Appendix D

~~Draft~~ Final Environmental Analysis

For the Proposed

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

California Air Resources Board

1001 I Street

Sacramento, California 95814

Date of Release: May 19, 2023

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FIGURES

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LIST OF ABBREVIATIONS

AB	Assembly Bill
APE	area of potential effects
ATCM	Airborne Toxic Control Measure
BLM	U.S. Bureau of Land Management
Blueprint	Community Air Protection Blueprint
CAA	Clean Air Act
CAAQS	California ambient air quality standards
CAL FIRE	California Department of Forestry and Fire Protection
CAL/OSHA	California Department of Industrial Relations/Division of Occupational Safety and Health
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Officers Association
CARB or the Board	California Air Resources Board
CEQA	California Environmental Quality Act
cfm	cubic feet per minute
CO_2e	carbon dioxide equivalent
Draft EA	draft environmental analysis
District	local permitting air district
EA	environmental analysis
EIR	environmental impact report
Final EA	final environmental analysis
HABS	Historic American Buildings Survey
HAP	hazardous air pollutant
HEPA	high efficiency particulate air
mg/hr	milligrams per hour
mg/hr-ft_2	milligrams per hour foot squared
NAAQS	national ambient air quality standards
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NOP	notice of preparation
PEL	permissible exposure limit

PPMV	parts per million by volume
Program	Community Air Protection Program
REL	reference exposure level
South Coast AQMD	South Coast Air Quality Management District
SMAQMD	Sacramento Metropolitan Air Quality Management District
TAC	toxic air contaminant
U.S. EPA	U.S. Environmental Protection Agency
VOC	volatile organic compound

PREFACE

The California Air Resources Board (CARB or Board) released a Draft Environmental Analysis (Draft EA) for the Proposed Amendments to the Airborne Toxic Control Measure for Chromium Electroplating and Chromic Acid Anodizing Operations, herein referred to as the Proposed Amendments (i.e., the proposed project under the California Environmental Quality Act (CEQA)), on December 2, 2022, for a 45-day public review and comment period that closed on January 18, 2023. In addition, written comment letters and verbal comments received at the public hearing on January 27, 2023, were included in the rulemaking record. In all, a total of 177 comment letters and verbal comments were received. A total of 81 comments were submitted electronically on or before January 18, 2023; 15 electronically submitted comment letters were submitted at the January 27, 2023, public hearing; and 81 verbal comments were presented at the public hearing on January 27, 2023. Out of the 177 total comments received, 19 comment letters and five verbal comments were determined to raise significant environmental issues related to the analysis in the Draft EA and are responded to in the Response to Comments on the Draft EA.

On March 27, 2023, CARB released a notice with modified regulatory language and supporting documentation for a review and comment period as required under the Administrative Procedure Act (APA). The review and comment period commenced on March 27, 2023, and ended on April 11, 2023. During the comment period, a total of 22 comments were received. Of those 22, six comment was determined to include significant environmental issues similar to those raised during the 45-day public comment period regarding increasing emissions from the transport of hexavalent chromium plated parts out-of-state due to the phase out. The first 15-day changes added an optional alternative phase out pathway for decorative chrome platers and updated information in the Initial Statement of Reasons. The first 15-day changes would not result in any new reasonably foreseeable significant environmental impacts or substantially increase the severity of an already identified environmental impact in the Draft EA and would not impact the implementation of the regulation in a way that affects the impact conclusions identified in the Draft EA.

On April 26, 2023, CARB released a second notice with modified information for a review and comment period as required under the APA. The review and comment period commenced on April 26, 2023, and ended on May 11, 2023. During the comment period a total of 1616 comments were received. Of those four were determined to include comments raising new significant environmental issues related to the Draft EA. The second 15-day changes do not change the implementation of the regulation in a way that affects the impact conclusions identified in the Draft EA. The second 15-day changes to the Proposed Amendments consist of correcting an error in Table 1 of Attachment 2 to the 15-day notice dated March 27, 2023, and correcting the corresponding values in Table III.1 and Table VI.1 and the narrative of Attachment

2. Staff has determined that these changes would not require new or modified compliance responses and would not result in any new reasonably foreseeable significant environmental impacts or substantially increase the severity of an already identified environmental impact in the Draft EA.

CARB staff made modifications to the Draft EA to create the Final EA. To facilitate identifying modifications to the document, modified text is presented in the Final EA with strikethrough for deletions and underline for additions. None of the modifications alter any of the types of foreseeable compliance responses evaluated or conclusions reached in the Draft EA, introduce new significant effects on the environment, or provide new information of substantial importance relative to the EA. As a result, these revisions do not require recirculation of the draft document pursuant to the CEQA Guidelines, California Code of Regulations, title 14, section 15088.5, before consideration by the Board.

1.0 INTRODUCTION AND BACKGROUND

A. Introduction

This ~~draft~~ Final environmental analysis (~~Draft~~ Final EA) is a program environmental document prepared to cover the Proposed Amendments to the Airborne Toxic Control Measure (ATCM) for Chromium Electroplating and Chromic Acid Anodizing Operations (Proposed Amendments or Proposed Project). This ~~Draft~~ Final EA is Appendix D to the staff report that ~~will be~~ was presented to the California Air Resources Board (CARB or the Board) for consideration at the January ~~26 or~~ 27, 2023 Board meeting. Chapter 2.0 of this ~~Draft~~ Final EA, "Project Description," presents a summary of the Proposed Amendments, as defined under the California Environmental Quality Act (CEQA). A detailed description of the Proposed Amendments is included in the *Staff Report: Proposed Amendments to the Airborne Toxic Control Measure for Chromium Electroplating and Chromic Acid Anodizing Operations* (Staff Report) (date of release: December 2, 2022), which is hereby incorporated by reference.

This ~~Draft~~ Final EA is intended to identify and disclose the Proposed Amendments' potentially significant adverse impacts on the environment and identify potentially feasible mitigation measures and alternatives to lessen or avoid those significant environmental impacts. It also identifies the potential benefits to the environment that would result from implementation of the Proposed Amendments. The Proposed Amendments are intended to eliminate the exposure of Californians to localized emissions of hexavalent chromium from the chromium electroplating industry. However, in some cases, as described in Chapter 4.0 of this ~~Draft~~ Final EA, potentially significant adverse impacts to environmental resources may occur as a result of compliance responses associated with the Proposed Amendments. Resource areas potentially impacted are air quality, cultural resources (historical resources), hazards and hazardous materials, and noise. For each resource area that has the potential to be adversely impacted, CARB is required to identify potentially feasible mitigation measures. This ~~Draft~~ Final EA also includes an analysis of potentially feasible alternatives that could avoid or substantially lessen the identified impacts. Where it is determined there would be no significant adverse impacts in those resource areas not already identified as having potential impacts, the rationale supporting that determination is included. This ~~Draft~~ Final EA also discusses environmental benefits expected from implementing the Proposed Amendments, including the associated benefits to resources listed above.

B. Scope of Analysis and Assumptions

The scope of analysis in this ~~Draft~~ Final EA is intended to help focus public review and comments on the Proposed Amendments, and ultimately to inform the Board of the environmental benefits and adverse impacts of the proposal. This analysis specifically focuses on potentially significant adverse and beneficial impacts on the physical

environment that would result from reasonably foreseeable compliance responses as a result of implementation of the Proposed Amendments.

The analysis of potentially significant adverse environmental impacts of the Proposed Amendments is based on the following:

1. This analysis addresses the potentially significant adverse environmental impacts resulting from implementing the Proposed Amendments compared to existing conditions (see Chapter 2.0 "Project Description").

2. The analysis of environmental impacts and determinations of significance are based on reasonably foreseeable compliance responses taken in response to implementation of the Proposed Amendments.

3. The analysis in this ~~Draft~~ Final EA addresses environmental impacts both within California and outside the State to the extent they are reasonably foreseeable and do not include speculation.

4. The level of detail of impact analysis is necessarily and appropriately general because the Proposed Amendments are programmatic. Implementation of the Proposed Amendments may result in some chromium electroplating and chromic acid anodizing operations (collectively referred to as "chrome plating") moving outside of California, but the extent to which businesses would move and the general locations where these operations would occur outside of California are unknown. Attempting to predict decisions by entities regarding the specific location and design of future facilities outside of California, or whether those operations occur outside of the State, in response to implementation of the Proposed Amendments would require speculation (and may be impossible) at this early stage, given the influence of other business and market considerations in those decisions. Since implementing the Proposed Amendments may push some chrome platers out of California, there is some inherent uncertainty in the degree of mitigation that would ultimately need to be implemented to reduce any potentially significant impacts identified in this ~~Draft~~ Final EA. Consequently, this ~~Draft~~ Final EA takes a conservative approach in its post-mitigation significance conclusions (i.e., tending to overstate the potential that feasible mitigation may not be implemented by the agency with authority to do so or may not be sufficient) and discloses, for CEQA compliance purposes, that potentially significant environmental impacts may be unavoidable, where appropriate. It is also possible that the amount of mitigation necessary to reduce specific environmental impacts to a less-than-significant level may be less than the amount identified in this ~~Draft~~ Final EA on a case-by-case basis. Specific actions undertaken to implement the Proposed Amendments would undergo project-level environmental review and compliance processes as required at the time they are proposed. It is expected that many individual development projects

would be able to feasibly avoid or mitigate potentially significant impacts to a less-than-significant level.

5. This ~~Draft~~ Final EA generally does not analyze site-specific impacts when identifying the location of future facilities or other infrastructure changes that would require substantial speculation to evaluate. However, it does examine regional (e.g., District and/or air basin) and local issues to the degree feasible, where appropriate. As a result, the impact conclusions in the resource-oriented sections of Chapter 4.0, "Impact Analysis and Mitigation Measures," covers broad types of impacts, considering the potential effects of the full range of reasonably foreseeable actions undertaken in response to the Proposed Amendments.

C. Background Information on the ATCM for Chromium Plating and Chromic Acid Anodizing Operations

Chrome plating is the electrical application of a chromium coating onto a surface for decoration or enhanced durability. Chrome plating happens when an electrical charge is applied to a tank containing an electrolytic salt solution and air is passed through the tank. The electrical charge causes the chromium metal particles in the bath to fall out of solution and deposit onto objects placed in the plating solution. The types of chrome plating are decorative chrome plating and functional chrome plating, which includes hard chrome plating and chromic acid anodizing. The most familiar type of chrome plating is decorative chromium plating, which provides a bright, shiny finish onto objects such as wheels and plumbing fixtures. Products with a decorative chrome plated surface may be in the chrome bath for only a few minutes to achieve the coating necessary. On the other hand, functional chrome plating uses the same application described above, but parts may remain in the chrome bath for several hours. Parts coated for functional finishes include engine parts, gun barrels, and landing gears, which are used in heavy industrial applications. During chromic acid anodizing, an oxidation layer is generated on the surface of the part. Products that require this coating process include helicopter engine components or aerospace parts.

When hexavalent chromium is used in all three of these electrolytic processes, mists containing hexavalent chromium are formed, and hexavalent chromium is released into the air when bubbles pop on the surface of the liquid at the top of the tank. Hexavalent chromium released from these bubbles can be eventually emitted into outdoor air, creating an exposure concern for the surrounding community. Emissions from the tank are controlled through surface-covering suppressants and by capture in a filter device, but these do not capture all hexavalent chromium emissions from chrome plating operations. Long-term exposure to even very low hexavalent chromium concentrations can substantially increase a person's chance of developing cancer. Short-term exposure can lead to chronic and acute symptoms such as asthma or other respiratory distress given its high potency.

In 1986, CARB identified hexavalent chromium as a toxic air contaminant (TAC). Hexavalent chromium was determined to be an extremely potent human carcinogen with no known safe level of exposure. In fact, it is about 500 times more potent than the toxicity of diesel exhaust particulate.[1]

In 1988, CARB adopted an ATCM to reduce hexavalent chromium emissions from chrome plating facilities. This measure reduced overall emissions from these facilities by 97 percent by introducing technology-based emission standards. The emission standards have been met by utilizing add-on pollution control devices, such as high efficiency particulate air (HEPA) filters and packed bed scrubbers, and/or by adding fume suppressants to the plating tanks.

In 1998, the ATCM for Chrome Plating and Chromic Acid Anodizing Facilities was amended to establish equivalency with federal standards. These amendments did not change the limits already in place but established separate limits for new sources. These amendments to the ATCM continued to divide hard chrome plating operations for existing sources into three tiers (Large/Medium/Small) but established two tiers (Large and Medium/Small) for new sources. For hard chrome plating, the ATCM required operations to comply with an emission limitation expressed in terms of milligrams of hexavalent chromium emissions per ampere-hour (mg/amp-hr). The applicable emission limitation depended on the chrome plating source size (both in terms of mass emissions and ampere-hour usage). The largest hard chrome plating operations had to meet a control efficiency greater than 99 percent by installing HEPA filter add-on air pollution control devices. Decorative chrome plating and chromic acid anodizing facilities were required to use chemical fume suppressants to reduce hexavalent chromium emissions by 95 percent from the chrome plating tanks. In addition to emission requirements, chrome plating operations were required to conduct a performance test on the chrome plating tanks to demonstrate compliance. The ATCM also required regular inspections and maintenance, parameter monitoring, operation and maintenance plans, and recordkeeping.

In an effort to further protect the public, amendments to the ATCM for Chrome Plating and Chromic Acid Anodizing Facilities were presented and approved by the Board on December 7, 2006. These amendments were subsequently adopted on August 9, 2007, and became legally effective on October 24, 2007. The adopted amendments set forth the most stringent emission control requirements for chrome plating in the nation. Generally, except for small facilities, the limits require the installation or the upgrade of add-on air pollution control devices at the plating tank. Based on proximity to sensitive receptors and total throughput, the requirements became effective between April 24, 2008, and October 24, 2011. The compliance date to meet emission control requirements was October 24, 2009, for facilities with sensitive receptors within 330 feet and/or those with higher throughputs. In addition, in Resolution 06-25, in which the

[1] Consolidate Table of California Office of Environmental health Hazard Assessment (OEHHA)/CARB Approved Risk Assessment Health Values.

amendments were approved, CARB staff was directed to track compliance with the ATCM.

Under the 2007 ATCM for Chrome Plating and Chromic Acid Anodizing Facilities, new hexavalent chromium plating facilities constructed after October 24, 2007, must install a HEPA add-on air pollution control device to meet an emission limit of 0.0011 mg/amp-hr and must not operate inside, or within 1,000 feet of, an area zoned residential or mixed use, or within 1,000 feet of a school or school under construction. They are also required to conduct a site-specific risk analysis. To reduce hexavalent chromium emissions from dust escaping into the outside air, facilities are required to rapidly clean up spills and store chromic acid powder and flakes in a closed container in an enclosed storage area. Training conducted by CARB explaining the requirements of the Chrome Plating ATCM is required every two years for employees responsible for compliance. The 2007 ATCM also prohibits the sale or use of electroplating materials unless sold or used by individuals or businesses under an air district (District) permit to conduct such operations.

The Proposed Amendments were developed to reduce hexavalent chromium emissions emitted by chrome plating facilities to the lowest achievable level and will be consistent with CARB's emission reduction strategies required under Assembly Bill (AB) 617. AB 617 requires CARB to prepare a statewide strategy to reduce emissions of TACs in communities that experience disproportionate burdens from exposure to air pollutants. CARB's 2018 Community Air Protection Blueprint (Blueprint) sets forth CARB's strategy to reduce air pollution in these communities.[2] The Blueprint explains that, in addition to being subjected to emissions from large industrial facilities, such as oil refineries, these communities suffer because of their proximity to smaller sources, like chrome platers, metal recycling facilities, oil and gas operations, and other sources of emissions that contribute to localized air toxics impacts. In the Blueprint, CARB committed to amend the Chrome Plating ATCM in order to reduce pollution in communities impacted by emissions from stationary sources.

In response to community concerns regarding the exposures and toxicity of hexavalent chromium, which has about a 500 times higher cancer potency than diesel exhaust (per Consolidated Table of OEHHA/CARB Approved Risk Assessment Health Value), staff re-evaluated the 2007 ATCM. Staff determined that more needs to be done to reduce hexavalent chromium emissions from chrome plating facilities to further protect public health, including residents of low income communities and communities of color. Implementing the Proposed Amendments to the Chrome Plating ATCM would result in the most stringent emission regulation of chrome plating facilities in the nation to date, with the goal of eliminating hexavalent chromium emissions from the chrome plating industry entirely.

[2] CARB. Community Air Protection Blueprint. October 2018.

To achieve some of the emission reduction strategies established in the Blueprint, the Proposed Amendments outline~~s~~ a timeframe for decorative and functional chrome plating facilities to cease their use of hexavalent chromium and transition to alternatives. The prominent alternative technology, trivalent chromium, utilizes a plating process similar to the hexavalent chromium plating process. Both processes involve the electrical application of a coating of chromium (hexavalent or trivalent chromium) onto a surface and require similar electrical charges to be applied to a tank containing an electrolytic salt solution. The main difference between the two is that the electrolytic solution used in trivalent plating contains chromium in an oxidation state (i.e., the total number of electrons that an atom either gains or losses to form a chemical bond with another atom) of +3.

The U.S. Environmental Protection Agency (U.S. EPA) has identified chromium compounds, which includes trivalent chromium, as a hazardous air pollutant (HAP) under the 1990 federal Clean Air Act Amendments. Subsequently, and in response to AB 2728, CARB identified all federal HAPs as TACs. The Office of Environmental Health Hazard Assessment has released noncancer reference exposure levels (RELs) for trivalent chromium. Trivalent chromium (Cr^{+3}) noncancer RELs that are more health protective than hexavalent chromium (Cr^{+6}); however, unlike hexavalent chromium, trivalent chromium does not have carcinogenic health effects. Consequently, trivalent chromium is far less toxic than hexavalent chromium as there is no safe level of exposure for a carcinogen.[3] Because of the comparatively lower toxicity, trivalent chromium is a safer alternative to hexavalent chromium for chrome plating. A detailed description of the Proposed Amendments is contained in Chapter 2.0, "Project Description."

D. Environmental Review Process: Requirements under CARB's Certified Regulatory Program

CARB is the lead agency for the Proposed Amendments and has prepared this ~~Draft~~ Final EA pursuant to its CEQA certified regulatory program. California Public Resources Code section 21080.5 allows public agencies with regulatory programs to prepare a "functionally equivalent" or substitute document in lieu of an environmental impact report or negative declaration, once the program has been certified by the Secretary of the Resources Agency as meeting the requirements of CEQA. CARB's regulatory program was certified by the Secretary of the Resources Agency in 1978 (Cal. Code Regs., tit. 14, § 15251(d)). As required by CARB's certified regulatory program, and the policy and substantive requirements of CEQA, CARB prepared this ~~Draft~~ Final EA to assess the potential for significant adverse and beneficial environmental impacts associated with the Proposed Amendments and to provide a succinct analysis of those impacts (Cal. Code Regs., tit. 17, § 60004.2). The resource areas from the CEQA Guidelines Environmental Checklist (Cal. Code Regs., tit. 14, §

[3] National Institute for Occupational Safety and Health. Occupational Cancer – NIOSH Chemical Carcinogen Policy.

15000, appendix G) were used as a framework for assessing potentially significant impacts.

CARB has determined that approval of the Proposed Amendments is a "project" as defined by CEQA. CEQA defines a project as "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is an activity directly undertaken by any public agency" (Cal. Code Regs., tit. 14, § 15378(a)). Although the policy aspects of the Proposed Amendments do not directly change the physical environment, indirect physical changes to the environment could result from reasonably foreseeable compliance responses taken in response to implementation actions identified in the Proposed Amendments.

