than diesel exhaust particulate matter (diesel PM);

Whereas, California has a comprehensive Air Toxics Program designed to identify and control air toxics, inform the public of significant air toxics exposure from stationary sources and require facilities to reduce those risks, and address the health impacts of exposure to toxics in communities while protecting children and other sensitive receptors;

Whereas, sections 39658, 39659, and 39666 of the Health and Safety Code authorize the Board to establish airborne toxic control measures (ATCM) for substances identified as toxic air contaminants;

Whereas, section 39666 of the Health and Safety Code authorizes the Board to regulate emissions of toxic air contaminants from nonvehicular sources;

Whereas, section 39666 of the Health and Safety Code requires an ATCM for an existing source for which the Board has not specified a threshold exposure level be designed, in consideration of the factors specified in subdivision (b) of section 39665, to reduce emissions to the lowest level achievable through application of the best available control technologies or more a more effective control method, unless the Board determines, based on an assessment of risk, that an alternative level of emission reduction is adequate or necessary to prevent an endangerment of public health;

Whereas, section 41511 of the Health and Safety Code authorizes the Board to adopt rules and regulations to require the owner or the operator of any air pollution emission source to take such action as the Board may determine to be reasonable for the determination of the amount of such emission from such source;

Whereas, on February 18, 1988, pursuant to section 39666 of the Health and Safety Code, the Board adopted the Hexavalent Chromium Airborne Toxic Control Measure for Chrome Plating and Chromic Acid Anodizing Operations (California Code of Regulations, title 17, section 93102), which limited emissions of hexavalent chromium from chromium plating and chromic acid anodizing operations;

Whereas, on May 21, 1998, the Board adopted amendments to the Hexavalent Chromium Airborne Toxic Control Measure for Chrome Plating and Chromic Acid Anodizing Operations to conform with the federal National Emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks for Chromium Plating and Chromic Acid Anodizing Facilities;

Whereas, on December 7, 2006, the Board approved amendments to the Airborne Toxic Control Measure for Chromium Plating and Chromic Acid Anodizing Facilities to further reduce emissions of hexavalent chromium (effective on October 24, 2007) (2007 ATCM; California Code of Regulations, title 17, sections 93102-93102.16);

Whereas, in 2012 the Legislature enacted Senate Bill (SB) 535 (Chapter 830, Statutes of 2012), which requires the California Environmental Protection Agency (CalEPA) to identify disadvantaged communities for investment opportunities based on geographic, socioeconomic, public health, and environmental hazard criteria;

Whereas, in 2017 the Legislature enacted Assembly Bill (AB) 617 (Chapter 136, Statutes of 2017), which highlights the need for further emission reductions in communities with high exposure burdens;

Whereas, to support the AB 617 effort, the California Legislature has appropriated incentive funding to support early actions to address localized air pollution in the most impacted communities (AB 134 (Chapter 14, Statutes of 2017) and SB 856 (Chapter 30, Statutes of 2018)).

Whereas, SB 856 (Chapter 30, Statutes of 2018) allows Community Air Protection (CAP) incentives to be directed to owners of stationary sources that are not subject to the Cap and Trade program requirements adopted by CARB pursuant to section 38562, subdivision (c) of the Health and Safety Code. The funding is intended to provide replacement of equipment with technologies that will result in direct emissions reductions of toxic air contaminants and criteria air pollution, including zero-emission technologies;

Whereas, Resolution 20-33 recognizes that, in addition to CARB's mission to reduce pollutant emissions and toxic air contaminants to ensure all Californians have healthy air to breathe, it is incumbent on CARB to also function as an agent of responsible social change, especially when it is clear that injustices persist that perpetuate institutional and structural racism;

Whereas, on September 24, 2020, the Board adopted Resolution 20-25, which directed staff to develop appropriate proposed steps to expeditiously transition from hexavalent chromium use in chrome plating and chromic acid anodizing operations to less toxic alternatives such as trivalent chromium;

Whereas, AB 617 directs CARB to consider communities for selection based on criteria outlined in SB 535 and the Community Air Protection Blueprint, and includes prioritizing disadvantaged communities and sensitive receptor locations;

Whereas, CARB's 2018 Community Air Protection Blueprint identifies chrome plating facilities as a source that contributes to localized air toxics impacts in many communities across the state, and identified the amendments to the chrome plating ATCM as a measure to reduce emissions in communities impacted by stationary sources;

Whereas, AB 617 Community Emission Reduction Plans (CERP) identified chrome plating operations as an air toxic concern for many communities;

Whereas, through CARB staff outreach and environmental justice listening sessions, people living near chrome plating facilities expressed concern regarding exposure to elevated levels of hexavalent chromium.