As required by CEQA, this ~~Draft~~ Final EA contains "an environmental analysis of the reasonably foreseeable methods by which compliance with that rule or regulation will be achieved" (Cal. Code Regs., tit. 14, § 15378). The analysis shall include reasonably foreseeable environmental impacts of the methods of compliance, reasonably foreseeable feasible mitigation measures related to significant impacts, and reasonably foreseeable alternative means of compliance that would avoid or eliminate significant impacts.

E. Public Review Process for the Environmental Analysis

On January 6, 2022, CARB issued a Notice of Preparation for the Proposed Amendments, announcing that it would prepare an EA. At a public workshop held on January 20, 2022, CARB staff discussed proposed regulatory activities for drafting the Proposed Amendments. Staff also described plans to prepare a Draft EA for the Proposed Amendments and invited public feedback on the scope of environmental analysis.

In accordance with CARB's certified regulatory program, and consistent with CARB's commitment to public review and input on regulatory actions, ~~this~~ the Draft EA ~~is~~ was subject to a public review process. The Staff Report, which ~~includes this~~ included the Draft EA, ~~is~~ was posted for a public review period that ~~begins~~ began on December 2, 2022 and ~~ends~~ ended on January 18, 2023. This period complies with the requirement for a minimum of 45 days of public review (Cal. Code Regs., tit. 17, § 60004.2(b)(2)).

At the conclusion of the public review period, the Board ~~will hold~~ held a public hearing~~s~~ on the Proposed Amendments. At the ~~first~~ hearing, ~~currently scheduled for~~ on January 2~~6~~7, 2023, the Board ~~will~~ did not take any approval action on the proposal; however, the Board ~~may~~ provided direction to staff on modifications to make to the Proposed Amendments. ~~If directed by the Board, staff would address any proposed changes in a notice that would be issued with modified regulatory language and supporting documentation for one or more 15-day review and comment periods as~~

~~required under the Administrative Procedure Act.~~ In response to the Board's direction, CARB issued two 15-day changes on March 27, 2023, and April 26, 2023. The comment period for the first 15-day changes commenced on March 27, 2023, and ended on April 11, 2023. The comment period for the second 15-day changes started on April 26, 2023, and ended on May 11, 2023.

At the conclusion of the review periods, staff ~~will~~ compiled public comments and responses, including comments on this Draft EA made during the noticed 45-day comment period and during the first and second 15-day comment periods ~~(or during any further CEQA comment period if CARB determines recirculation of this Draft EA is necessary)~~, and prepared a final hearing package, which includes the Final EA and response to environmental comments, for the Board's consideration at a second public hearing. This second hearing is scheduled for May 25, 2023. ~~currently planned for spring 2023.~~ If the Proposed Amendments are adopted by the Board at that time, a Notice of Decision will be filed with the Secretary of Natural Resources Agency and posted on CARB's regulatory webpage. The Final Statement of Reasons for the final Regulation would be prepared by staff, and the completed regulatory package would be filed with the Office of Administrative Law.

2.0 PROJECT DESCRIPTION

A. Objectives

The Proposed Amendments seek to further protect public health and air quality in communities near chrome plating facilities. Health and environmental benefits would be achieved by substantially reducing and ultimately eliminating emissions of hexavalent chromium emitted from these facilities. It is the public policy of the State that emissions of toxic air contaminants should be controlled to levels which prevent harm to the public health (Health & Saf. Code § 39650).

The primary objectives of the Proposed Amendments are the following:

1. Reduce emissions of hexavalent chromium sufficiently so that the source will not result in, or contribute to, ambient levels at or in excess of the level which may cause or contribute to adverse health effects. (Health & Saf. Code §§ 39600, 39650, 39658, 39659, 39666, and 41511).

2. Prior to the phase out of hexavalent chromium in functional chrome plating, reduce health risk from the exposure to hexavalent chromium to the lowest level achievable through application of best available control technology or a more effective control method to reduce adverse health effects. (Health & Saf. Code §§ 39600, 39650, 39658, 39659, 39666, and 41511).

3. Eliminate emissions of hexavalent chromium from the chrome plating industry in California following the applicable phase out in order to prevent an endangerment of public health (Health & Saf. Code § 39666(c)).

4. Catalyze the development of technologies that substantially reduce the emissions of hexavalent chromium emitted from chrome plating facilities and accelerate the development of alternative technologies that are more environmentally friendly and that will continue to deliver the performance, practicality, and safety demanded by the market. (Health & Saf. Code § 39650)

5. It is the public policy of the State that emissions of toxic air contaminants should be controlled to levels which prevent harm to the public health. (Health & Saf. Code § 39650).

B. Description of Proposed Amendments and Reasonably Foreseeable Compliance Responses

1. Complete Phase Out of the Use of Hexavalent Chromium at Chrome Plating Facilities in the State

a) Summary

Staff propose the phase out of hexavalent chromium use for chrome plating processes at all chrome plating facilities in California as follows:

- Effective January 1, 2024, staff are proposing that no person install or operate any new chrome plating facility that uses hexavalent chromium in the State. An owner or operator may modify an existing chrome plating facility as long as permitted annual ampere-hours, after modification, do not exceed permitted levels for the facility as of January 1, 2024, and as long as any modified or additional hexavalent chromium containing tanks meet all applicable requirements.
- Effective January 1, 2027, staff are proposing that decorative plating facilities in California must stop using hexavalent chromium. An extension up to one year may be granted by the District if it determines that the facility needs additional time to procure or install equipment or to complete permitting or construction necessary to transition to alternative technology.
- Facilities that elect to comply with the alternative phase out pathway may continue using hexavalent chromium for the purposes of decorative chrome plating until January 1, 2030. The facility must submit a notification to the District by January 1, 2025, indicating that they are electing to pursue the alternative phase out pathway and must comply with the building enclosure requirements starting on January 1, 2026. The District may grant facilities that elect to comply with the alternative phase out pathway up to a one-year extension to the January 1, 2030, phase out date if the District determines that the facility needs additional time to procure or install equipment or to complete permitting or construction necessary to transition to alternative technology.
- Effective January 1, 2039, staff are proposing that all functional chrome plating facilities must stop using hexavalent chromium. CARB will conduct two technology reviews, to be completed by January 1, 2032, and January 1, 2036, assessing the progress made in development of replacement technologies for hard chrome plating and chromic acid anodizing facilities. CARB staff may propose further amendments for consideration by the Board, which could include adjusting the deadline for this phase out based on the findings of the technology reviews.

b) Compliance Responses

Reasonably foreseeable compliance responses associated with requiring all chrome plating facilities to phase out hexavalent chromium include conversion to alternative technology, such as trivalent chromium, which may result in modifications of existing facilities within California. The modifications involved in the conversion to trivalent chromium or another alternative technology include installation of trivalent chromium equipment, air pollution control devices, disposing of hexavalent chromium and associated equipment. It is also possible that facilities may shut down or relocate out of the State. If this were to take place, then it could result in an increase of the number of heavy-duty truck and train trips transporting parts out of the State to be plated with hexavalent chromium and back to customers in California.

Since the mid-1970s, trivalent chromium has been commercially used at decorative chromium plating facilities and at some functional chromium plating facilities across the nation. It is anticipated that the use of trivalent chromium will generally increase nationally and globally. However, the chrome plating industry has expressed concerns over the viability of trivalent chromium plating technology. Specifically, decorative platers have raised concerns with the aesthetics, and functional platers have concerns with the durability of trivalent chromium plated parts.

According to concerns voiced by the decorative plating industry during stakeholder meetings, trivalent chromium plating can result in a slightly different shade than the deposit produced by hexavalent chromium plating. Trivalent chromium plating does provide color and shine similar to those provided by hexavalent chromium. However, there is a concern that these plated parts may not have the precise shade and finish type to which consumers have grown accustomed. For example, customers of chrome plating facilities may expect decorative plated parts used to trim motorcycles, cars, and trucks to have the specific hexavalent chromium finish, which is slightly different than the finish produced by trivalent chromium plating. As such, there is a concern that the Proposed Amendments could result in a decline in demand for decorative plating from California chrome platers that convert to trivalent chromium following the phase out and an increase in demand for parts plated out-of-state by facilities still using hexavalent chromium.

Functional chrome plating facilities raised concerns during stakeholder meetings that trivalent chromium does not achieve the same level of durability as hexavalent chromium and does not meet specific durability requirements. Functional parts plated with hexavalent chromium include landing gear, marine equipment, aerospace architecture, medical devices, and industrial machinery. These parts require a very high level of corrosion resistance, hardness, and resistance to abrasive wear. At this time, trivalent chromium plated parts often do not meet the durability specifications required by some consumers such as the military and aerospace industry. Due to this, industry has expressed concern that the Proposed Amendments could result in most functional chrome plating facilities either leaving the State or sending parts

out-of-state to be plated. Industry has also expressed a concern that California-based businesses/manufacturers may relocate to other states to be closer to chrome plating facilities that can still use hexavalent chromium.

The only known ban on hexavalent chromium outside of the state is from the Registration, Evaluation and Authorization of Chemicals (REACH) of the European Union (UN), which established a phase out date for the use of hexavalent chromium of September 21, 2017.[4] However, REACH allows authorized uses where there are no alternatives, and it is deemed necessary, and the user is doing the maximum to prevent impacts to public health. Since hexavalent chromium is presently allowed within all other states in the U.S.A. and a majority of countries, it is possible that owners or operators of facilities would consider relocating their operations to other states rather than transition to an alternative such as trivalent chromium. However, it is not feasible to predict to what extent owners or operators may choose to move facilities out of the state as a result of the Proposed Amendments or to predict where they would relocate. Such predictions would be speculative, particularly given the influence of various business, market, personnel, and personal considerations involved in the decision to relocate. These considerations may include the cost of shipping parts to out-of-state chrome plating facilities to be plated with hexavalent chromium, cost of land or real estate, presence of skilled labor, client retention, establishing the business in a new market, moving costs, as well as personnel factors such as replacing employees who do not relocate and personal factors such as whether the owner or operator is willing to move their own residence. Therefore, staff have determined that the effects of relocation of operations out-of-state are too speculative for any further evaluation and did not include these effects in the analysis in Chapter 4.0, below.

2. Technology Reviews for Functional Hard Hexavalent Chromium Facilities to Determine Status of Technology

a) Summary

The Amendments specify two technology reviews to be completed by January 1, 2032, and January 1, 2036, that assess the feasibility of less toxic alternatives to replace hexavalent chromium in functional chrome plating. CARB staff may propose further amendments for consideration by the Board depending on the results of the technology reviews, such as adjusting the phase out date as needed.

b) Compliance Responses

The technology reviews will evaluate the progress made in the development of technologies to replace hexavalent chromium in the chrome plating industry. Functional chrome plating facilities could continue using hexavalent chromium

[4] REACH Official Journal of the European Union. Commission Regulation EU) No. 348/2013. April 17, 2013.

throughout the technology review process, which would be completed ~~by~~ prior to the phase out on January 1, 2039.

3. Additional Control Requirements for ~~Functional~~ Hexavalent Chromium Facilities

~~Functional c~~Chrome plating facilities will be required to comply with additional emission control requirements, such as reduced emission limits, building enclosures, housekeeping requirements, best management practices, and air pollution control techniques. The proposed additional emission control requirements are summarized below.

a) Building Enclosure Requirements for ~~Functional~~ Chrome Plating Facilities

i) Summary

The Proposed Amendments establish requirements for enclosure of buildings at existing functional chrome plating facilities and decorative chrome plating facilities that elect to comply with the alternative phase out pathway, which become effective on January 1, 2026.

Specifically, all Tier I, Tier II, and Tier III hexavalent chromium tanks and buffing, grinding, and polishing operations must be operated within a building enclosure to reduce fugitive hexavalent chromium emissions. Under the Proposed Amendments, a Tier I tank is a tank that contains at least 1,000 parts per million (ppm) of hexavalent chromium and is not a Tier II or Tier III tank. A Tier II tank is a tank that is operated within the range of temperatures and corresponding hexavalent chromium concentrations specified in Appendix 9 of the Proposed Amendments. A Tier III tank is a tank that meets any of the following:

- Is permitted to operate within the range of temperatures and corresponding hexavalent chromium concentrations specified in the Appendix 9 of the Proposed Amendments; or
- Contains a hexavalent chromium concentration greater than 1,000 ppm, and uses air sparging as an agitation method or is electrolytic; or
- Is a chrome plating tank that contains hexavalent chromium.

All building enclosure openings that are open to the exterior and on opposite ends of the building enclosure from each other cannot be simultaneously open except during the passage of vehicles, equipment, or people, and must be equipped with a protected opening method provided in the Proposed Amendments.

The Proposed Amendments include additional requirements to close building enclosure openings for chrome plating facilities located within 1,000 feet of a sensitive receptor (e.g., schools, nursing homes, residential care facilities, daycare centers, and hospitals), as measured from the property line of the sensitive receptor to the building

enclosure opening. Chrome plating facilities located within 1,000 feet of a sensitive receptor must use one of the listed methods provided in the Proposed Amendments and remain closed except during the passage of vehicles, equipment, or people though the building enclosure opening.

The building enclosure required to house all Tier II or Tier III functional hexavalent chromium tanks must not have openings that exceed a combined area of 3.5 percent of the building enclosure envelope. The 3.5 percent building enclosure requirement does not apply to Tier I functional hexavalent chromium tanks; however, these tanks are still required to operate within an enclosed building. All building enclosure openings in the roof that are located within 15 feet from the edge of any Tier II or Tier III functional hexavalent chromium tanks shall either remain closed or be equipped with a HEPA filter or other add-on air pollution control device that fully covers the opening ~~or remain closed~~ except in situations when building enclosure openings are actively providing access for equipment or parts or provide intake or circulation air for a building enclosure.

If a chrome plating facility cannot comply with the building enclosure requirements due to conflicting requirements set by the federal Occupational Safety and Health Administration (OSHA), California Occupational Safety and Health Administration (Cal/OSHA), or other applicable municipal codes or agency requirements directly related to worker safety, the owner or operator must submit a request to implement an alternative building enclosure compliance plan to the District.

A complete list of building enclosure requirements is provided in the Proposed Amendments.

ii) Compliance Responses

The proposed building enclosure requirement would require hexavalent chromium tanks operating in functional chrome plating facilities and decorative chrome plating facilities that elect to comply with the alternative phase out pathway to be operated within a building enclosure ~~at hexavalent chrome plating facilities~~. Compliance responses associated with the building enclosure requirements could result in the reduction of building ventilation, which could potentially result in workers being exposed to higher concentrations of hexavalent chromium emissions prior to the phase out of hexavalent chromium in functional chrome plating.

b) Additional Air Pollution Control Technique Requirements for Hexavalent Chromium Operations

i) Summary

Until January 1, 2026, chrome plating tank(s) that use hexavalent chromium for the purposes of functional chrome plating must meet the requirements in Table 2-1.

Chrome plating tank(s) that use hexavalent chromium for the purposes of decorative chrome plating must meet the requirements identified in Table 2-1 until they cease to use hexavalent chromium.

Table 2-1: Hexavalent Chromium Emission Limitation for Chrome Plating Tanks

Sensitive Receptor Distance[1]	Annual Permitted Ampere-Hours	Emission Limitation
≤ 330 feet	≤ 20,000	Use Chemical Fume Suppressants as specified in section 93102.8[2]
≤ 330 feet	> 20,000 and ≤ 200,000	0.0015 milligrams/Ampere-Hour as measured after Add-On Air Pollution Control Device(s)
≤ 330 feet	> 200,000	0.0015 milligrams/Ampere-Hour as measured after Add-on Air Pollution Control Device(s)[3]
> 330 feet	≤ 50,000	Use Chemical Fume Suppressants as specified in section 93102.8[2]
> 330 feet	> 50,000 and ≤ 500,000	0.0015 milligrams/Ampere-Hour
> 330 feet	> 500,000	0.0015 milligrams/Ampere-Hour as measured after Add-on Air Pollution Control Device(s)[3]

[1] Sensitive receptor distance is the most current distance between the Facility and the nearest sensitive receptor that is recorded with the District.
[2] Alternatively, a Facility may install an Add-on Air Pollution Control Device(s) that controls emissions to below 0.0015 milligrams per Ampere-Hour.
[3] When annual emissions exceed 15 grams, a Site-Specific Risk Analysis must be conducted by the Owner or Operator in accordance with the District's procedures, unless a Site-Specific Risk Analysis has already been conducted and approved by the District. The analysis shall be submitted to the District.

Effective January 1, 2026, the Proposed Amendments establish additional requirements for chrome plating tanks used for functional chrome plating that contain hexavalent chromium ~~containing tanks~~, which would require owners or operators of chrome plating facilities to use add-on air pollution device(s) to control hexavalent chromium emissions and meet an emission limit of 0.00075 milligrams per ampere-hour or less (mg/amp-hr).

Effective January 1, 2026, the Proposed Amendments would require owners or operators of functional chrome plating facilities to collect and ventilate emissions from Tier III hexavalent chromium tanks that are not chrome plating tanks to an add-on air pollution control device or an approved alternative compliance method. These tanks must comply with the following hexavalent chromium emission limits and requirements:

- 0.00075 milligrams per ampere-hour (mg/amp-hr), if any Tank(s) vented to an add-on air pollution control device are electrolytic.
- 0.20 milligrams per hour (mg/hr), if all tanks that are vented to an add-on air pollution control device are not electrolytic and the ventilation system has a maximum exhaust rate of 5,000 cubic feet per minute (cfm) or less; or
- 0.004 milligrams per hour foot squared (mg/hr-ft_2), with the applicable surface area based on the tank surface area of all chromium tank(s) and other tanks required to be vented to an add-on air pollution control, provided all tanks are not electrolytic, if the ventilation system has a maximum exhaust rate of greater than 5,000 cfm.

Additional requirements for Tier III hexavalent chromium tanks that are not chrome plating tanks at functional chrome plating facilities include:

- The owner or operator of a Tier III hexavalent chromium tank must apply for an authority to construct with the District for the add-on air pollution control device prior to January 1, 202~~6~~5.
- Conduct a source test on Tier III hexavalent chromium tanks demonstrating that the applicable emission limitation is satisfied and submit it to the District in its application for ~~prior to issuance of~~ the permit to operate ~~from the District~~.
- Beginning no later than July 1, 2024, and until the Add-on Air Pollution Control Device has been installed, cover the entire surface area of the Tier III hexavalent chromium Tank no later than 30 minutes after ceasing operation of the Tier III Tank. Tank covers shall be free of holes, tears, and gaps and made out of a non-permeable and durable material such as metal or plastic.

~~The owner or operator of a chrome plating facility~~ Tier III hexavalent chromium tank(s) that are not chrome plating tanks may not be subject to the add-on air pollution control device requirements listed above provided the uncontrolled hexavalent chromium emission rate of the tank is less than 0.20 mg/hr, as demonstrated by source test approved by the District.

The Proposed Amendments would also require owners or operators of functional chrome plating facilities to control emissions from Tier II hexavalent chromium tanks by either complying with the limits listed above for Tier III hexavalent chromium tanks or utilizing a tank cover, mechanical fume suppressant, or another approved method approved ~~no later than~~ beginning July 1, 2024.

The Proposed Amendments establish additional special requirements for enclosed hexavalent chromium plating tanks, which would require owners or operators of chrome plating facilities to control hexavalent chromium emissions through one of the following processes:

- Achieving an emission limitation of 0.015 milligrams per dry standing cubic meter (mg/dscm) of hexavalent chromium from each enclosed hexavalent chromium plating tanks as measured after passage through the add on air pollution control device(s).
- Using a chemical fume suppressant listed in the Proposed Amendments and maintaining the surface tension of the chrome plating bath as specified in the Proposed Amendments. An alternative chemical fume suppressant may be used upon approval of the Executive Officer provided the following criteria are met:

    - The chemical fume suppressant does not contain PFAS or any PFAS compound.
    - The chemical fume suppressant has been source tested under conditions that are representative of normal operations in a hexavalent chromium chrome plating bath and demonstrated to reduce the hexavalent chromium emissions below 0.01 milligrams per ampere-hour.
    - In the source testing, the hexavalent chromium emission rate of 0.01 milligrams per ampere-hour was achieved under conditions in which the surface tension did not exceed 45 dynes/cm, as measured by a stalagmometer or 35 dynes/cm, as measured by a tensiometer.

- Not allowing the mass emission rate of the total chromium to exceed the maximum allowable mass emission rate ~~determined by~~ as specified in the Proposed Amendments.

ii) Compliance Responses

The proposed additional control technique requirements would require modification to existing chrome plating facilities. The modifications would include the installation of add-on control equipment, including fans, ducting, control system, and exhaust stack. Although these modifications would take place within the existing footprint of these facilities, use of on- and off-road equipment required to install these modifications may result in an increase in short-term emissions of air pollution and noise.

c) Housekeeping Requirements

i) Summary

The Proposed Amendments establish specific housekeeping requirements applicable to facilities that use hexavalent chromium for chrome plating operations. Starting on the effective date of the Proposed Amendments, the updated housekeeping requirements will apply to reduce fugitive emissions of hexavalent chromium from escaping into the community. Specifically, chromic acid powder or flakes, or other substances that may contain hexavalent chromium must be stored in a closed

container in an enclosed storage and be transported from the enclosed storage area to the chrome plating bath in a closed container. Spills of any liquid or solid material that may contain hexavalent chromium must be cleaned up or contained within one hour after being spilled using an approved cleaning method or a containment device such as a drip tray. The listed surfaces, floors, and walkways must be cleaned weekly using an approved cleaning method as these are the surfaces that are likely to become contaminated with hexavalent chromium. Hexavalent chromium containing wastes generated from housekeeping activities must be stored, disposed of, recovered, or recycled using practices that do not lead to fugitive emissions, and containers containing these wastes must be closed at all times except when being filled or emptied and must be stored in an enclosed storage area. Floors within a 20-foot radius of any buffing, grinding, or polishing workstation must be cleaned using an approved cleaning method at the end of each day. The listed materials, including housekeeping supplies, reusable tank covers, reusable hangers, and anodes and cathodes used in the tanks must be stored in a closed container or in an enclosed storage area when not in use because these are parts that are likely to be contaminated with hexavalent chromium. A complete list of housekeeping requirements is provided in the Proposed Amendments.

ii) Compliance Responses

The housekeeping requirements in the Proposed Amendments do not involve compliance responses that could result in physical development that may have direct or indirect environmental impacts. Therefore, this ~~Draft~~ Final EA does not discuss environmental review of this aspect of the rulemaking any further.

d) Best Management Practices

i) Summary

The Proposed Amendments establish best management practices that operators of chrome plating facilities using hexavalent chromium must follow to prevent the release or generation of fugitive hexavalent chromium emissions. Effective July 1, 2024, and for as long as facilities continue to use hexavalent chromium for chrome plating, chrome plating facilities will be required to minimize dragout from hexavalent chromium tanks by containing hexavalent chromium fluids using a drip tray or other listed best management practices, as applicable. Further, owners or operators and employees shall not spray rinse parts or equipment that were previously in a hexavalent chromium tank unless the equipment is lowered inside the tank such that the liquid is captured in the tank unless they use one of the listed alternative methods. Other best management practices include limitations on the following operations: air sparging, buffing, grinding, polishing, and compressed air cleaning or drying. Further, tanks must be clearly labelled with a tank number or identifier, permit number, bath contents, maximum concentration of hexavalent chromium, operating temperature

range, agitation methods, and tier. A complete list of best management practices is provided in the Proposed Amendments.

ii) Compliance Responses

The proposed best management practices would reduce fugitive emissions of hexavalent chromium from chrome plating operations and do not involve compliance responses that could result in physical development that may have direct or indirect adverse environmental impacts. Therefore, this ~~Draft~~ Final EA does not discuss environmental review of this aspect of the rulemaking any further.

e) Source Test Requirement for Functional Chrome Plating Facilities

i) Summary

The Proposed Amendments establish additional parameters for monitoring hexavalent chromium emissions emitted from functional chrome plating facilities. Functional chrome plating facilities that use hexavalent chromium would be subject to compliance source testing every two years starting on January 1, 2026, to demonstrate compliance with the applicable emission limitations. Facilities using trivalent chromium must conduct a source test to demonstrate compliance with the chromium emission rate upon the facility's initial start-up.

ii) Compliance Responses

The proposed additional monitoring requirements would require existing functional chrome plating facilities to operate at higher levels for longer periods compared to the facility's normal operation conditions. This compliance source testing would occur over a short period (i.e., one day out of two years) and would not require a functional chrome plating facility to operate at a substantially higher load.

f) Air Pollution Control Requirements for Facilities Converting from Hexavalent to Trivalent Chromium Operation

i) Summary

Owners or operators of chrome plating facilities that convert their plating operations from using hexavalent to trivalent chromium will be subject to the following requirements:

- Meet an emission limitation of less than or equal to 0.01 mg/dscm as demonstrated by a source test conducted upon initial start-up; or
- Use a wetting agent as a bath component and comply with the applicable recordkeeping and reporting provisions provided in the Proposed Amendments.

ii) Compliance Responses

The proposed requirements for chrome plating facilities that use trivalent chromium would necessitate owners or operators of existing facilities that convert to trivalent chromium to modify their facilities. The 2007 ATCM set forth the emission limitation, so existing trivalent chromium plating facilities would not need to modify their facility to comply with the Proposed Amendments. The air pollution control requirements would require owners or operators to modify their facility to meet the emission limitation, which may require installation of add-on control equipment, or to use a wetting agent. These modifications may include disposal of old hexavalent chromium plating equipment, such as plating baths and other contaminated parts for facilities converting from hexavalent chromium, and relocation of tanks, fans, ducting, control systems and exhaust stacks. Although these modifications would take place within the existing footprint of these facilities, use of on- and off-road equipment required to install these modifications may result in an increase in short-term emissions of air pollution and noise.

C. Summary of Compliance Responses

Reasonably foreseeable compliance responses to the Proposed Amendments include modification of existing chrome plating facilities to trivalent chromium, installation of building enclosures and related modifications of buildings to reduce openings at functional chrome plating facilities and decorative chrome plating facilities that elect to comply with the alternative phase out pathway, ~~and installation of air pollution control requirements at functional chrome plating facilities, which include modification of buildings to reduce openings, installation of tank building enclosures,~~ and manufacturing and installation of add-on air pollution control equipment at ~~the~~ functional chrome plating facilities. The implementation of the Proposed Amendments has the potential to result in a decline in demand for decorative plating from California chrome platers that convert to trivalent chromium following the phase out and an increase in demand for parts plated out-of-state by facilities still using hexavalent chromium. Due to a potential increase in demand for out-of-state hexavalent chromium plated parts in California, there could be an increase in the number of heavy-duty trucks and train trips transporting parts out of the State to be plated with hexavalent chromium and back to customers in California. Similarly, there could be a decrease in the number of heavy-duty trucks and train trips transporting parts into the State to be plated using hexavalent chromium. Requiring owners or operators of functional chrome plating facilities to install additional air pollution control devices would result in the use of construction equipment that may result in temporary increases in air pollution. The building enclosure requirements applicable to functional chrome plating facilities may temporarily result in workers being exposed to higher concentrations of hexavalent chromium emissions prior to the phase out of hexavalent chromium.

3.0 ENVIRONMENTAL AND REGULATORY SETTING

The CEQA Guidelines require an environmental impact report (EIR) to include an environmental setting section, which discusses the current environmental conditions near the project. This environmental setting constitutes the baseline physical conditions by which an impact is determined to be significant (Cal. Code Regs., tit. 14, § 15125). For this ~~Draft~~ Final EA, CARB is using the environmental conditions as they existed when the Notice of Preparation (NOP) was released to inform the evaluation required under CARB's certified regulatory program (see Cal. Code Regs., tit. 17, § 60004.3(b)).

As discussed in Chapter 1.0 of this ~~Draft~~ Final EA, CARB has a CEQA certified regulatory program and prepares an EA in lieu of an EIR. This ~~Draft~~ Final EA is a functional equivalent to an EIR under CEQA; therefore, in an effort to comply with the policy objectives of CEQA, an environmental setting and a regulatory setting with environmental laws and regulations relevant to the Proposed Amendments have been included as Attachment A to this ~~Draft~~ Final EA.

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4.0 IMPACT ANALYSIS AND MITIGATION MEASURES

A. Approach to the Environmental Impacts Analysis and Significance Determination

This chapter contains an analysis of environmental impacts and mitigation measures associated with the Proposed Amendments. CEQA states the baseline for determining the significance of environmental impacts would normally be the existing conditions at the time the environmental review is initiated (Cal. Code Regs., tit. 14, § 15125(a)). Therefore, significance determinations reflected in this Draft Environmental Analysis (EA) are based on a comparison of the potential environmental consequences of the Proposed Amendments with the regulatory setting and physical conditions in 2022 (see Attachment A). For the purpose of determining whether the Proposed Amendments may have a potential effect on the environment, CARB evaluated the potential physical changes to the environment resulting from the reasonably foreseeable compliance responses described in further detail in Chapter 2.0 of this ~~Draft~~ Final EA. A table summarizing all the potential impacts and proposed mitigation for each resource area discussed below is included in Attachment B to this document.

The reasonably foreseeable compliance responses associated with the Proposed Amendments are analyzed in a programmatic manner for several reasons: (1) any individual action or activity would be carried out under the same authorizing regulatory authority; (2) the reasonably foreseeable compliance responses would result in generally similar environmental effects that can be mitigated in similar ways (Cal. Code Regs., tit. 14, § 15168(a)(4)); and (3) while the types of foreseeable compliance responses can be reasonably predicted, the specific location, design, and setting of the potential actions cannot feasibly be known at this time. If a later activity would have environmental effects that are not examined within this ~~Draft~~ Final EA, the public agency with authority over the later activity may be required to conduct additional environmental review as required by CEQA or other applicable law.

The analysis is based on reasonably foreseeable compliance responses that are based on a set of reasonable assumptions. While the compliance responses described in this ~~Draft~~ Final EA are not the only conceivable ones, they provide a credible basis for impact conclusions that are consistent with available evidence. In addition, as discussed in Chapter 2.0 of this ~~Draft~~ Final EA, the evaluation of certain compliance responses would be speculative under CEQA. Those compliance responses are related to the potential for some chrome plating operations moving outside of the State. Therefore, an evaluation of effects of relocation of operations out-of-state is not required and is not included in this analysis. The analysis also includes actions that could likely occur under a broad range of the potential scenarios. The impact discussions reflect a conservative assessment to describe the type and magnitude of effects that may occur (i.e., the conclusions tend to overstate adverse effects) because the specific location, extent, and design of potential new and/or modified facilities cannot be known at this time.

1. Adverse Environmental Impacts

The potentially significant adverse impacts on the environment discussed in this ~~Draft~~ Final EA, and significance determinations for those effects, reflect the programmatic nature of the reasonably foreseeable compliance responses of the regulated entities. These reasonably foreseeable compliance responses are described in more detail in Chapter 2.0 ("Project Description") of this ~~Draft~~ Final EA. This ~~Draft~~ Final EA addresses broadly defined types of impacts or actions that may be taken by others in the future as a result of implementation of the Proposed Amendments.

This ~~Draft~~ Final EA takes a conservative approach and considers some environmental impacts as potentially significant because of the inherent uncertainties in the relationship between physical actions that are reasonably foreseeable under the Proposed Amendments and environmentally sensitive resources or conditions that may be affected. This conservative approach tends to overstate environmental impacts in light of these uncertainties and is intended to satisfy the good-faith, full-disclosure intention of CEQA. If and when specific projects are proposed and subjected to project-level environmental review, it is expected that many of the impacts recognized as potentially significant in this Draft EA can actually be feasibly avoided or reduced to a less-than-significant level.

Where applicable, consistent with CARB's certified regulatory program requirements (Cal. Code Regs, tit. 17, § 60004.2), this ~~Draft~~ Final EA also acknowledges potential beneficial effects on the environment in each resource area that may result from implementation of the Proposed Amendments. Any beneficial impacts associated with the Proposed Amendments are included in the impact analysis for each resource area listed below.

2. Mitigation Measures

This ~~Draft~~ Final EA contains a degree of uncertainty regarding implementation of feasible mitigation for potentially significant impacts. "'Feasible' means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors." (Pub. Resources Code, § 21061.1) While CARB is responsible for adopting the Proposed Amendments, it does not have authority over all the potential infrastructure and development projects that could be carried out in response to the Proposed Amendments. Other agencies are responsible for the review and approval, including any required environmental analysis, of any facilities and infrastructure that are reasonably foreseeable, including any adoption of feasible project-specific mitigation measures, and any monitoring of mitigation implementation. For example, local cities or counties must review and decide to approve proposals to construct new facilities; CARB does not have jurisdiction over land use permitting of any potential development associated with the compliance responses. (Cal. Const., Article XI, Section 7 ("A county or city may make and enforce within its limits all local, police,

sanitary, and other ordinances and regulations not in conflict with general laws."); California Building Industry Assn. v. City of San Jose (2015) 61 Cal.4th 435, 455; Big Creek Lumber Co. v. County of Santa Cruz (2006) 38 Cal.4th 1139, 1151-1152; Health & Saf. Code §§ 39000-44474 (CARB's statutory authority provides no authority to regulate local land use permitting)). Additionally, State and/or federal permits may be needed for specific environmental resource impacts, such as take of endangered species, filling of wetlands, and streambed alteration.

Because CARB cannot predict the location, design, or setting of specific projects that may result and does not have authority over implementation of specific infrastructure projects that may occur, the programmatic analysis in this ~~Draft~~ Final EA does not allow for identification of the precise details of project-specific mitigation. As a result, there is inherent uncertainty in the degree of feasible mitigation that would ultimately need to be implemented to reduce any potentially significant impacts identified in this ~~Draft~~ Final EA.

Given the foregoing, and due to legal factors affecting the feasibility of CARB's proposed mitigation for several of the identified potential significant indirect impacts associated with the Proposed Amendments, CARB's implementation of the identified mitigation measures is infeasible, based on the following: 1) the lack of certainty of the scope, siting and specific design details of compliance-response development projects, which prevents CARB from being able to determine the projects' significant environmental impacts; and 2) even if there was certainty with respect to compliance-response development projects and associated significant environmental impacts, CARB lacks the legal authority and jurisdiction to permit these projects. Therefore, due to its lack of legal permitting authority and jurisdiction to permit these compliance-related development projects that may occur following adoption of the proposed amendments, CARB's implementation of the mitigation measures suggested, below, in this EA are legally infeasible to implement and enforce.

Consequently, this ~~Draft~~ 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 less than significant) and discloses, for CEQA compliance purposes, that potentially significant environmental impacts may be unavoidable, where appropriate. It is also possible that the amount of mitigation necessary to reduce environmental impacts to below a significant level may be far less than disclosed in this ~~Draft~~ Final EA on a case-by-case basis. It is expected that many potentially significant impacts of facility and infrastructure projects would be avoidable or mitigatable to a less-than-significant level as an outcome of their project-specific environmental review processes, conducted by the appropriate District with jurisdiction as the lead agency under CEQA.

B. Resource Area Impacts and Mitigation Measures

The following discussion provides a programmatic analysis of the reasonably foreseeable compliance responses that could result from implementation of the Proposed Amendments, described in Chapter 2.0 of this ~~Draft~~ Final EA. The impact analysis is organized by where impacts may occur near chrome plating facilities. These impacts are discussed under each environmental resource area in accordance with the topics presented in the Environmental Checklist in Appendix G to the CEQA Guidelines (Cal. Code Regs., tit. 14, §§ 15000 et seq.). These impact discussions are followed by the types of mitigation measures that could be required to reduce potentially significant environmental impacts.

1. Aesthetics

Landscape character can be defined as the visual and cultural image of a geographic area. It consists of the combination of physical, biological, and cultural attributes that make each landscape identifiable or unique. Visual character may range from predominately natural to heavily influenced by human development. Its value is related, in part, to the importance of a site to those who view it. Viewer groups typically include residents, motorists, and recreation users.

Impact 1-1: Short-Term Construction-Related Impacts on Aesthetics

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The Proposed Amendments would allow an alternative phase out pathway for decorative plating facilities. The alternative pathway will require decorative chrome plating facilities to comply with building enclosure requirements by January 1, 2026, and cease use of hexavalent chromium by January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as meeting lower emission limits, building enclosures, air pollution control equipment, best management practices, and source testing. Chrome plating facilities that switch to trivalent chromium must control chromium emissions by meeting the emission limitation or using a wetting agent. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the State, which could result in an increase in heavy-duty truck traffic along State haul routes and potentially other modes of transpiration such as train traffic along State rail routes.

The construction of new facilities is not anticipated in the State due to the Proposed Amendments. However, it is possible that existing facilities would require internal retrofitting which would include minimal ground-disturbing activity. The retrofit would not involve activities outside of the building that could degrade the visual character or

quality of the surrounding area; thus, visual impacts would not be substantial in these cases. Construction activities would include, but are not limited to, the removal of existing chrome plating equipment and modifications such as installing air pollution control devices and upgrading building enclosures.

If an owner or operator decide to convert their chrome plating facility from hexavalent to trivalent chromium, construction activities may also include installation of new plating equipment and site preparation for the installation. Owners or operators of decorative plating facilities that elect the alternative phase out pathway will be required to comply with the building enclosure requirements, which may require construction involving the installation or upgrading of building enclosures.

Although it is not possible to predict exactly where project-related improvements would occur or what each project would involve, these construction activities would occur throughout the State. Depending on the size and scope of the modifications to existing chrome plating facilities, construction equipment could include forklifts, welding equipment, aerial lifts, and air compressors. Construction activities to install additional controls and to convert a facility to trivalent chromium could range from six days to two months at each project site.

Because modifications would be limited to areas within the existing footprint of these industrial facilities, short-term construction-related aesthetic impacts associated with the Proposed Amendments would be **less than significant**.

Impact 1-2: Long-Term Operational-Related Impacts on Aesthetics

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The alternative phase out pathway will require decorative chrome plating facilities to comply with the building enclosure requirements starting on January 1, 2026, and cease use of hexavalent chromium by January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as building enclosures, air pollution control equipment, best management practices, and source testing. Chrome plating facilities that switch to trivalent chromium must control chromium emissions by meeting the emission limitation or using a wetting agent. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the State, which could result in an increase in heavy-duty truck traffic along State haul routes and potentially other modes of transportation such as train traffic along State rail routes.

Long-term operation-related activities associated with compliance with the Proposed Amendments may require new or additional equipment within existing facilities.