Whereas, CARB staff determined through an evaluation of chrome plating facilities that sensitive receptors such as schools and residential neighborhoods are often located in close proximity to chrome plating facilities. Approximately 15 percent of all chrome plating facilities are located within approximately 300 meters of a school;

Whereas, there are 113 chrome plating facilities currently operating with hexavalent chromium in California, and approximately 73 percent are located within SB 535 communities and approximately 14 percent are located within AB 617 communities;

Whereas, many of the communities near chrome plating facilities may bear a disproportionate health burden due to their close proximity to hexavalent chromium emissions from these facilities, in addition to other sources of hexavalent chromium and other toxic air contaminants. Cumulative health impacts can occur when multiple facilities are within a short distance of one another;

Whereas, despite significant emission reductions under the 2007 ATCM, chrome plating facilities still have an estimated potential cancer risk between 9 and 213 chances per million people exposed (not including the impacts of potential fugitive emissions);

Whereas, ambient air monitoring and sampling conducted by CARB's Monitoring and Laboratory Division and South Coast Air Quality Management District in the South Coast Air Basin in recent years suggests that fugitive emissions could be a significant contributor to near source hexavalent chromium concentrations.

Whereas, CARB staff have evaluated all feasible substitutes to hexavalent chromium plating (e.g., conversion to trivalent chromium plating) and emission reduction and monitoring strategies (e.g., add-on air pollution control devices, fume suppressants, fugitive emission control strategies, and increased source testing) to reduce emissions of hexavalent chromium from the chrome plating industry;

Whereas, the phase out of hexavalent chromium is intended to protect public health by eliminating emissions of this toxic air contaminant from chrome plating operations and encouraging the development of safer alternatives to hexavalent chromium in chrome plating operations;

Whereas, trivalent chromium is a significantly less toxic alternative to hexavalent chromium and is an available substitute that can be used to replace hexavalent chromium in decorative chrome plating and may serve as a replacement for functional chrome plating applications over time;

Whereas, although alternative technologies are not currently available to replace all applications in functional chrome plating operations, the proposed amendments to the Airborne Toxic Control Measure for Chromium Electroplating and Chromic Acid Anodizing Operations (Proposed Amendments) are anticipated to encourage design, research, engineering, construction, and project management firms to improve trivalent chromium technology and develop new less toxic technologies;

Whereas, 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. The first technology review must be completed by January 1, 2032, and the second must be completed by January 1, 2036;

Whereas, the Proposed Amendments will further reduce and eventually eliminate the emissions of hexavalent chromium from chrome plating operations in California by switching to less toxic alternatives and implementing improved technologies and operating practices;

Whereas, Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) are toxic and highly persistent environmental contaminants that scientific studies have linked to harmful health effects in humans and animals;

Whereas, as a co-benefit of this regulation, the usage and emissions of PFAS-containing fume suppressants 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;

Whereas, during the development process for the Proposed Amendments, staff have conducted more than 90 meetings with members of impacted communities, environmental justice advocates, air districts, industry stakeholders (including OEM, chemical manufacturers, the U.S. Environmental Protection Agency, and the European Union). Meeting formats included public workshops, work group meetings, community meetings, video conferencing, informal meetings, phone calls, and site visits with stakeholders;

Whereas, in AB 211 (Chapter 574, Statutes of 2022), the Legislature declared that a transition away from hexavalent chromium plating is “necessary” and stated its intent to enact future legislation that would make \$10 million available to CARB to assist with the transition away from the use of hexavalent chromium, and to make this funding available upon CARB’s adoption of a rule to fully eliminate hexavalent chromium at all decorative and functional chrome plating facilities and chromic acid anodizing facilities statewide;

Whereas, these funds can be used to provide incentives for small businesses to transition away from hexavalent chromium, grow customer awareness and acceptance of trivalent chromium plating products, and fund demonstration projects that further alternative technologies;

Whereas, staff has proposed amendments to the Airborne Toxic Control Measure for Chromium Electroplating and Chromic Acid Anodizing Operations as set forth in Appendix A to the Staff Report: Initial Statement of Reasons released to the public on November 29, 2022;

Whereas, CARB’s regulatory program that involves the adoption, approval, amendment, or repeal of standards, rules, regulations, or plans has been certified by the Secretary for Natural Resources under Public Resources Code section 21080.5 of the California Environmental Quality Act (CEQA; California Code of Regulations, title 14, section 15251(d)), and CARB conducts its CEQA review according to this certified program (California Code of Regulations, title 17, sections 60000-60007);