Where upgrades may be located within existing facilities, these features would not degrade the visual character or quality of the surrounding area; thus, visual impacts would not be substantial in these cases. No new facilities within the State are anticipated to result from compliance with the Proposed Amendments. Therefore, long-term operational-related aesthetics effects would be **less than significant**.

2. Agriculture and Forestry Resources

Impact 2-1: Short-Term Construction-Related and Long-Term Operational-Related Impacts to Agriculture and Forestry Resources

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The alternative phase out pathway will require decorative chrome plating facilities to comply with building enclosure requirements starting on January 1, 2026, and cease use of hexavalent chromium by January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as building enclosures, air pollution control equipment, best management practices, and source testing. Chrome plating facilities that switch to trivalent chromium must control chromium emissions by meeting the emission limitation or using a wetting agent. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the State, which could result in an increase in heavy-duty truck traffic along State haul routes and potentially other modes of transportation such as train traffic along State rail routes.

Construction activities that would occur with implementation of the Proposed Amendments may involve conversion of existing hexavalent chromium plating facilities to trivalent chromium operations, which could involve, but not be limited to, site preparation for new plating equipment and the installation of trivalent plating equipment. Owners or operators of decorative plating facilities that elect the alternative phase out pathway will be required to comply with the building enclosure requirements, which may require construction involving the installation or upgrading of building enclosures. Owners or operators of functional chrome plating facilities would also be required to install additional control within their facilities, including modifications such as installing air pollution control devices, relocating hexavalent chromium tanks, installing tank enclosures, and upgrading building enclosures. It is assumed that all improvements and modifications would occur within the current footprint of existing facilities as well as within existing building structures, and no expansion of the footprint of existing facilities or construction of new building structures to accommodate conversion and modification requirements would occur. Although it is not possible to predict exactly where project-related improvements

would occur or what each project would involve, these construction activities would occur throughout the State.

As many local governments have adopted land use policies to protect important agricultural and forest land from conversion to urban development, including industrial facilities, it is expected that existing facilities are located in areas zoned for industrial or mixed uses, which are environments that are developed and disturbed and are unlikely to contain agricultural and forestry resources. Moreover, as construction activities would occur within the existing footprint and building structures of existing facilities, there would be no potential to impact agriculture and forestry resources. Therefore, no conversion of agriculture or forestry resources to nonagricultural or non-forest use would occur and no impact would result.

Overall, short-term construction-related and long-term operational-related agricultural and forest resources impacts associated with implementation of the Proposed Amendments would be **less than significant**.

3. Air Quality

Impact 3-1: Short-Term Construction-Related Impacts on Air Quality

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The alternative phase out pathway will require decorative chrome plating facilities to comply with building enclosure requirements starting on January 1, 2026, and cease use of hexavalent chromium by January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as building enclosures, air pollution control equipment, best management practices, and source testing. Chrome plating facilities that switch to trivalent chromium must control chromium emissions by meeting the emission limitation or using a wetting agent. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the State, which could result in an increase in heavy-duty truck traffic along State haul routes and potentially other modes of transportation such as train traffic along State rail routes. Diesel-powered off- and on-road equipment and heavy-duty trucks that could expose nearby communities to air pollutant and TAC emissions would be used for the transport of equipment and parts during the installation of additional controls at existing functional chrome plating facilities, and to convert chrome plating facilities to other cleaner hexavalent chromium free alternative, such as trivalent chromium plating, following their respective phase out dates of hexavalent chromium.

a) Construction Air Quality Criteria Pollutant Emissions

Construction activities would include, but are not limited to, the removal of existing hexavalent chromium plating equipment, site preparation for new plating equipment, and the installation of new plating equipment. In addition to converting existing chrome plating facilities to another cleaner hexavalent chromium free alternative, owners or operators would have to install additional controls within their facilities. These additional controls would require modifications such as installing air pollution control devices, relocating hexavalent chromium tanks, and installing or upgrading building enclosures. Although it is not possible to predict exactly where project-related improvements would occur or what each project would involve, these construction activities would occur throughout the State.

Depending on the size and scope of the modifications to existing chromium plating facilities, construction equipment could include forklifts, welding equipment, aerial lifts, and air compressors. Construction activities to install additional controls and to convert a facility to another cleaner hexavalent chromium free alternative could range from six days to two months at each project site.

Based on the anticipated types of activities and equipment needed to comply with the Proposed Amendments, it would be expected that the primary sources of construction–related emissions would occur from use of construction equipment and heavy-duty trucks. It is expected that, during the construction phase for any new project, criteria air pollutants (e.g., NOx, SOx, and PM) and TACs could be generated from a variety of activities and emission sources, including equipment use, heavy-duty trucks, and worker commute trips. These emissions would be temporary and occur intermittently depending on the intensity of construction on any given day. Levels and characteristics of emissions fluctuate depending on the particular type, number, duration, and use of various equipment. CARB, in addition to many local Districts, implements many regulations with the purpose of reducing NOx and PM, and limits idling from in-use vehicles and equipment.

Air pollutant emissions from construction in California associated with the Proposed Amendments were estimated using the California Emissions Estimator Model (CalEEMod) version 2020.4.0. CalEEMod is a land-use air quality modeling program developed by the California Air Pollution Officers Association (CAPCOA) in collaboration with California Districts. CalEEMod was used to quantify direct emissions from construction associated with converting existing facilities to another cleaner hexavalent chromium free alternative and installing additional controls. Construction activities associated with installing additional controls that require the use of off- and on-road construction equipment include relocating tanks to accommodate building enclosures and installing air pollution control devices. To understand the construction air quality impacts associated with the Proposed Amendments, air pollutant emissions were estimated assuming all chrome plating facilities in the State install additional controls and convert to trivalent chromium operations. As shown in the Table 3-1, it

was assumed that it would take six days to install all additional controls and 41 days to convert a plating facility from hexavalent chrome to trivalent chrome plating operations, which are based on the assumptions used the ~~South Coast Air Quality Management District~~ South Coast AQMD's Final Environmental Impact Assessment for Amendment Rule 1469 and required specifications of the Proposed Amendments.[5] It was assumed that decorative chrome plating facilities would begin modifying their facilities in early January 2026, functional chrome plating facilities would begin modifying their facilities in early January 2038 and functional chrome plating facilities would begin installing additional controls in January 2025. It was assumed that decorative chrome plating facilities that elect the alternative phase out pathway would begin installing building enclosures in early January 2025 and modifying their facilities to switch to alternatives to hexavalent chromium by early January 2029.

A list of construction equipment and vehicle trips required to install additional controls and convert an existing plating facility to trivalent chromium plating operations are provided in Table 3-2 and Table 3-3 below. It was assumed that retrofitting and converting an existing chrome plating facility would require at most an aerial lift, air compressor, forklift and welding equipment operating four hours per day. It was also assumed that retrofitting and converting an existing chrome plating facility would require at most 12 daily worker trips, and two daily vendor trips and two haul trips to bring new equipment and parts to the project site. These assumptions are based on the specifications required under the Proposed Amendments. Chrome plating facilities would need to transport existing equipment (e.g., tanks, plumbing, scrubbers) contaminated with hexavalent chromium to a designated hazardous waste facility for treatment and disposal. For this analysis, it is assumed that each facility would require an additional two heavy-duty truck trips to transport hazardous waste to a disposal site. Since the ~~South Coast Air Quality Management District (South Coast AQMD)~~South Coast AQMD already requires the installation additional controls identified in the Proposed Amendments, it was assumed that all functional chrome plating facilities and decorative chrome plating facilities that elect the alternative compliance method in South Coast AQMD would already have ~~relocated their tanks~~ installed building enclosures and that functional chrome plating facilities already installed air pollution control devices prior to the implementation of the Proposed Amendments. For facilities outside of South Coast AQMD, it was assumed that ~~all~~ functional chrome plating facilities and decorative chrome plating facilities that elect the alternative compliance method would need to ~~relocate their tanks~~ install building enclosures and functional chrome plating facilities would need to install air pollution control devices to comply with the Proposed Amendments.

[5] South Coast AQMD. Revised Final Environmental Assessment for Proposed Amended Rule 1469 – Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations. October 2018.

Table 3-1: Construction Schedule for Installing Additional Controls and Convert an Existing Decorative and Functional Hexavalent Chromium Facility to Trivalent Chromium Plating Operations

Phase	Decorative Facility Start Date	Decorative Facility End Date	Hard Functional Facility Start Date	Hard Functional Facility End Date	Workdays
2027 Phase Out Pathway					
Additional Controls – Building Enclosure	N/A	N/A	1/1/2025	1/8/2025	6
Additional Controls – Air Pollution Control Devices Installation	N/A	N/A	1/9/2025	1/16/2025	6
Convert to Trivalent Chromium or other cleaner alternative	1/17/2026	3/16/2026	1/17/2038	3/15/2038	41
Alternative 2030 Phase Out Pathway					
Additional Controls – Building Enclosure	1/1/2025	1/8/2025	1/1/2025	1/8/2025	6
Additional Controls – Air Pollution Control Devices Installation	N/A	N/A	1/9/2025	1/16/2025	6
Convert to Trivalent Chromium or other cleaner alternative	1/17/2029	3/14/2029	1/17/2038	3/15/2038	41

~~Phase~~	~~Decorative Facility Start Date~~	~~Decorative Facility End Date~~	~~Hard Functional Facility Start Date~~	~~Hard Functional Facility End Date~~	~~Workdays~~
~~Additional Controls – Building Enclosure Requirement~~	~~N/A~~	~~N/A~~	~~1/1/2025~~	~~1/8/2025~~	~~6~~
~~Additional Controls – Air Pollution Control Devices Installation~~	~~N/A~~	~~N/A~~	~~1/9/2025~~	~~1/18/2025~~	~~6~~
~~Convert to Trivalent Chromium~~	~~1/17/2026~~	~~3/16/2026~~	~~1/19/2038~~	~~3/16/2038~~	~~41~~

Notes: N/A = Not Applicable

Table 3-2: Construction Equipment for Installing Additional Controls and Converting an Existing Hexavalent Chromium Facility to Trivalent Chromium Plating Operations

Phase/Equipment	Unit Amount	Hours/Day	Horsepower (HP)	Load Factor
Additional Controls – Building Enclosure				
Aerial Lift	1	4	63	0.31
Forklift	1	4	89	0.20
Welders	1	4	46	0.45

Phase/Equipment	Unit Amount	Hours/Day	Horsepower (HP)	Load Factor
Additional Controls – Air Pollution Control Devices Installation				
Aerial lift	1	4	63	0.31
Air Compressor	1	4	78	0.48
Forklift	1	4	89	0.20
Welders	1	4	46	0.45
Convert to Trivalent Chromium				
Aerial lift	1	4	63	0.31
Air Compressor	1	4	78	0.48
Forklift	1	4	89	0.20
Welders	1	4	46	0.45

Table 3-3: Construction Vehicle Trips and Distances for Installing Additional Controls and Converting an Existing Hexavalent Chromium Facility to Trivalent Chromium Plating Operations

Phase	Daily One-Way Worker Trips	Daily One-Way Vendor Trips	Total One-Way Haul Trips	Worker Trip Length (miles)	Vendor Trip Length (miles)	Hauling Trip Length (miles)
Additional Controls – Tank Relocation	10	2	2	~~14.7~~10.8	~~6.97.3~~	20
Additional Controls – Air Pollution Control Devices Installation	12	2	4	~~14.7~~10.8	~~6.9~~7.3	20
Convert to Trivalent Chromium	12	2	4	~~14.7~~10.8	~~6.9~~7.3	20

Currently, there are chrome plating facilities in seven of the 35 Districts in California. The number of chrome plating facilities in each of the seven Districts is listed in Table 3-4. Because all chrome plating facilities operating in California would have to comply with the Proposed Amendments, it is not expected that chrome plating facilities would relocate to another District within the State as a result of the Proposed Amendments. Construction air pollutant emissions associated with a single chrome plating facility were estimated using CalEEMod and the construction schedule, list of construction equipment, and vehicle trips provided in Tables 3-1 through 3-3. For complete construction air quality calculations, see Attachment C. The calculated air pollutant emissions were multiplied by the number of reported facilities in each California District provided in Table 3-4. The total estimated construction emissions are reported in Table 3-5. As shown in Table 3-4, the construction air pollutant emissions were

compared to the local District's CEQA significance threshold.[6,7,8,9,10,11,12] Districts in California set thresholds of significance for criteria pollutants, which are used to determine if a land use project's construction emissions would result in significant impacts. If a project exceeds these thresholds of significance, that project would be considered to have a significant impact on air quality under CEQA. As shown in Table 3-5, construction air quality impacts due to construction from implementation of the Proposed Amendments are expected to be **less than significant**.

In addition, the use of diesel equipment during construction activities may result in odors. However, construction activities would be short-term, limited to internal modifications to existing facilities, have no anticipated ground disturbance, and would not result in a substantial number of people being exposed to odors.

Table 3-4: Number of Chrome Plating Facilities in California by District

District	Decorative	Hard Functional
South Coast Air Quality Management District	36	50
Ventura County Air Pollution Control District	0	1
Bay Area Air Quality Management District	4	6
San Joaquin Valley Air Pollution Control District	6	3
San Diego Air Pollution Control District	3	1
Feather River Air Quality Management District	1	0
Sacramento Metropolitan Air Quality Management District	1	1

Source: Data provided by Air Distracts in California through survey responses.

Table 3-5: Construction Air Pollutant Emissions for Installing Additional Controls and Converting an Existing Hexavalent Chrome Plating Facilities to Trivalent Chromium Plating Operations [a, b, c]

District/Year	ROG	NOx	CO	SO2	PM10	PM2.5
South Coast Air Quality Management District (ppd)						
2025 – Option 1[d]	N/A	N/A	N/A	N/A	N/A	N/A
2025 – Option 2[d]	N/A	N/A	N/A	N/A	N/A	N/A
2026 – Option 1	11	80	124	<1	7	4
2029 – Option 2	11	80	122	<1	7	4
2038 – Option 1	12	83	169	<1	7	2

[6] South Coast AQMD. South Coast AQMD Air Quality Significance Thresholds, April 2019.
[7] Ventura County APCD. Ventura County Air Quality Assessment Guidelines, October 2003.
[8] Bay Area AQMD. CEQA Air Quality Guidelines, May 2017.
[9] San Joaquin Valley APCD. Air Quality Thresholds of Significance, March 19, 2015.
[10] San Diego AQMD. Rule 20.2 New Source Review Non-Major Stationary Sources.
[11] Feather River AQMD. Feather River AQMD Thresholds of Significance. June 7, 2010.
[12] Sacramento Metropolitan AQMD. SMAQMD Thresholds of Significance Table, April 2020.

District/Year	ROG	NOx	CO	SO2	PM10	PM2.5
Maximum Daily Emissions	12	83	169	<1	7	4
Significance Threshold	75	100	550	150	150	55
Exceed Threshold (Yes or No)?	No	No	No	No	No	No
Ventura County Air Pollution Control District (ppd)						
2025 – Option 1	<1	2	3	<1	<1	<1
2025 – Option 2	None	None	None	None	None	None
2026 – Option 1	None	None	None	None	None	None
2029 – Option 2	None	None	None	None	None	None
2038 – Option 1	<1	2	3	<1	<1	<1
Maximum Daily Emissions	<1	2	3	<1	<1	<1
Significance Threshold	25	25	N/A	N/A	N/A	N/A
Exceed Threshold (Yes or No)?	No	No	No	No	No	No
Bay Area Air Quality Management District (ppd)						
2025 – Option 1	2	14	21	<1	1	1
2025 – Option 2	1	6	9	<1	1	<1
2026 – Option 1	1	9	14	<1	1	0
2029 – Option 2	1	9	14	<1	1	<1
2038 – Option 1	1	10	20	<1	1	<1
Maximum Daily Emissions	2	14	21	<1	1	1
Significance Threshold	54	54	N/A	N/A	82	54
Exceed Threshold (Yes or No)?	No	No	No	No	No	No
San Joaquin Valley Air Pollution Control District (tpy)						
2025 – Option 1	<1	<1	<1	<1	<1	<1
2025 – Option 2	<1	<1	<1	<1	<1	<1
2026 – Option 1	<1	<1	<1	<1	<1	<1
2029 – Option 2	<1	<1	<1	<1	<1	<1
2038 – Option 1	<1	<1	<1	<1	<1	<1
Maximum Emissions	<1	<1	<1	<1	<1	<1
Significance Threshold	10	10	100	27	15	15
Exceed Threshold (Yes or No)?	No	No	No	No	No	No
San Diego Air Pollution Control District (ppd)						
2025 – Option 1	<1	2	3	<1	<1	<1
2025 – Option 2	1	4	7	<1	<1	<1
2026 – Option 1	1	7	10	<1	1	<1
2029 – Option 2	1	7	10	<1	1	<1
2038 – Option 1	<1	2	3	<1	<1	<1
Maximum Daily Emissions	1	7	10	<1	1	<1
Significance Threshold	N/A	250	550	250	100	67
Exceed Threshold (Yes or No)?	No	No	No	No	No	No

District/Year	ROG	NOx	CO	SO2	PM10	PM2.5
Feather River Air Quality Management District (ppd)						
2025 – Option 1	None	None	None	None	None	None
2025 – Option 2	<1	1	2	<1	<1	<1
2026 – Option 1	<1	2	3	<1	<1	<1
2029 – Option 2	<1	2	3	<1	<1	<1
2038 – Option 1	None	None	None	None	None	None
Maximum Daily Emissions	<1	2	3	<1	<1	<1
Significance Threshold	25	25	N/A	N/A	80	N/A
Exceed Threshold (Yes or No)?	No	No	No	No	No	No
Sacramento Metropolitan Air Quality Management District (ppd)						
2025 – Option 1	<1	2	3	<1	<1	<1
2025 – Option 2	<1	1	2	<1	<1	<1
2026 – Option 1	<1	2	3	<1	<1	<1
2029 – Option 2	<1	2	3	<1	<1	<1
2038 – Option 1	<1	2	3	<1	<1	<1
Maximum Daily Emissions	<1	2	3	<1	<1	<1
Significance Threshold	N/A	85	N/A	N/A	80	82
Exceed Threshold (Yes or No)?	No	No	No	No	No	No

[a] ppd = pounds per day; tpy = tons per year; ROG = reactive organic gases; NOx = oxides of nitrogen; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter 10 micrometers or less in diameter; $PM_{2.5}$ = particulate matter 2.5 micrometers or less in diameter.

[b] Option 1 = Decorative chrome plating facilities that comply with the originally proposed 2027 phase out date start phasing out the use of hexavalent chromium in 2026, and functional chrome plating facilities install additional controls starting in 2025 and start phasing out the use of hexavalent chromium starting in 2038.

[c] Option 2 = Decorative chrome plating facilities that elect to comply with the alternative phase out pathway start installing building enclosures in 2025, and phase out the use of hexavalent chromium starting in 2029.

[d] Since South Coast AQMD already requires building enclosures, it was assumed that chrome plating facilities located in the South Coast AQMD would have already installed the building enclosures required under the Proposed Amendments.

~~District/Phase~~	~~ROG~~	~~Nox~~	~~CO~~	~~SO_2~~	~~PM_{10}~~	~~$PM_{2.5}$~~
~~**South Coast Air Quality Management District**~~						
~~Decorative Chrome Plater Facilities Convert to Trivalent Chromium Operations (ppd)~~	~~11~~	~~80~~	~~124~~	~~<1~~	~~7~~	~~4~~
~~Functional Chrome Plater Facilities Convert to Trivalent Chromium (ppd)~~	~~12~~	~~83~~	~~169~~	~~<1~~	~~7~~	~~2~~
~~Functional Chrome Plater Facilities Install Air Pollution Control Devices and Construction Building Enclosures (ppd)~~[~~b~~]	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~

~~District/Phase~~	~~ROG~~	~~Nox~~	~~CO~~	~~SO_2~~	~~PM_{10}~~	~~$PM_{2.5}$~~
~~Maximum Daily Emissions (ppd)~~	~~12~~	~~83~~	~~169~~	~~<1~~	~~7~~	~~4~~
~~Significance Threshold (ppd)~~	~~75~~	~~100~~	~~550~~	~~150~~	~~150~~	~~55~~
~~Exceed Threshold (Yes or No)?~~	~~No~~	~~No~~	~~No~~	~~No~~	~~No~~	~~No~~
~~**Ventura County Air Pollution Control District**~~						
~~Decorative Chrome Plater Facilities Convert to Trivalent Chromium Operations (ppd)~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~
~~Functional Chrome Plater Facilities Convert to Trivalent Chromium (ppd)~~	~~<1~~	~~2~~	~~3~~	~~<1~~	~~<1~~	~~<1~~
~~Functional Chrome Plater Facilities Install Air Pollution Control Devices and Construction Building Enclosures (ppd)~~	~~<1~~	~~3~~	~~6~~	~~<1~~	~~<1~~	~~<1~~
~~Maximum Daily Emissions (ppd)~~	~~<1~~	~~3~~	~~6~~	~~<1~~	~~<1~~	~~<1~~
~~Significance Threshold (ppd)~~	~~25~~	~~25~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~
~~Exceed Threshold (Yes or No)?~~	~~No~~	~~No~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~
~~**Bay Area Air Quality Management District**~~						
~~Decorative Chrome Plater Facilities Convert to Trivalent Chromium Operations (ppd)~~	~~1~~	~~9~~	~~14~~	~~<1~~	~~1~~	~~<1~~
~~Functional Chrome Plater Facilities Convert to Trivalent Chromium (ppd)~~	~~1~~	~~10~~	~~20~~	~~<1~~	~~1~~	~~<1~~
~~Functional Chrome Plater Facilities Install Air Pollution Control Devices and Construction Building Enclosures (ppd)~~	~~1~~	~~11~~	~~17~~	~~<1~~	~~1~~	~~<1~~
~~Maximum Daily Emissions (ppd)~~	~~1~~	~~11~~	~~20~~	~~<1~~	~~1~~	~~< 1~~
~~Significance Threshold (ppd)~~	~~54~~	~~54~~	~~N/A~~	~~N/A~~	~~82~~	~~54~~
~~Exceed Threshold (Yes or No)?~~	~~No~~	~~No~~	~~N/A~~	~~N/A~~	~~No~~	~~No~~
~~**San Joaquin Valley Air Pollution Control District**~~						
~~Decorative Chrome Plater Facilities Convert to Trivalent Chromium Operations (tpy)~~	~~<1~~	~~<1~~	~~<1~~	~~<1~~	~~<1~~	~~<1~~
~~Functional Chrome Plater Facilities Convert to Trivalent Chromium (tpy)~~	~~<1~~	~~<1~~	~~<1~~	~~<1~~	~~<1~~	~~<1~~
~~Functional Chrome Plater Facilities Install Air Pollution Control Devices and Construction Building Enclosures (tpy)~~	~~<1~~	~~<1~~	~~<1~~	~~<1~~	~~<1~~	~~<1~~
~~Maximum Annual Emissions (tpy)~~	~~<1~~	~~<1~~	~~<1~~	~~<1~~	~~<1~~	~~<1~~
~~Significance Threshold (tpy)~~	~~10~~	~~10~~	~~100~~	~~27~~	~~15~~	~~15~~
~~Exceed Threshold (Yes or No)?[f]~~	~~No~~	~~No~~	~~No~~	~~No~~	~~No~~	~~No~~
~~**San Diego Air Pollution Control District**~~						
~~Decorative Chrome Plater Facilities Convert to Trivalent Chromium Operations (ppd)~~	~~1~~	~~7~~	~~10~~	~~<1~~	~~1~~	~~<1~~

District/Phase	ROG	Nox	CO	SO_2	PM_{10}	$PM_{2.5}$
Functional Chrome Plater Facilities Install Air Pollution Control Devices and Construction Building Enclosures (ppd)	<1	2	3	<1	<1	<1
Functional Chrome Plater Facilities Install Air Pollution Control Devices and Construction Building Enclosures (ppd)	<1	3	6	<1	<1	<1
Maximum Daily Emissions (ppd)	1	7	10	<1	1	<1
Significance Threshold (ppd)	N/A	250	550	250	100	67
Exceed Threshold (Yes or No)?	N/A	No	No	No	No	No
Feather River Air Quality Management District						
Decorative Chrome Plater Facilities Convert to Trivalent Chromium Operations (ppd)	<1	2	3	<1	<1	<1
Functional Chrome Plater Facilities Install Air Pollution Control Devices and Construction Building Enclosures (ppd)	N/A	N/A	N/A	N/A	N/A	N/A
Functional Chrome Plater Facilities Install Air Pollution Control Devices and Construction Building Enclosures (ppd)	N/A	N/A	N/A	N/A	N/A	N/A
Maximum Daily Emissions (ppd)	<1	2	3	<1	<1	<1
Significance Threshold (ppd)	25	25	N/A	N/A	80	N/A
Exceed Threshold (Yes or No)?	No	No	N/A	N/A	No	N/A
Sacramento Metropolitan Air Quality Management District						
Decorative Chrome Plater Facilities Convert to Trivalent Chromium Operations (ppd)	<1	2	3	<1	<1	<1
Functional Chrome Plater Facilities Install Air Pollution Control Devices and Construction Building Enclosures (ppd)	<1	2	3	<1	<1	<1
Functional Chrome Plater Facilities Install Air Pollution Control Devices and Construction Building Enclosures (ppd)	<1	3	6	<1	<1	<1
Maximum Daily Emissions (ppd)	<1	2	3	<1	<1	<1
Significance Threshold (ppd)	N/A	85	N/A	N/A	80	82
Exceed Threshold (Yes or No)?	N/A	No	N/A	N/A	No	No

[a] ppd = pounds per day; tpy = tons per year; ROG = reactive organic gases; Nox = oxides of nitrogen; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter 10 micrometers or less in diameter; $PM_{2.5}$ = particulate matter 2.5 micrometers or less in diameter.

[d] Since South Coast Air Quality Management District already requires the installation of additional controls identified in the Proposed Amendments, it was assumed that all chrome plating facilities would already have relocated their tanks and installed air pollution control devices prior to the implementation of the Proposed Amendments.

b) Construction Health Impacts

Any increase in emissions of criteria pollutants, including ozone precursors, could result in an increase in ambient concentrations of criteria pollutants in air basins across

the State and increase the likelihood that ambient concentrations exceed the California ambient air quality standards and national ambient air quality standards. Human exposure to pollutants can result in health impacts. For example, ozone may cause acute and chronic health impacts including coughing, pulmonary distress, lung inflammation, shortness of breath, and permanent lung impairment.[13] However, as discussed further in the paragraph below, it would be misleading to correlate the levels of air pollutant and precursor emissions associated with compliance options to specific health outcomes to sensitive receptors. While sensitive receptors could suffer from the health impacts noted above, actual effects on individuals depend on local pollutant concentrations and individual factors, such as life stage (e.g., children and older adults are more sensitive), preexisting cardiovascular or respiratory diseases, and genetic polymorphisms. There are wide ranges of potential health outcomes that could result from an individual's exposure to pollutants, and specific predictions cannot be made even when specific medical information regarding an individual is available. Because the health information of sensitive receptors adjacent to specific existing chrome plating facilities is unknown, the ability for CARB staff to estimate health impacts that would occur as a result of the Proposed Amendments related to any specific facility has been determined to be too speculative for a thorough evaluation.

As shown in Table 3-5, areas surrounding existing chrome plating facilities may experience elevated levels of construction-related air pollutant emissions. Although these emissions estimates would not exceed any of the significance thresholds established by the Districts in the State, the emissions generated could exacerbate existing local air quality to potentially unhealthy criteria air pollutant concentrations in nearby communities. The addition of criteria air pollutants due to construction activities, including ozone precursors, could result in an increase in ambient concentrations of these pollutants in air basins containing chrome plating facilities, as well as downwind Districts. To model how these increases in ambient concentrations would impact public health would require project-specific information such as the location of where construction equipment would operate relative to existing residences and truck routes used to transport construction materials into a project site, which is presently unknown to CARB staff. Consequently, the exact location and magnitude of specific health impacts that could occur as a result of project-level construction-related emissions in specific air basins is infeasible to model with any degree of accuracy with the level of information known about the changes industry would make to come into compliance with the Proposed Amendments.

CARB estimates premature death and other health effects related to PM and NOx exposure based on a peer-reviewed incidence-per-ton methodology developed by U.S. EPA that quantifies the health benefits of regulations and programs. There is an approximately linear relationship between premature deaths and other health

[13] Environmental Protection Agency. Health Effects of Ozone in the General Population. September 2021.

outcomes and emission concentrations. This modeling requires characterization of a change in air quality occurring due to a policy or other change. To estimate premature death and other health effects that may result from construction-related activities associated with the Proposed Amendments would require knowledge of the age groups of the residences near each chrome plating facility, and the concentration of PM and NOx emitted by the facility. As previously discussed, there is uncertainty regarding the specific details of how each individual chrome plating facility would come into compliance with the Proposed Amendments, and this information would be necessary to evaluate health effects related to construction emissions. As such, the total amount of PM and NOx emissions across the State that would be used in the incidence-per-ton methodology is unknown. As a result, it is not feasible to associate specific health impacts with construction emissions caused by industry coming into compliance with the Proposed Amendments.

In summary, although construction air pollutant emissions would likely not exceed any of the significance thresholds established by the Districts in the State (as shown in Table 3-5), due to limited information of where construction activities may occur relative to existing sensitive receptors (e.g., schools, nursing homes, residential care facilities, daycare centers, and hospitals), it is not possible to model, with certainty, the location and magnitude of specific anticipated construction-related adverse health effects. Thus, in consideration of the relative unknowns about the scope, location and details of potential compliance-response development, CARB takes the conservative approach and acknowledges that without these potential future project-specific details at this time, these future compliance-related development projects could have adverse air quality impacts on the environment. Therefore, based on the foregoing, short-term construction-related impacts associated with implementation of the Proposed Amendments could be **potentially significant.**

Mitigation Measure 3-1

The environmental and regulatory setting sections in Attachment A identify applicable laws and regulations that protect air quality in California.

The local land use authority is the lead agency for potential compliance response projects because it has primary approval authority over a proposed action and is required to review the proposed action for compliance with CEQA. CARB does not have land use permit authority to require implementation of mitigation related to new or modified facilities that would be approved by local jurisdictions. The ability to require such measures is within the purview of jurisdictions with local or State land use approval and/or permitting authority. New or modified facilities in the State would likely qualify as a "project" under CEQA, because they would generally need a discretionary public agency approval and could affect the physical environment.

Local or State jurisdictions with land use approval and/or permitting authority can require the implementation of mitigation measures related to new or modified

stationary sources. Project-specific impacts and mitigation measures may be identified during the project-approval process. Recognized practices routinely required to avoid and/or minimize impacts to air quality include environmental review by agencies with project approval authority. Recognized practices routinely required to avoid and/or minimize impacts to air quality include, but are not limited to, the following:

- Proponents of a modified hexavalent chromium plating facility would coordinate with State or local land use agencies to seek entitlements for development, including the completion of all necessary environmental review requirements (e.g., CEQA). The local or State land use agency or governing body must follow all applicable environmental regulations as part of the approval process for project development.
- If the project is subject to CEQA, based on the results of the environmental review, proponents shall implement all feasible mitigation to reduce or substantially lessen the potentially significant air quality impacts of the project. Below are recommended emission reduction measures to reduce air pollutant emissions from project construction:

    - Implement the necessary infrastructure to support zero and near-zero emission technology vehicles and equipment that will be operating on-site. Necessary infrastructure may include the physical, energy, and fueling infrastructure for construction equipment, on-site vehicles and equipment, and medium-heavy and heavy-duty trucks.
    - In construction contracts, include language that requires all off-road diesel-powered equipment used during construction to be zero-emission if commercially available. If not commercially available, include language that requires such equipment to be equipped with Tier 4 Final or cleaner engines, except for specialized construction equipment in which Tier 4 Final engines are not available. In place of Tier 4 Final engines, off-road equipment can incorporate retrofits such that emissions reductions achieved equal or exceed that of a Tier 4 Final engine.
    - In construction contracts, include language that requires all off-road equipment with a power rating below 19 kilowatts (e.g., pressure washers, plate compactors) used during project construction to be battery-powered.
    - In construction contracts, include language that requires all heavy-duty trucks entering the construction site during the grading and building construction phases be zero-emission if commercially available. If not commercially available, include language that requires such equipment to be model year 2014 or later. All heavy-duty haul trucks should also meet CARB's lowest optional low-NOx standard starting in the year 2022.

    - In construction contracts, include language that requires all construction equipment and fleets to be in compliance with all current air quality regulations. CARB staff is available to assist in implementing this recommendation.
- Project proponents will apply for, secure, and comply with all appropriate air quality permits for project construction from the local agencies with air quality jurisdiction and from other applicable agencies, if appropriate, prior to construction mobilization.
- Project proponents will comply with the federal Clean Air Act (CAA) and the California Clean Air Act (CCAA) (e.g., New Source Review and Best Available Control Technology criteria), if applicable.
- Project proponents will comply with local plans, policies, ordinances, rules and regulations regarding air quality-related emissions and associated exposure (e.g., construction-related fugitive PM dust regulations, indirect source review, and payment into offsite mitigation funds).
    - For projects located in PM10 nonattainment areas, project proponents will prepare and comply with a dust abatement plan that addresses emission of fugitive dust during construction and operation of the project.
    - Project proponents will ensure the cleanest possible construction practices and equipment are used. This includes eliminating idling of diesel-powered equipment and providing the necessary infrastructure (e.g., electric plugs) to support zero and near-zero equipment and tools.

Short-term construction-related air quality effects could be reduced to a less-than-significant level by mitigation that can and should be implemented by local lead agencies with land use permit authority, but such mitigation authority in the land use permitting context is beyond the authority of CARB. The authority to determine project-level impacts and required project-level mitigation lies with land use and/or Districts for individual projects. The programmatic levels of analysis associated with this ~~Draft~~ Final EA does not attempt to address project-specific details of mitigation because there is inherent uncertainty in the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts. With mitigation, construction emissions could still exceed local District threshold levels of significance, depending on the intensity, location, and duration of construction.

Consequently, while impacts could and should be reduced to a less-than-significant level by land use and/or air district conditions of approval, this ~~Draft~~ Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purpose, that short-term construction-related air quality effects resulting from compliance response associated with the Proposed Amendments could be **potentially significant and unavoidable.**

Impact 3-2: Long-Term Operational-Related Impacts on Air Quality

Construction activities would include, but are not limited to, the removal of existing hexavalent chromium plating equipment, site preparation for new plating equipment, and the installation of trivalent plating equipment. In addition to converting existing hexavalent chromium plating facilities to another cleaner hexavalent chromium free alternative, owner or operators would have to install additional controls within their facilities. These additional controls would require modifications such as installing air pollution control devices, relocating hexavalent chromium tanks, and installing or upgrading building enclosures. It is assumed that all improvements and modifications would occur within the current footprint of existing facilities as well as within existing building structures, and no expansion of the footprint of existing facilities or construction of new building structures to accommodate conversion and modification requirements would occur.

As shown in Table 3-6, relative to the 2007 ATCM and baseline levels, the Proposed Amendments are projected to reduce hexavalent chromium emissions from functional chrome plating facilities by ~~54.2~~41.3 percent in the year ~~2027~~ 2026, not including fugitive emissions (4.09 pounds per year for functional platers, and 0.10 pounds per year for chromic acid anodizing facilities). Starting in 2027, the Proposed Amendments are anticipated to reduce hexavalent chromium emissions by an additional 1.31 pounds per year from decorative platers, not including fugitive emissions, if all decorative facilities comply with the originally proposed 2027 phase out date instead of electing to comply with the alternative phase out pathway. If all decorative platers follow the alternative phase out pathway, the anticipated hexavalent chromium emissions reductions of 1.31 pounds would be delayed until 2030. The emission reductions (not including fugitive emissions) of hexavalent chromium from the Proposed Amendments are projected to be 22.29 pounds if all facilities comply with the originally proposed 2027 phase out date and 18.35 pounds if all facilities follow the alternative phase out pathway. By January 1, 2030, the Proposed Amendments will reduce hexavalent chromium emissions from decorative chrome plating by 100 percent due to the phase out of hexavalent chromium in decorative chrome plating. On January 1, 2039, the total emission reductions (not including fugitive emissions) from functional plating facilities would be 8.64 pounds per year and 0.19 pounds per year for chromic acid anodizing facilities, respectively. On January 1, 2039, the Proposed Amendments will reduce hexavalent chromium emissions from chrome platers by 100 percent due to the phase out of hexavalent chromium. For more details regarding quantified emission reductions from chrome plating operations see attachment two of the first 15-day Notice Package. ~~And 100 percent in the year 2039. The Proposed Amendments are anticipated to reduce hexavalent chromium emissions by 1.31 pounds per year for decorative platers, 4.09 pounds per year for functional platers, and 0.10 pounds per year for chromic acid anodizing facilities starting in 2027. Starting in 2039, it is anticipated that the Proposed Amendments would maintain the hexavalent chromium emissions reductions from decorative platers of 1.31 pounds per year. Also, in 2039 the emission reductions from functional platers would increase to~~

~~8.64 pounds per year and 0.19 pounds per year for chromic acid anodizing facilities. For more details regarding quantified emission reductions from chrome plating operations associated with the Proposed Amendments, see Chapter VI of the ISOR.~~

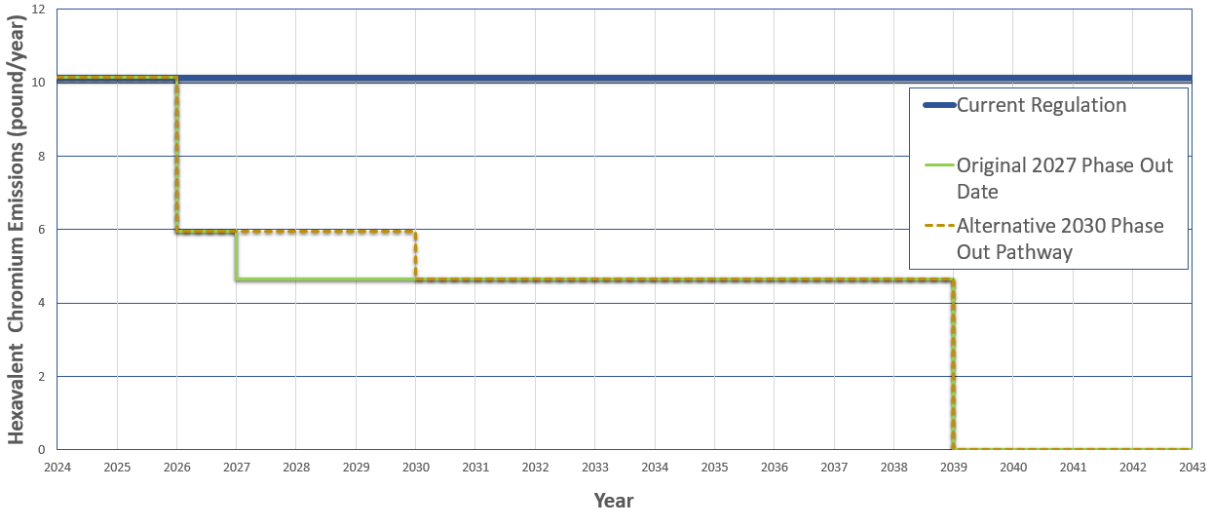
Table 3-6: Percent Reductions of Hexavalent Chromium Emissions from Projected Business-as-Usual Level in the Year 2026, 2027/2030 and 2039[a,b, c]