Whereas, CARB prepared a draft Environmental Analysis (EA) under its certified regulatory program for the Proposed Amendments entitled *Draft Environmental Analysis Prepared for the Proposed Amendments to the Airborne Toxic Control Measure for Chromium Electroplating and Chromic Acid Anodizing Operations* (Draft EA), and circulated it as Appendix D to the Staff Report for 45 days from December 2, 2022, through January 17, 2023;

Whereas, the Draft EA concluded that implementation of the Proposed Amendments has the potential to result in: less-than-significant or no impacts to aesthetics, agriculture and forestry resources, air quality (long-term operational-relates), 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);

Whereas, on January 27, 2023, the Board conducted a public hearing on the Proposed Amendments and the Draft EA prepared for the proposal;

Whereas, at the public hearing, the Board directed the Executive Officer to make any additional appropriate conforming modifications available for public comment, with any additional supporting documents and information, for a period of at least 15 days. The Executive Officer was further directed to consider written comments submitted during the public review period and make any additional appropriate conforming modifications available for public comment for at least 15 days, evaluate all comments received during the public

comment periods, including comments on the Draft EA, and prepare written responses to EA comments as required by CARB's certified regulations at California Code of Regulations, title 17, sections 60000-60007 and Government Code section 11346.9, subdivision (a). The Executive Officer was directed to present to the Board, at a subsequently scheduled public hearing, staff's written responses to any comments on the Draft EA, along with the Final EA, for consideration for approval, and the finalized amendments for consideration for adoption;

Whereas, following the Board hearing, two 15-day notices of proposed modifications (15-day notices) were circulated. The first 15-day notice was released on March 27, 2023, with a 15-day public comment period that closed on April 11, 2023, where the modified regulatory language and supporting documentation were circulated, with the changes to the originally proposed text clearly indicated, according to provisions of California Code of Regulations, title 1, section 44 and Government Code section 11346.8. The second 15-day notice updated the information in Attachment 2 of the previous 15-day notice. The second 15-day notice was released on April 26, 2023, with a 15-day public comment period that closed on May 11, 2023;

Whereas, staff reviewed written comments received on the draft EA and prepared written responses to those comments in a document entitled *Response to Comments on the Draft Environmental Analysis Prepared for Proposed Amendments to the Airborne Toxic Control Measure for Chromium Electroplating and Chromic Acid Anodizing Operations* (Response to EA Comments);

Whereas, on May 19, 2023, staff posted on the rulemaking page the Final EA, which includes minor revisions, and the Response to EA Comments;

Whereas, prior to the duly noticed public hearing held on May 25, 2023, staff presented the Final EA and the Response to Comments on the EA, as released to the public on May 19, 2023, to the Board for consideration;

Whereas, a public hearing and other administrative proceedings have been held according to the provisions of chapter 3.5 (commencing with section 11340), part 1, division 3, title 2 of the Government Code; and

Whereas, in consideration of the ISOR, 15-day notices, written comments, and public testimony, the Board finds that:

Due to the high toxicity level of hexavalent chromium, the health impacts of exposure to hexavalent chromium, the proximity of chrome plating facilities to sensitive receptors and disadvantaged communities, and following evaluation of air monitoring data, the Board determines that, based on an assessment of risk, it is necessary to reduce emissions of hexavalent chromium from the chrome plating industry to zero to prevent an endangerment of public health;

From 2026 through 2043, the Proposed Amendments are expected to reduce emissions (not including fugitive emissions) of hexavalent chromium by 18.4 pounds (lbs) for decorative chrome plating operations, 96.4 lbs for hard chrome plating operations, and 2.3 lbs for chromic acid anodizing operations;

The Proposed Amendments are expected to reduce individual residential cancer risk from hexavalent chromium used in chrome plating operations by 100 percent starting in 2039, when fully implemented;

The Proposed Amendments will reduce cumulative exposures to hexavalent chromium and other pollutants within communities that could be impacted by multiple chrome plating operations and other sources of harmful emissions;

As directed by the Board and in response to comments, changes outlined in the first 15-day notice provide flexibility by providing an alternative phase out pathway for decorative plating facilities who elect to continue to use hexavalent chromium in their chrome plating processes after January 1, 2027, if they reduce fugitive emissions by complying with the building enclosure requirements.

The Proposed Amendments require CARB to complete two technology reviews for functional chrome plating by January 1, 2032, and January 1, 2036. Community representatives, environmental justice advocates, chrome plating facility owners and operators, and other industry stakeholders will be invited to participate in the technology review process;

The economic and fiscal impacts of the Proposed Amendments have been analyzed as required by California law, and the conclusions and supporting documentation for this analysis are set forth in Chapter IX of the Staff Report, as supplemented by staff's presentation at the hearing of this item;

The Proposed Amendments were developed in an open public process, in consultation with affected parties, through numerous public workshops, individual meetings, and other outreach efforts, and these efforts are expected to continue;

No reasonable alternatives to the Proposed Amendments considered to date, or that have otherwise been identified and brought to the attention of CARB, would be more effective at carrying out the purpose for which the amendments are proposed or would be as effective and less burdensome to affected entities than the amendments; and

Now, therefore, be it resolved that the Board hereby certifies that the Final EA (including the response to EA comments), as released to the public on May 19, 2023, was completed in compliance with CARB's certified regulatory program to meet the requirements of CEQA, reflects the agency's independent judgment and analysis, and was presented to the Board whose members reviewed and considered the information therein before taking action to approve the amendments. The Final EA and Response to EA Comments is accessible at <https://ww2.arb.ca.gov/rulemaking/2023/chromeatcm2023>.

Be it further resolved that in consideration of the Final EA, the Response to EA Comments, and the entirety of the record, the Board adopts the Findings and Statement of Overriding Considerations as released to the public on May 19, 2023.

Be it further resolved that the Board hereby adopts amendments to sections 93102, 93102.1, 93102.2, 93102.3, 93102.4, 93102.5, 93102.6, 93102.7, 93102.8, 93102.9, 93102.10, 93102.11, 93102.12, 93102.13, 93102.14, 93102.15, and 93102.16., title 17 California Code of Regulations, as released to the public on May 19, 2023.

Be it further resolved that the Board hereby directs the Executive Officer to take the following actions:

- a. Work closely with the air districts to intentionally track and evaluate the implementation and enforcement of the Proposed Amendments to ensure compliance with the Proposed Amendments.
- b. Leverage existing and future monitoring resources, including community-based monitoring under the American Rescue Plan Act of 2021 and other federal legislation and air monitoring done by the South Coast Air Quality Management District or other air districts, to increase the understanding of the emissions impacts of hexavalent chromium and other toxic metals around chrome plating facilities and other metal processing related operations, and in identifying unregulated sources.
- c. Explore and prioritize additional funding sources for air monitoring of hexavalent chromium and chrome plating facilities, where appropriate, to ensure that fugitive emissions continue to be reduced through implementation of the Proposed Amendments. Staff may propose further amendments for consideration by the Board should fugitive emissions remain elevated.
- d. Track progress made in development of alternatives to using hexavalent chromium for functional chrome plating, including assessing data and information received from external stakeholders, to review the potential feasibility of alternatives to hexavalent chromium in a report by January 1, 2032, and the second report by January 1, 2036. Based on the results of the technology reviews, staff may propose further amendments for consideration by the Board, which could include adjusting the deadline for the phase out.
- e. Prioritize CAP incentive funding and available AB 211 funding such that decorative chrome platers who transition from hexavalent chromium to a less toxic alternative by January 1, 2027, receive priority funding.

Be it further resolved that the adopted regulatory text may be further revised with non-substantial or grammatical changes, which will be added to the rulemaking record and indicated as such.

Be it further resolved that the Board directs the Executive Officer to determine if additional sufficiently-related modifications to the regulations are appropriate, and that if no additional modifications are appropriate, the Executive Officer shall take CARB's final step for final approval of such amendments through submittal of the Board-approved rulemaking package to the Office of Administrative Law. The Executive Officer may revise the adopted regulations with grammatical and other non-substantial changes, indicate them as such, and add them to the rulemaking record. If the Executive Officer determines that additional sufficiently-related substantial modifications are appropriate, the modified regulatory language shall be made available for public comment, with any additional supporting documents and information, for at least 15 days, and the Executive Officer shall consider written comments submitted during the public review period and make any further modifications that are appropriate available for public comment for at least 15 days. The Board delegates to the Executive Officer the authority to both (1) either approve or disapprove proposed changes in regulatory language under Government Code section 11346.8(c), and (2) conduct any appropriate further environmental review associated with such changes, consistent with the Board's Certified Regulatory Program regulations, at California Code of Regulations, title 17, sections 60000-60008, for those sufficiently-related



substantial modifications. Alternatively, rather than taking action on the proposed modifications, the Executive Officer may instead present the modifications, and any appropriate further environmental review associated with the modifications, to the Board for further consideration, if the Executive Officer determines further Board consideration is warranted.

Be it further resolved that the Board directs the Executive Officer to finalize the Final Statement of Reasons, submit the completed rulemaking package to the Office of Administrative Law, and transmit the Notice of Decision to the Secretary of the Natural Resources Agency for posting.

I hereby certify that the above is a true and correct copy of Resolution 23-16 as adopted by the California Air Resources Board.



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Board Clerk