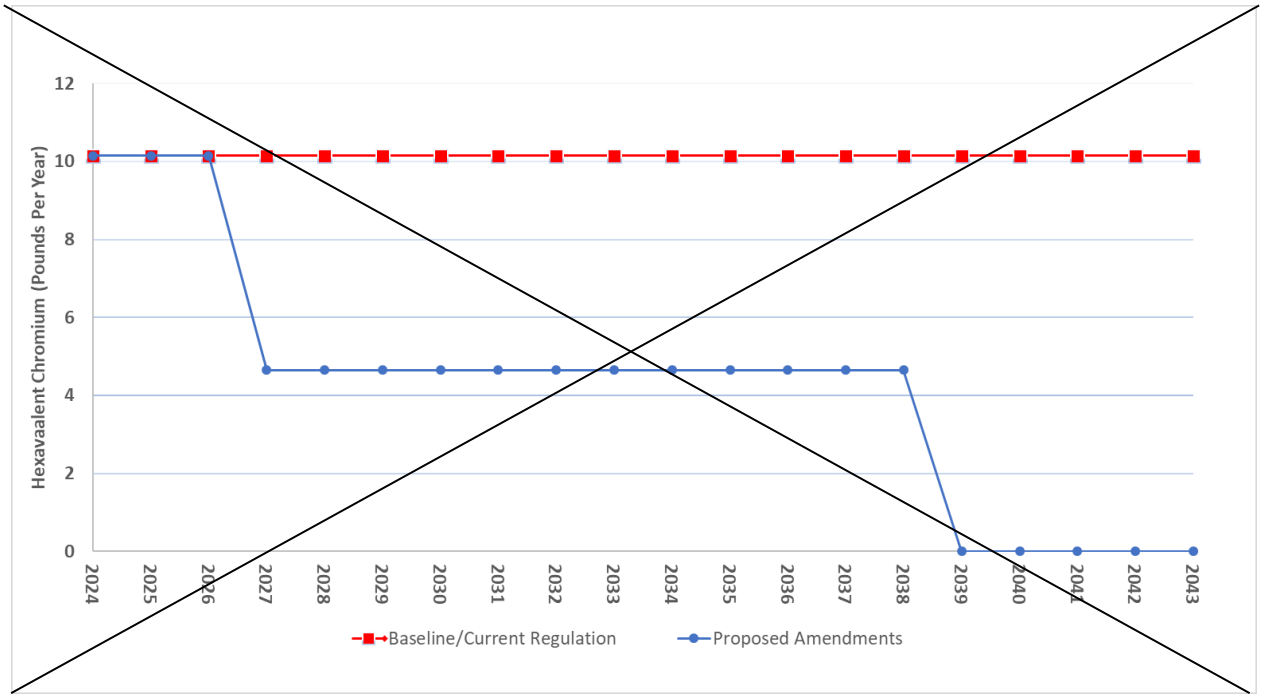
Year	Baseline/2007 ATCM (pounds/year)	Proposed Amendments (pounds/year)	Percent Reduction (%)
2026	10.15	5.96	41.20
2027/2030[b]	~~10.14~~10.15	4.65	54.20
2039	~~10.14~~10.15	0.00	100.00

[a] Emission estimates reflect District permitted throughput and ACTM emission limits.
[b] Decorative Chrome Plating Facilities must phase out the use of Hexavalent Chrome by 2027 or 2030, if they elect to comply with the alternative phase out pathway.
[c] Values do not include fugitive emissions.
Source: Attachment 2 of the first 15-day Notice Package and Chapter VI of the ISOR.

The chart below in Figure 3-1 shows the overall hexavalent chromium emissions reductions anticipated from the Proposed Amendments, year over year. Staff has estimated the potential hexavalent chromium emission inventory under the 2007 ATCM and the Proposed Amendments from 2024 to 2043. Figure 3-1 shows anticipated hexavalent chromium emissions under 2007 ATCM/baseline conditions and under the Proposed Amendments. For more details regarding quantified emission reductions from chrome plating operations, see Attachment 2 of the first 15-day Notice Package. For full details of the emission inventory methodology, see Chapter VI and Appendix B of the Staff Report.

Figure 3-1: The 2007 ATCM/Baseline vs. Proposed Amendments Hexavalent Chromium Emissions





Trivalent chromium and hexavalent chromium plating processes both involve the electrical application of a coating of chromium (e.g., trivalent or hexavalent chromium) onto a surface and both require similar electrical charges to be applied to a tank containing an electrolytic salt solution. Because the processes are similar, trivalent chromium would not substantially increase chromium mining or vehicle worker traffic in existing facilities.

Based on information provided by industry, converting a chrome plating facility from hexavalent chromium to trivalent chromium operations has the potential to increase the facility's energy consumption, which may result in an increase in indirect air pollutant emissions. Under the 2007 ATCM, the combined statewide energy consumption of functional plating facilities is 18 gigawatt hours (GWh). The Proposed Amendments are anticipated to increase the combined statewide energy consumption of functional plating facilities to approximately 44 GWh, which is a 26 GWh increase over the 2007 ATCM.

Chrome plating facilities would be powered by California's electricity grid or a compliant distributed generation power source. Emissions associated with producing electricity for these facilities would vary depending on the relative shares of zero/low-emission sources (e.g., hydro, wind, solar) and higher emission sources (e.g., coal- and natural gas-fired power plants) that are used to power the grid. The relative shares of fuel sources would change over time (and even vary hour-to-hour depending on electricity demand).

If the marginal load results in an increase in energy generation, there could be increased air pollutant emissions. However, the Proposed Amendments are likely to lead to only a relatively small incremental generation-related emissions increase, since the marginal load increase is expected to be minimal. The total system electric generation for the State in the year 2020 was 272,576 GWh.[14] Based on this total statewide energy consumption, the Proposed Amendments are anticipated to increase overall grid demand in California by 0.01 percent by 2039. Furthermore, this increase in demand would be spread across the different sectors in the State, rather than concentrated in one particular service area.

California's Renewable Portfolio Standard (RPS), which was established by legislation enacted in 2002 and its most recent targets were set by Senate Bill (SB) 100, requires California's load-serving entities to procure 60 percent of their retail electricity from eligible renewable sources by 2030. The RPS also established interim targets for utilities as shown below.

- 33 percent of retail sales by December 31, 2020;
- 44 percent of retail sales by December 31, 2024;
- 52 percent of retail sales by December 31, 2027; and
- 60 percent of retail sales by December 31, 2030.[15]

SB 100, "The 100 Percent Clean Energy Act of 2018" established the goal for 100 percent of total retail sales of electricity in California to come from eligible

[14] California Energy Commission. 2020 Total System Electric Generation.

[15] California Energy Commission, Renewables Portfolio Standard-Verification and Compliance.

renewable energy resources and zero-carbon resources by December 31, 2045.[16] According to the California Energy Commission, in 2020, 36 percent of all California consumed electricity was sourced from renewable power.[17] As grid power electricity becomes cleaner over time to meet the RPS targets, air pollutant emission reductions from use of electricity compared to diesel engines would grow accordingly. Over the time the Proposed Amendments are in effect, air pollutant emissions associated with the generation of electricity to power chrome plating facilities that have converted from hexavalent to trivalent chromium would decrease to zero. Therefore, the conversion would not result in a substantial increase in emissions of air pollutants and TACs. As previously discussed, and illustrated in in Figure 3-1, implementation of the Proposed Amendments would result in a net reduction in statewide hexavalent chromium emissions. Consequently, the Proposed Amendments are expected to lead to substantial net improvement in health outcomes across the State, as described in the Staff report.

The Proposed Amendments would require owners or operators to install building enclosures at existing chrome plating facilities. These building enclosures would be required to be designed such that a maximum of 3.5 percent of the building envelope would be open space to reduce fugitive emissions. Although the building enclosure would reduce the exposure of communities near existing chromium plating facilities to hexavalent chromium concentrations, workers within these modified chrome plating facilities may be exposed to an increase in hexavalent chromium concentrations prior to the phase out that could result in a health impact to onsite workers. To protect worker safety, the California Department of Industrial Relations/Division of Occupational Safety and Health (CAL/OSHA) has established a permissible exposure limit (PEL) for hexavalent chromium of 5 parts per million by volume (PPMV).[18] The PEL is the maximum, eight-hour, time-weighted average hexavalent chromium concentration for occupational exposure. CAL/OSHA also requires employee training on procedures for the safe handling of hazardous substances in the workplace and the health effects of those substances.

If the owner or operator cannot comply with the building requirements set forth in the Proposed Amendments due to conflicting requirements set forth by the federal OSHA, CAL/OSHA, or another applicable municipal code or agency requirements directly related to worker safety, the owner or operator of the chromium plating facility must submit a request to implement an alternative building enclosure compliance plan to the District. The District must approve the request if it determines that the proposed alternative building enclosure compliance plan limits fugitive emissions in an amount equal to or greater than the amount that would have been

[16] Senate Bill No. 100, California Renewables Portfolio Standard Program: emissions of greenhouse gases, 2018.

[17] California Energy Commission, Tracking Progress, February 2020.

[18] OSHA. OSHA Occupational Chemical Database.

achieved by compliance with the building enclosure requirement that it seeks to replace.

Implementation of the Proposed Amendments would minimize emissions associated with operation of chrome plating facilities and would assist in the implementation of the air pollutant emission reduction strategies contained in the Community Air Protection Blueprint. As discussed in detail in the Staff Report, emission reductions resulting from the implementation of the Proposed Amendments are expected to far outweigh any long-term operational-related emissions increases and would result in high net positive overall health benefits over the life of the Proposed Amendments. Furthermore, converting chromium plating facilities from hexavalent chromium plating to another cleaner hexavalent chromium free alternative, such as trivalent chromium plating, would not include activities or processes that are associated with major odor sources (e.g., landfills, wastewater treatment facilities, petroleum refineries, rendering plants). In addition, the modifications to existing facilities in compliance with the Proposed Amendments would not be expected to result in any operational odor increases and thus, a substantial number of people would not be exposed to odors.

For these reasons, long-term operational-related air quality impacts would be **less than significant.**

4. Biological Resources

Impact 4-1: Short-Term Construction-Related and Long-Term Operational-Related Impacts on Biological Resources

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The alternative phase out pathway will require decorative chrome plating facilities to comply with the building enclosure requirements by January 1, 2026, and cease use of hexavalent chromium by January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as building enclosures, air pollution control equipment, best management practices, and source testing. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the State, which could result in an increase in heavy-duty truck traffic along State haul routes and potentially other modes of transportation such as train traffic along State rail routes.

Construction activities that would occur with implementation of the Proposed Amendments may involve conversion of existing hexavalent chromium plating facilities to trivalent chromium operations, which could involve, but not be limited to, site preparation for new plating equipment and the installation of trivalent plating

equipment. Owners or operators of decorative plating facilities that elect the alternative phase out pathway to comply with the Proposed Amendments will be required to install building enclosures around hexavalent chromium containing tanks. Owners or operators of functional chrome plating facilities would also be required to install additional control within their facilities, including modifications such as installing air pollution control devices, relocating hexavalent chromium tanks, installing tank enclosures, and upgrading building enclosures. It is assumed that all improvements and modifications would occur within the current footprint of existing facilities as well as within existing building structures, and no expansion of the footprint of existing facilities or construction of new building structures to accommodate conversion and modification requirements would occur. Although it is not possible to predict exactly where project-related improvements would occur or what each project would involve, these construction activities would occur throughout the State.

Although it is not possible to predict exactly where project-related improvements would occur or what each project would involve, it is expected that existing facilities are located in areas zoned for industrial uses, which are environments that are developed and disturbed and are unlikely to contain protected or sensitive biological resources. Moreover, as construction activities would occur within the existing footprint and building structures of existing facilities and no ground disturbance is anticipated, there would be no potential to impact protected or sensitive biological resources. As a result, this impact would be less than significant, and no short-term construction related or long-term operation-related effects to biological resources would occur.

Overall, short-term construction-related and long-term operational-related biological resources impacts associated with implementation of the Proposed Amendments would be **less than significant**.

5. Cultural Resources

Impact 5-1: Short-Term Construction-Related Impacts on Cultural Resources

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The alternative phase out pathway will require decorative chrome plating facilities to comply with building enclosure requirements by January 1, 2026, and cease use of hexavalent chromium by January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as building enclosures, air pollution control equipment, best management practices, and source testing. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the State, which could result in an increase in heavy-duty

truck traffic along State haul routes and potentially other modes of transportation such as train traffic along State rail routes.

Construction activities that would occur with implementation of the Proposed Amendments may involve conversion of existing hexavalent chromium plating facilities to trivalent chromium operations, which could involve, but not be limited to, site preparation for new plating equipment and the installation of trivalent plating equipment. Owners or operators of decorative plating facilities that elect the alternative phase out pathway to comply with the Proposed Amendments will be required to install building enclosures around hexavalent chromium containing tanks. Owners or operators of functional chrome plating facilities would also be required to install additional control within their facilities, including modifications such as installing air pollution control devices, relocating hexavalent chromium tanks, and installing ~~tank enclosures, and~~ or upgrading building enclosures. It is assumed that all improvements and modifications would occur within the current footprint of existing facilities as well as within existing building structures, and no expansion of the footprint of existing facilities or construction of new building structures to accommodate conversion and modification requirements would occur. Although it is not possible to predict exactly where project-related improvements would occur or what each project would involve, these construction activities would occur throughout the State. Modifications to existing facilities would not affect culturally, archaeologically, or paleontologically significant resources because the improvements would be made to existing facilities and equipment themselves, and therefore would not require any ground-disturbing activities that could result in impacts on these resources.

The Proposed Amendments could result in modification of existing historic structures. However, there is uncertainty as to the exact location of existing facilities that may be considered historically significant, and as a result, there is uncertainty as to the presence of historically significant resources at various facilities. Furthermore, it is not known exactly what modifications to existing facilities would occur. Therefore, short-term construction-related impacts to cultural resources associated with the Proposed Amendments would be potentially significant.

Mitigation Measure 5-1

The Regulatory Setting in Attachment A includes applicable laws and regulations that relate to cultural resources. CARB does not have the authority to require implementation of mitigation related to new or modified facilities or infrastructure that would be approved by State or local jurisdictions or jurisdictions outside of California. The ability to require such measures is under the purview of jurisdictions with local or State land use approval and/or permitting authority. New or modified facilities or infrastructure in California would qualify as a "project" under CEQA. The jurisdiction with primary approval authority over a proposed action is the lead agency, which is required to review the proposed action for compliance with CEQA statutes. Project specific impacts and mitigation would be identified during the environmental review

by agencies with project-approval authority. Recognized practices routinely required to avoid and/or minimize impacts to cultural resources include:

- Proponents of modified facilities or equipment constructed as a result of reasonably foreseeable compliance responses to the Proposed Amendments would coordinate with State or local land use agencies to seek entitlements for development including the completion of all necessary environmental review requirements (e.g., CEQA). The local or State land use agency or governing body must follow all applicable environmental regulations as part of approval of a project for development.
- Based on the results of the environmental review, proponents would implement all feasible mitigation identified in the environmental document to reduce or substantially lessen the significant environmental impacts of the project on cultural resources. Any mitigation specifically required for a new or modified facility or infrastructure would be determined by the State or local lead agency.
- Actions required to mitigate potentially significant cultural resources impacts may include the following; however, any mitigation specifically required for a modified facility would be determined by the local lead agency:

    - If a resource determined to be significant by the qualified architectural historian, preservation in place is the preferred manner of mitigating impacts on a historical resource. If avoidance is infeasible, an appropriate documentation plan (e.g., recordation consistent with Historic American Buildings Survey (HABS) Guidelines) shall be required.
    - Regulated entities shall define the area of potential effects (APE) for each project, which is the area where project construction and operation may directly or indirectly cause alterations in the character or use of historic properties. The APE shall include a reasonable construction buffer zone and laydown areas, access roads, and borrow areas, as well as a reasonable assessment of areas subject to effects from visual, auditory, or atmospheric impacts, or impacts from increased access.

Because the authority to determine project-level impacts and require project-level mitigation lies with State or local land use and/or Districts for individual projects, CARB finds it legally infeasible to implement and enforce this measure. Moreover, due to the programmatic analysis of this EA, which does not contain project-specific details of potential impacts and associated mitigation, there is inherent uncertainty in the degree of mitigation that lead agencies may ultimately implement to reduce the potentially significant impacts if they approve these potential projects.

Consequently, while impacts would likely be reduced to a less-than-significant level with mitigation measures imposed by the land use and/or Districts acting as lead agencies for these individual projects under CEQA, it cannot be determined with certainty impacts would be reduced to less than significant given that the authority to require these measures is within the responsibility and jurisdiction of another agency, and not CARB. As such, this ~~Draft~~ Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that, if and when a project applicant seeks a permit for a compliance response related project, short-term construction-related impacts to historical resources associated with the Proposed Amendments would remain **potentially significant and unavoidable**.

Impact 5-2: Long-Term Operational-Related Impacts on Cultural Resources

Following any short-term construction activities, operation of the facilities with the compliance responses would not result in any ground disturbance activities because operation activities would occur within the footprint of the existing facilities. Therefore, operational activities would not have the potential to affect archaeological, paleontological, or historical resources.

Therefore, long-term operational-related impacts to cultural resources associated with implementation of the Proposed Amendments would be **less than significant**.

6. Energy

Impact 6-1: Short-Term Construction-Related and Long-Term Operational-Related Impacts on Energy Demand

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The alternative phase out pathway will require decorative chrome plating facilities to comply with building enclosure requirements by January 1, 2026, and cease use of hexavalent chromium by January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as building enclosures, air pollution control equipment, best management practices, and source testing. Chrome plating facilities that switch to trivalent chromium must control chromium emissions by meeting the emission limitation or using a wetting agent. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the State, which could result in an increase in heavy-duty truck traffic along State haul routes and potentially other modes of transportation such as train traffic along State rail routes.

Construction activities that would occur with implementation of the Proposed Amendments may involve conversion of existing hexavalent chromium plating facilities

to trivalent chromium operations, which could involve, but not be limited to, site preparation for new plating equipment and the installation of trivalent plating equipment. Owners or operators of decorative plating facilities that elect the alternative phase out pathway to comply with the Proposed Amendments will be required to install building enclosures around hexavalent chromium containing tanks. Owners or operators of functional chrome plating facilities would also be required to install additional control within their facilities, including modifications such as installing air pollution control devices, relocating hexavalent chromium tanks, installing tank enclosures, and upgrading building enclosures. It is assumed that all improvements and modifications would occur within the current footprint of existing facilities as well as within existing building structures, and no expansion of the footprint of existing facilities or construction of new building structures to accommodate conversion and modification requirements would occur. Although it is not possible to predict exactly where project-related improvements would occur or what each project would involve, these construction activities would occur throughout the state.

Temporary increases in energy demand associated with modifications to existing facilities would include fuels used during construction, and gas and electric demands. Short-term construction-related activities associated with implementation of the Proposed Amendment would be similar to the construction and maintenance activities already occurring throughout the State. While energy would be required to complete construction for modified facilities, it would be temporary, intermittent, and limited in magnitude such that a reasonable amount of energy would be expended.

For this analysis, it is assumed that owners or operators of chrome plating facilities will convert from hexavalent to trivalent chromium plating operations. In most cases, plating a part using trivalent chromium requires less energy than plating a part with hexavalent chromium. However, based on information provided by industry, converting a plating facility from hexavalent chromium to trivalent chromium operations has the potential to increase the energy consumption of the facility. Under the 2007 ATCM, the combined statewide energy consumption of functional plating facilities is 18 gigawatt hours (GWh). The Proposed Amendments are anticipated to increase the combined statewide energy consumption of functional plating facilities to approximately 44 GWh, which is a 26 GWh increase over the 2007 ATCM.

Chrome plating facilities would be powered by California's electricity grid or a compliant distributed generation power source. Emissions associated with producing electricity for these facilities would vary depending on the relative shares of zero/low-emission sources (e.g., hydro, wind, solar) and higher emission sources (e.g., coal- and natural gas-fired power plants) that are used to power the grid. The relative shares of fuel sources would change over time (and even vary hour-to-hour depending on electricity demand).

The total system electric generation for the State in the year 2020 was 272,576 GWh. Based on this total statewide energy consumption, the Proposed Amendments are

anticipated to increase overall grid demand in California by just 0.01 percent by 2039. Furthermore, this increase in demand would be spread across the different sectors in the State, rather than concentrated in one particular service area. Therefore, the marginal load increase for the Proposed Amendments is expected to be minimal.

California's RPS, which was established by legislation enacted in 2002, and its most recent targets which were set by Senate Bill (SB) 100, requires California's load-serving entities to procure 60 percent of their retail electricity from eligible renewable sources by 2030. The RPS also established interim targets for utilities as shown below.

- 33 percent of retail sales by December 31, 2020;
- 44 percent of retail sales by December 31, 2024;
- 52 percent of retail sales by December 31, 2027; and
- 60 percent of retail sales by December 31, 2030.

SB 100, "The 100 Percent Clean Energy Act of 2018" sets the target for 100 percent of total retail sales of electricity in California to come from eligible renewable energy resources and zero-carbon resources by December 31, 2045. According to the California Energy Commission, in 2020, 36 percent of all California consumed electricity was sourced from renewable power. As grid power electricity becomes cleaner over time to meet the RPS targets, the emissions resulting from the generation of electricity to power chrome plating facilities that have converted from hexavalent to trivalent chromium would decrease as a result of California's power grid converting to renewable power.

The Proposed Amendments would not result in the construction of new plating facilities. While trivalent chromium and hexavalent chromium plating processes both involve the electrical application of a coating of chromium (e.g., hexavalent or trivalent chromium) onto a surface, the processes are similar and would not substantially increase electricity consumption from the power grid. Therefore, the conversion of chrome plating facilities to trivalent chromium would not increase operational energy consumption.

Therefore, short-term construction-related and long-term operational-related energy impacts associated with implementation of the Proposed Amendments would be **less than significant**.

7. Geology and Soils

Impact 7-1: Short-Term Construction-Related and Long-term Operational-Related Impacts on Geology and Soils

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease

use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The alternative phase out pathway will require decorative chrome plating facilities to comply with building enclosure requirements starting on January 1, 2026, and cease use of hexavalent chromium by January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as building enclosures, air pollution control equipment, best management practices, and source testing. Chrome plating facilities that switch to trivalent chromium must control chromium emissions by meeting the emission limitation or using a wetting agent. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the State, which could result in an increase in heavy-duty truck traffic along State haul routes and potentially other modes of transportation such as train traffic along State rail routes.

Modifications to existing facilities and structures would not affect geology and soils because all improvements would be to existing facilities and equipment themselves and no ground-disturbing activities that could exacerbate geologic hazards would occur. Implementation of the Proposed Amendments would take place within the current footprint of existing facilities as well as within existing building structures, and no expansion of the footprint of existing facilities or construction of new building structures to accommodate conversion and modification requirements would occur. Any modification to existing structures would comply with State and local building codes. Therefore, the Proposed Amendments would not directly or indirectly cause adverse effects related to rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, or landslides; result in soil erosion, unstable soils, or expansive soils; require the use of septic tanks; or destroy a unique paleontological resource or geologic feature.

Overall, the Proposed Amendments would have **no impact** associated with short-term construction-related and long-term operational-related geology and soil impacts.

8. Greenhouse Gas Emissions

Impact 8-1: Short-Term Construction-Related Impacts on Greenhouse Gas Emissions

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The alternative phase out pathway will require decorative chrome plating facilities to comply with building enclosure requirements by January 1, 2026, and cease use of hexavalent chromium by January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as building enclosures, air

pollution control equipment, best management practices, and source testing. Chrome plating facilities that switch to trivalent chromium must control chromium emissions by meeting the emission limitation or using a wetting agent. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the State, which could result in an increase in heavy-duty truck traffic along State haul routes and potentially other modes of transportation such as train traffic along State rail routes.

Diesel-powered off-road equipment and heavy-duty trucks would be required to transport equipment and parts during the installation of additional controls and to convert facilities to a cleaner alternative to hexavalent chromium, such as trivalent chromium, following the applicable phase out date of hexavalent chromium. The use of off-road equipment and heavy-duty trucks could result in greenhouse gas (GHG) emissions that contribute to climate change.

Although construction activities could result in temporary increases in GHG emissions, many Districts do not require the quantification of short-term construction generated GHG emissions for typical construction projects because these occur for only a temporary period of time (e.g., South Coast Air Quality Management District). The Sacramento Metropolitan Air Quality Management District (SMAQMD) requires the quantification of construction emissions to be measured against an adopted threshold. With respect to the SMAQMD, construction emissions are considered to be potentially significant if annual emissions exceed 1,100 metric tons of carbon dioxide equivalent (CO_2e). This threshold is typically applied to land use development projects that entail the prolonged use of heavy-duty equipment over multiple years.

Construction GHG emissions associated with the Proposed Amendments were estimated using CalEEMod version 2020.4.0. As previously discussed in Section 3 (“Air Quality”), CalEEMod is a land-use air quality modeling program developed by CAPCOA in collaboration with California Districts and can be used to quantify direct GHG emissions from construction activities. Construction activities associated with installing additional controls that require the use of off- and on-road construction equipment include construction of building enclosures that may require the relocation of hexavalent chromium tanks and installing air pollution control devices. To understand the construction climate change impacts associated with the Proposed Amendments, air pollutant emissions were estimated for a single plating facility and compared to SMAQMD’s 1,100 CO_2e GHG significance threshold. It was conservatively assumed that an owner or operator of a chrome plating facility would begin by installing the additional controls and converting their operations from hexavalent chromium to trivalent chromium operations at the same time. The construction schedule, equipment and vehicle trips used to estimate the construction GHG emissions under the Proposed Amendments are provided in Tables 3-1 through 3-3 in Section 3 (“Air Quality”), above.

Construction GHG emissions associated with a single chromium plating facility were estimated using CalEEMod and then were multiplied by the number of reported facilities operating in California provided in Table 3-4. For complete construction air quality calculations, see Attachment C. As shown in Table 8-1, construction GHG emissions were compared against the most stringent construction emissions significance threshold from a California District. As shown in Table 8-1 below, construction related GHG emissions for chrome plating facilities developed in response to the Proposed Amendments would not be expected to exceed this significance threshold. Given the temporary nature of these construction GHG impacts, short-term construction related GHG impacts associated with the Proposed Amendments would be **less than significant**.

Table 8-1: Statewide Construction GHG Emissions from Installing Additional Controls and Converting an Existing Hexavalent Chromium Facility to Trivalent Chromium (metric tons per year)[a,b,c]

Category	CO_2	CH_4	N_2O	CO_2e
Decorative Chromium Facilities (statewide)				
Proposed Amendments Option 1 Construction GHG Emissions	539	≤1	≤1	543
Proposed Amendments Option 1 Amortized Emissions over 30 Years	18	≤1	≤1	18
Proposed Amendments Option 2 Construction GHG Emissions	584	≤1	≤1	589
Proposed Amendments Option 2 Amortized Emissions over 30 Years	19	≤1	≤1	20
Hard Functional Chromium Facilities (statewide)				
Construction GHG Emissions	837	≤1	≤1	842
Amortized Emissions over 30 Years	28	≤1	≤1	28
Most Stringent Significance Threshold				1,100
Exceed Threshold (Yes or No)?				No

[a] CO_2 = Carbon Dioxide; CH_4 = Methane; N_2O = Nitrous Oxide
[b] Option 1 = Decorative chrome plating facilities that comply with the original 2027 phase out date start phasing out the use of hexavalent chromium in 2026, and functional chrome plating facilities install additional controls starting in 2025 and start phasing out the use of hexavalent chromium starting in 2038.
[c] Option 2 = Decorative chrome plating facilities that elect to comply with the alternative phase out pathway start installing building enclosures starting in 2025, and phase out the use of hexavalent chromium starting in 2029.

~~Category~~	~~CO_2~~	~~CH_4~~	~~N_2O~~	~~CO_2e~~
~~**Decorative Chromium Facilities (statewide)**~~				
~~Construction GHG Emissions~~	~~539~~	~~< 1~~	~~< 1~~	~~543~~
~~Amortized Emissions over 30 Years~~	~~18~~	~~< 1~~	~~< 1~~	~~18~~
~~**Hard Functional Chromium Facilities (statewide)**~~				
~~Construction GHG Emissions~~	~~702~~	~~< 1~~	~~< 1~~	~~705~~
~~Amortized Emissions over 30 Years~~	~~23~~	~~< 1~~	~~< 1~~	~~23~~

~~Category~~	~~CO_2~~	~~CH_4~~	~~N_2O~~	~~CO_2e~~
~~Most Stringent Significance Threshold~~				~~1,100~~
~~Exceed Threshold (Yes or No)?~~				~~No~~

~~[a] CO_2 = Carbon Dioxide; CH_4 = Methane; N_2O = Nitrous Oxide~~

Impact 8-2: Long-Term Operational-Related Impacts on Greenhouse Gas Emissions

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The alternative phase out pathway will require decorative chrome plating facilities to comply with building enclosure requirements by January 1, 2026, and cease use of hexavalent chromium by January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as building enclosures, air pollution control equipment, best management practices, and source testing. Chrome plating facilities that switch to trivalent chromium must control chromium emissions by meeting the emission limitation or using a wetting agent. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the State, which could result in an increase in heavy-duty truck traffic along State haul routes and potentially other modes of transportation such as train traffic along State rail routes.

For this analysis, it is assumed that owners or operators of chrome plating facilities will convert from hexavalent to trivalent chromium plating operations. Converting a chrome plating facility from hexavalent chromium to trivalent chromium operations has the potential to increase the energy consumption of a chrome facility for the lifetime of its operation. This increase in energy consumption has the potential to increase indirect GHG emissions. As discussed above in the "Air Quality" section (Section 3) of this ~~Draft~~ Final EA, the Proposed Amendments are anticipated to increase overall grid demand in California by just 0.01 percent (i.e., one hundredth of a percent) by 2039. Furthermore, California's electrical grid would become increasingly cleaner by utilizing more renewable energy over the coming years to comply with the targets mandated by the RPS. Therefore, the conversion of existing chrome facilities from hexavalent to trivalent operations would not increase statewide energy consumption in a way that is expected to substantially increase GHG emissions.

After the Proposed Amendments are fully implemented, there would still be a demand for chrome plated parts within the State. Presently, most chrome plating facilities operating within the State meet the demand of state-based businesses/manufacturers within the state. However, once the Proposed Amendments are fully implemented, hexavalent chromium plated parts would no longer be plated within the State. Since there is uncertainty regarding the number of trucks and train trips required to transport

hexavalent chromium plated parts across state lines, it is too speculative for CARB staff to estimate the climate change-related effects (if any) resulting from the increase in trucks and trains used to transport hexavalent chromium plated parts. Additionally, even if CARB had data relative to the number of new truck trips into the State as a result of the Proposed Amendments, there is not sufficient data to establish the baseline conditions of the number of truck trips that transport chrome-plated products into the State from which CARB can evaluate the change in truck trips in response to the Proposed Amendments.

Therefore, the impacts to climate change from GHG emissions resulting from unknown issues related to trucking into the State attributable to the Proposed Amendments would be speculative, as noted above, and substantial evidence is required to establish an adverse impact. CEQA, at Public Resources Code section 21082.2, states: "The lead agency shall determine whether a project may have a significant effect on the environment based on substantial evidence in light of the whole record….[and] speculation…is not substantial evidence."[19] California Code of Regulations, title 14, section 15145 states: "If, after thorough investigation, a Lead Agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact." [20] Consequently, CARB cannot establish such an impact without knowing how the Proposed Amendments would affect trucking into the State.

In summary, certain aspects of the Proposed Amendments could increase GHG emissions (through minor increases in power consumption). However, the Proposed Amendments were included as part of the Community Air Protection Blueprint EA,[21] which concluded that the Community Air Protection Blueprint would result in a beneficial impact on GHG emissions, considering all of its measures together. Furthermore, even though transportation emissions (e.g., trucks, and trains) associated with compliance responses are too speculative to assess based on the analysis above, the baseline GHG emissions from transport are, nonetheless, expected to be reduced through California's current and future truck regulations, which would result in trucks becoming cleaner over time. Therefore, taking a conservative approach given the potential minor measure-specific GHG increases presented by the Proposed Amendments (despite overall GHG benefits from the overarching Blueprint planning strategy), the long-term construction related GHG impacts associated with the Proposed Amendments would be **less than significant**.

[19] CEQA, at Public Resources Code section 21082.2

[20] California Code of Regulations, title 14, section 15145

[21] CARB. Final Environmental Analysis Prepared for the Proposed Final Community Air Protection Blueprint. September 2018.

9. Hazards and Hazardous Materials

Impact 9-1: Short-Term Construction-Related Impacts on Hazards and Hazardous Materials

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The alternative phase out pathway will require decorative chrome plating facilities to comply with building enclosure requirements by January 1, 2026, and cease use of hexavalent chromium by January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as building enclosures, air pollution control equipment, best management practices, and source testing. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the State, which could result in an increase in heavy-duty truck traffic along State haul routes and potentially other modes of transportation such as train traffic along State rail routes.

Construction activities that would occur with implementation of the Proposed Amendments may involve conversion of existing hexavalent chromium plating facilities to trivalent chromium operations, which could involve, but not be limited to, site preparation for new plating equipment and the installation of trivalent plating equipment. Owners or operators of decorative plating facilities that elect the alternative phase out pathway will be required to comply with the building enclosure requirements, which may require construction involving the installation or upgrading of building enclosures. Owners or operators of functional chrome plating facilities would also be required to install additional controls within their facilities, including modifications such as installing air pollution control devices, relocating hexavalent chromium tanks, installing tank enclosures, and upgrading building enclosures. It is assumed that all improvements and modifications would occur within the current footprint of existing facilities as well as within existing building structures, and no expansion of the footprint of existing facilities or construction of new building structures to accommodate conversion and modification requirements would occur. Although it is not possible to predict exactly where project-related improvements would occur or what each project would involve, these construction activities would occur throughout the State. Any modification to existing structures would comply with State and local building codes. Although it is not possible to predict exactly where project-related improvements would occur or what each project would involve, it is expected that existing facilities are located in areas zoned for industrial uses and where the handling and use of hazardous materials is allowed, regulated, and permitted.

Construction activities associated with the Proposed Amendments may require the transport, use, and disposal of hazardous materials. As the Proposed Amendments involve removal of existing hexavalent chromium plating equipment, construction of building enclosures that may require the relocation of hexavalent chromium tanks, and the installation of new plating equipment, the potential exists for accidental release of hazardous materials into the environment during construction activities. Hazardous waste handling and disposal would comply with all applicable regulations and requirements as outlined in the Regulatory Setting in Attachment A, including but not limited to the Resource Conservation and Recovery Act, Hazardous Waste Control Law, Comprehensive Environmental Response, Compensation and Liability Act, California Accidental Release Prevention Program, Hazardous Material Business Plan and Area Plan Program, as well as requirements to protect worker safety regulated by the Occupational Safety and Health Administration.

Also, some facilities could be located within 1,000 feet of schools, and thus impacts related to emitting or handling hazardous or acutely hazardous materials within 1,000 feet of a school could be potentially significant. Although precautions would be taken to ensure that any spill is properly contained and disposed, and such spills are typically minor and localized to the immediate area of the facility, the potential remains for a substantial release of hazardous materials into the environment.

For the reasons described above, short-term construction-related hazard and hazardous materials impacts associated with the Proposed Amendments would be potentially significant.

Mitigation Measure 9-1

The Regulatory Setting in Attachment A includes, but is not limited to, applicable laws, regulations, and policies related to hazards and hazardous materials. CARB does not have the authority to require implementation of mitigation related to modified facilities or equipment that would be approved by State or local jurisdictions or jurisdictions outside of California. The ability to require such measures is under the purview of jurisdictions with local or State land use approval and/or permitting authority. Modified facilities or equipment in California would qualify as a "project" under CEQA. The jurisdiction with primary approval authority over a proposed action is the lead agency, which is required to review the proposed action for compliance with CEQA statutes. Project specific impacts and mitigation would be identified during the environmental review by agencies with project approval authority. Recognized practices that are routinely required to avoid accident-related impacts include:

- Proponents of modified facilities or equipment constructed as a result of reasonably foreseeable compliance responses to the Proposed Amendments would coordinate with State or local land use agencies to seek entitlements for development, including the completion of all necessary environmental review requirements (e.g., CEQA). The local or

State land use agency or governing body must follow all applicable environmental regulations as part of approval of a project for development.

- Based on the results of the environmental review, proponents would implement all feasible mitigation identified in the environmental document to reduce or substantially lessen the significant environmental impacts of the project on hazards and hazardous materials. Any mitigation specifically required for a modified facility or equipment would be determined by the State or local lead agency. However, future environmental documents prepared by State or local lead agencies could include the following mitigation measures:

    - Handling of potentially hazardous materials/wastes should be performed by or under the direction of a licensed professional with the necessary experience and knowledge to oversee the proper identification, characterization, handling and disposal or recycling of the materials generated as a result of the project. As wastes are generated, they should be placed, at the direction of the licensed professional, in designated areas that offer secure, secondary containment and/or protection from storm water runoff. Other forms of containment may include placing waste on plastic sheeting (and/or covering with same) or in steel bins or other suitable containers pending profiling and disposal or recycling.
    - The temporary storage and handling of potentially hazardous materials/wastes should occur in areas away from sensitive receptors such as schools or residential areas. These areas should be secured with chain-link fencing or a similar barrier with controlled access to restrict casual contact from non-project personnel. All project personnel that may encounter potentially hazardous materials/wastes should have the appropriate health and safety training commensurate with the anticipated level of exposure.

Because the authority to determine project-level impacts and require project-level mitigation lies with State or local land use and/or Districts for individual projects, CARB finds it legally infeasible to implement and enforce this measure. Moreover, due to the programmatic analysis of this EA, which does not contain project-specific details of potential impacts and associated mitigation, there is inherent uncertainty in the degree of mitigation that lead agencies may ultimately implement to reduce the potentially significant impacts if they approve these potential projects.

Consequently, while impacts would likely be reduced to a less-than-significant level with mitigation measures imposed by the land use and/or Districts acting as lead agencies for these individual projects under CEQA, it cannot be determined with certainty that impacts would be reduced to less than significant given that the authority to require these measures is within the responsibility and jurisdiction of

another agency, and not CARB. As such, this ~~Draft~~ Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that, if and when a project applicant seeks a permit for a compliance-response related project, short-term construction-related impacts on hazards and hazardous materials associated with the Proposed Amendments would remain **potentially significant and unavoidable.**

Impact 9-2: Long-Term Operational Impacts on Hazards and Hazardous Materials

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The alternative phase out pathway will require decorative chrome plating facilities to comply with building enclosure requirements by January 1, 2026, and cease use of hexavalent chromium by January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as building enclosures, air pollution control equipment, best management practices, and source testing. Chrome plating facilities that switch to trivalent chromium must control chromium emissions by meeting the emission limitation or using a wetting agent. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the State, which could result in an increase in heavy-duty truck traffic along State haul routes and potentially other modes of transportation such as train traffic along State rail routes.

As mentioned above, it is expected existing facilities are located in areas zoned for industrial uses and where the handling and use of hazardous materials is allowed, regulated, and permitted. For this analysis, it is assumed owners or operators of chrome plating facilities will convert from hexavalent to trivalent chromium operations. The plating processes are similar for both trivalent and hexavalent chromium. Both processes involve the electrical application of a coating of chromium (hexavalent or trivalent chromium) onto a surface and require similar electrical charges to be applied to a tank containing an electrolytic salt solution. Long-term operation of existing facilities with implementation of the Proposed Amendments would be similar to the existing condition and involve the routine handling of hazardous materials for operational activities. The transport, use, and disposal of hazardous materials would be required to comply with all applicable federal, State, and local laws that would reduce the potential for accidents and require certain actions should a spill or release occur; however, the potential remains for the release of hazardous materials into the environment through the mishandling of materials and spills.

Additionally, the Proposed Amendments would require owners or operators to install additional control within their facilities, including modifications such as installing air pollution control devices, and, for functional chrome plating facilities, and installing

and upgrading building enclosures that may require the relocation of hexavalent chromium tanks. Owners or operators of decorative plating facilities that elect the alternative phase out pathway will be required to comply with the building enclosure requirements, which may require construction involving the installation or upgrading of building enclosures. ~~For functional chrome plating facilities,~~ B~~b~~uilding enclosures would be required to be designed such that a maximum of 3.5 percent of the building envelope would be an opening in the building enclosure. Thus, emission of hazardous materials would be reduced in communities near existing facilities compared to existing conditions, including schools that could potentially be located within 1,000 feet of existing facilities. However, while building enclosures would reduce the exposure of communities near existing chrome plating facilities to hexavalent chromium concentrations, workers within these modified chrome plating facilities may be exposed to an increase in hexavalent chromium concentrations prior to the phase out that could result in a health impact.

To protect worker safety, the CAL/OSHA has established a PEL for hexavalent chromium of 5 PPMV. The PEL is the maximum, eight-hour, time-weighted average hexavalent chromium concentration for occupational exposure. CAL/OSHA also requires employee training on procedures for the safe handling of hazardous substances in the workplace and the health effects of those substances. Under the Proposed Amendments, the owner or operator of a chrome facility must notify the District if the building requirements provided under the Proposed Amendments conflict with the requirements established by the federal OSHA, CAL/OSHA, or other municipal code or agency requirements directly related to worker safety. If the installation of building enclosures required under the Proposed Amendments interferes with OSHA, CAL/OSHA, or other municipal code or agency worker safety requirements, the owner or operator of the chrome plating facility may submit a building enclosure compliance plan to the Executive Officer for review and approval no later than July 1, 2025.

Because all improvements and modifications would occur within the current footprint of existing facilities as well as within existing building structures, no impacts are anticipated with implementation of compliance responses to the Proposed Amendments related to being located on a hazardous materials site, excessive noise for people residing or working in the project area. Further, the compliance responses are not expected to impair implementation of or physically interfere with an adopted emergency response plan or expose people or structures to significant impacts related to wildland fires.

Since implementing the Proposed Amendments may result in the mishandling hazardous materials that could result in spills, long-term operational impacts on hazards and hazardous materials associated with the Proposed Amendments would be potentially significant.

Mitigation Measure 9-2: Implement Mitigation Measure 9-1

Because the authority to determine project-level impacts and require project-level mitigation lies with local land use and/or Districts for individual projects, CARB finds it legally infeasible to implement and enforce this measure. Moreover, due to the programmatic analysis of this EA, which does not allow project-specific details of potential impacts and associated mitigation, there is inherent uncertainty in the degree of mitigation that may ultimately by implemented to reduce potentially significant impacts if it approves these potential projects.

Consequently, while impacts could be reduced to a less-than-significant level with mitigation measures imposed by the land use and/or Districts acting as lead agencies for these individual projects under CEQA, if and when a project applicant seeks a permit for compliance-response related project, this ~~Draft~~ Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA compliance purposes, that the potential long-term operation-related impacts regarding hazards and hazardous materials associated with the Proposed Amendments could be **potentially significant and unavoidable.**

10. Hydrology and Water Quality

Impact 10-1: Short-Term Construction-Related and Long-Term Operational-Related Impacts on Hydrology and Water Quality

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The alternative phase out pathway will require decorative chrome plating facilities to comply with building enclosure requirements by January 1, 2026, and cease use of hexavalent chromium by January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as building enclosures, air pollution control equipment, best management practices, and source testing. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the state, which could result in an increase in heavy-duty truck traffic along state haul routes and potentially other modes of transportation such as train traffic along State rail routes.

Construction activities that would occur with implementation of the Proposed Amendments may involve conversion of existing hexavalent chromium plating facilities to trivalent chromium operations, which could involve, but not be limited to, site preparation for new plating equipment and the installation of trivalent plating equipment. Owners or operators of decorative plating facilities that elect the alternative phase out pathway will be required to comply with the building enclosure requirements, which may require construction involving the installation or upgrading

of building enclosures. Owners or operators of functional chrome plating facilities would also be required to install additional control within their facilities, including modifications such as installing air pollution control devices, relocating hexavalent chromium tanks, installing tank enclosures, and upgrading building enclosures. It is assumed that all improvements and modifications would occur within the current footprint of existing facilities as well as within existing building structures, and no expansion of the footprint of existing facilities or construction of new building structures to accommodate conversion and modification requirements would occur. Although it is not possible to predict exactly where project-related improvements would occur or what each project would involve, these construction activities would occur throughout the State. Modifications to existing facilities would not result in ground disturbance or any impacts to hydrology and water quality. Compliance with existing applicable laws and regulations aimed at reducing water quality impacts during and construction activities would be required for any modifications to existing facilities.

Following any short-term construction activities, operation of the facilities with the modifications resulting from compliance responses would not result in any ground disturbance activities because operation activities would occur within the footprint of the existing facilities. In addition, the Proposed Amendments would not change operations of existing facilities in a manner that would result in an increase in the amount of potentially harmful substances that would affect water quality. Although the operation of existing chrome plating facilities and modification activities required under the Proposed Amendments would have high risk of discharging chrome plating liquid waste into the groundwater through accidental spills, chrome plating facilities will be required to comply with existing applicable laws and regulations aimed at reducing water quality during operations. In addition, per- and poly-fluoroalkyl substances (PFAS) have been widely used within the chrome plating industry as a chemical fume suppressant. It is estimated that 30–40 percent of surface finishing facilities have chrome plating processes.[22] The use of PFAS fume suppressants at existing chrome plating facilities have the potential to result in the runoff of these substances, which can impact groundwater or drinking water wells. Exposure to drinking water contaminated with PFAS can lead to cancer and other negative health outcomes.[23] Because only hexavalent chromium processes use PFAS as a fume suppressant (trivalent chromium processes use non-PFAS fume suppressants), the Proposed Amendments would result in the elimination of the need for PFAS chemical fume suppressants as hexavalent chromium is phased out. Therefore, water quality near existing chrome plating facilities may improve as the Proposed Amendments are fully implemented.

[22] SCS Engineering, Chrome Plating Facilities to Meet PFAS Mandates in California, November 1, 2019.

[23] Vermont Department of Health, Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) in Drinking Water.

Since the Proposed Amendments will not result in an increased use of PFAS fume suppressants over what presently exists under baseline levels, short-term construction-related and long-term operational impacts on hydrology and water quality associated with the Proposed Amendments would be **less than significant**.

11. Land Use and Planning

Impact 11-1: Short-Term Construction-Related and Long-Term Operational-Related Impacts on Land Use and Planning

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The alternative phase out pathway will require decorative chrome plating facilities to comply with building enclosure requirements by January 1, 2026, and cease use of hexavalent chromium by January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as building enclosures, air pollution control equipment, best management practices, and source testing. Chrome plating facilities that switch to trivalent chromium must control chromium emissions by meeting the emission limitation or using a wetting agent. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the State, which could result in an increase in heavy-duty truck traffic along State haul routes and potentially other modes of transportation such as train traffic along State rail routes.

Construction activities would include, but are not limited to, the removal of existing hexavalent chromium plating equipment, site preparation for new plating equipment, and the installation of trivalent plating equipment. In addition to converting existing chrome plating facilities from hexavalent chromium to alternative technology, such as trivalent chromium, owners or operators may have to install additional controls within their facilities. These additional controls would require modifications such as installing air pollution control devices and upgrading and constructing building enclosures that may require the relocation of existing hexavalent chromium tanks. It is assumed that all improvements and modifications would occur within the current footprint of existing facilities as well as within existing building structures, and no expansion of the footprint of existing facilities or construction of new building structures to accommodate conversion and modification requirements would occur. Modifications to existing facilities would not result in ground disturbance, and it is expected that existing facilities are located in areas zoned for industrial uses, which are environments that are developed and disturbed. Regardless, any modifications to existing facilities would be required to be designed to comply with applicable land use plans and zoning requirements.

A conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect is not on its own considered an impact on the environment. Rather, a land use impact occurs when such a conflict causes a significant impact on the environment. As such, the Proposed Amendments would not result in any land use changes and would not conflict with adopted land use policies, plans, and regulations because operations would be the same as the existing conditions. Therefore, implementation of the Proposed Amendments is not anticipated to divide an established community or conflict with a land use plan, policy, or regulation. Land use impacts would be **less than significant**.

12. Mineral Resources

Impact 12-1: Short-Term Construction-Related and Long-Term Operational-Related Impacts on Mineral Resources

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The alternative phase out pathway will require decorative chrome plating facilities to comply with building enclosure requirements by January 1, 2026, and cease use of hexavalent chromium by January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as building enclosures, air pollution control equipment, best management practices, and source testing. Chrome plating facilities that switch to trivalent chromium must control chromium emissions by meeting the emission limitation or using a wetting agent. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the State, which could result in an increase in heavy-duty truck traffic along State haul routes and potentially other modes of transportation such as train traffic along State rail routes.

Construction activities that would occur with implementation of the Proposed Amendments may involve conversion of existing hexavalent chromium plating facilities to trivalent chromium operations, which could involve, but not be limited to, site preparation for new plating equipment and the installation of trivalent plating equipment. Owners or operators of decorative plating facilities that elect the alternative phase out pathway will be required to comply with the building enclosure requirements, which may require construction involving the installation or upgrading of building enclosures. Owners or operators of functional chrome plating facilities would also be required to install additional control within their facilities, including modifications such as installing air pollution control devices, installing tank enclosures, and upgrading building enclosures. It is assumed that all improvements and modifications would occur within the current footprint of existing facilities as well as within existing building structures, and no expansion of the footprint of existing

facilities or construction of new building structures to accommodate conversion and modification requirements would occur. Although it is not possible to predict exactly where project-related improvements would occur or what each project would involve, these construction activities would occur throughout the State. As many local governments have adopted land use policies to protect important mineral resources, it is expected that existing facilities are located in areas zoned for industrial uses, which are environments that are developed and disturbed and are unlikely to contain mineral resources. Moreover, as construction activities would occur within the existing footprint and building structures of existing facilities, there would be no potential to impact mineral resources. In addition, the operations of the existing facilities would not change as compared to the existing conditions in a manner that would result in loss of mineral resources.

Overall, short-term construction-related and long-term operational-related mineral resources impacts associated with implementation of the Proposed Amendments would be **less than significant**.

13. Noise

Impact 13-1: Short-Term Construction-Related Impacts on Noise

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The alternative phase out pathway will require decorative chrome plating facilities to comply with building enclosure requirements by January 1, 2026, and cease use of hexavalent chromium by January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as building enclosures, air pollution control equipment, best management practices, and source testing. Chrome plating facilities that switch to trivalent chromium must control chromium emissions by meeting the emission limitation or using a wetting agent. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the State, which could result in an increase in heavy-duty truck traffic along State haul routes and potentially other modes of transportation such as train traffic along State rail routes.

Construction activities that would occur with implementation of the Proposed Amendments may involve conversion of existing hexavalent chromium plating facilities to trivalent chromium operations, which could involve, but not be limited to, site preparation for new plating equipment and the installation of trivalent plating equipment. Owners or operators of decorative plating facilities that elect the alternative phase out pathway will be required to comply with the building enclosure requirements, which may require construction involving the installation or upgrading

of building enclosures. Owners or operators of functional chrome plating facilities would also be required to install additional control within their facilities, including modifications such as installing air pollution control devices, relocating hexavalent chromium tanks, installing tank enclosures, and upgrading building enclosures. It is assumed that all improvements and modifications would occur within the current footprint of existing facilities as well as within existing building structures, and no expansion of the footprint of existing facilities or construction of new building structures to accommodate conversion and modification requirements would occur. Although it is not possible to predict exactly where project-related improvements would occur or what each project would involve, these construction activities would occur throughout the State.

Depending on the size and scope of the modifications to existing chrome plating facilities, construction equipment could include forklifts, welding equipment, aerial lifts, and air compressors. For this analysis, it is assumed owners or operators of chrome plating facilities will convert from hexavalent to trivalent chromium operations. Construction activities to install additional controls and to convert a facility to trivalent chromium could range from six days to two months at each project site. Based on the anticipated types of activities and equipment needed to comply with the Proposed Amendments, it would be expected that the primary sources of construction-related noise sources would occur from use of construction equipment and heavy-duty trucks. The effects of construction noise would depend on the type of construction activities occurring on any given day, noise levels generated by those activities, distances to noise sensitive receptors, and whether the equipment is mobile or stationary. Additionally, the perception of changes in noise would depend on the existing ambient noise environment. Use of heavy equipment would be consistent with the existing noise characteristics of typical construction activities within industrial areas.

According to the California Department of Transportation (Caltrans) Technical Supplemental document, a doubling of sound energy (i.e., two sources of the same loudness each producing sound) would result in a three decibel (3 dB) increase in sound, which is considered as barely perceptible increase in sound to the normal person.[24] Therefore, for this analysis, if the Proposed Amendments does not result in the doubling of the intensity of off-road construction equipment within a project area, the Proposed Amendments would not result in a noise increase during construction that would be perceptible to the nearest sensitive receptor. Since the off-road construction equipment needed to modify existing facilities are expected to operate intermittently over short durations, it is unlikely that the operation of these equipment would result in the double of sound in any given project area. Furthermore, industrial areas and other locations where support facilities may be located generally do not support substantial numbers of sensitive land uses such as residences, hospitals, day care facilities, and hotels, with the exception of some facilities that are located near

[24] Caltrans, Technical Noise Supplement to the Traffic Noise Analysis Protocol, September 2013.

schools. However, although construction activities would be limited to the interior of existing facilities, the noise generated during construction has the potential to result in a short-term exceedance of an applicable local noise standards.

The construction activities would be limited to modifications to existing facilities and would not result in the complete demolition of any facilities. As such, the proposed construction activities are not anticipated to result in excess groundborne noise and vibration.

Implementation of the Proposed Amendments could result in short-term construction noise levels in excess of applicable standards or that result in a substantial increase in ambient levels at nearby sensitive receptors. Therefore, short-term construction-related noise impacts associated with the Proposed Amendments could be potentially significant.

Mitigation Measure 13-1

The Regulatory Setting in Attachment A includes, but is not limited to, applicable laws, regulations, and policies related to noise and vibration. CARB does not have the authority to require implementation of mitigation related to modified facilities that would be approved by local jurisdictions. The ability to require such measures is under the purview of jurisdictions with discretionary local land use and/or permitting authority. Modified facilities in California could qualify as a "project" under CEQA. The jurisdiction with primary permitting authority over a proposed action is the lead agency, which is required to review the proposed action for compliance with CEQA statutes. Project-specific impacts and mitigation may be identified during the environmental review by agencies with discretionary project approval authority. Recognized practices that are routinely required to avoid upset and accident-related impacts include:

- Proponents of facilities modified as a compliance response to the Proposed Amendments would coordinate with local land use agencies to seek entitlements for development, including the completion of all necessary environmental review requirements (e.g., CEQA). The local land use agency or governing body would certify that the environmental document was prepared in compliance with applicable regulations and would approve the project for development.
- Based on the results of the environmental review, proponents would implement all mitigation identified in the environmental document to reduce or substantially lessen the environmental impacts of the project. The definition of actions required to mitigate potentially significant noise impacts may include the following; however, any mitigation specifically required for a modified facility would be determined by the local lead agency.

- Equip all emergency pressure relief valves and steam blow-down lines with silencers to limit noise levels.
- Contain facilities within buildings or other types of effective noise enclosures.
- Employ engineering controls, including sound-insulated equipment and control rooms, to reduce the average noise level in normal work areas.
- Ensure noise-generating construction activities (including truck deliveries, and blasting) are limited to the least noise-sensitive times of day (e.g., weekdays during the daytime hours) for projects near sensitive receptors.
- Consider use of noise barriers, such as berms, to limit ambient noise at property lines, especially where sensitive receptors may be present.
- Ensure all project equipment has sound-control devices no less effective than those provided on the original equipment.
- All construction equipment used would be adequately muffled and maintained.
- Ensure all stationary construction equipment (i.e., compressors and generators) is located as far as practicable from nearby sensitive receptors or shielded.
- Properly maintain mufflers, brakes and all loose items on construction and operational-related vehicles to minimize noise and ensure safe operations.
- Keep truck operations to the quietest operating speeds. Advise about downshifting and vehicle operations in sensitive communities to keep truck noise to a minimum.
- Use noise controls on standard construction equipment; shield impact tools.
- Consider use of flashing lights instead of audible back-up alarms on mobile equipment.
- Install mufflers on air coolers and exhaust stacks on all diesel and gas-driven engines.

Because the authority to determine project-level impacts and require project-level mitigation lies with local land use and/or Districts for individual projects, CARB finds it legally infeasible to implement and enforce this measure. Moreover, due to the programmatic analysis of this EA, which does not allow project-specific details of potential impacts and associated mitigation, there is inherent uncertainty in the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts if it approves these potential projects.

Consequently, while impacts could be reduced to a less-than-significant level with mitigation measures imposed by the land use and/or Districts acting as lead agencies for these individual projects under CEQA, if and when a project applicant seeks a permit for a compliance-response related project, this ~~Draft~~ Final EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for

CEQA compliance purposes, that the potential short-term construction-related noise impacts associated with the Proposed Amendments could be **potentially significant and unavoidable**.

Impact 13-2: Long-Term Operational-Related Impacts on Noise

Compliance with the Proposed Amendments would result in modification of existing chrome facilities that include installation of new equipment and add on pollution control devises, and construction of building enclosures. These modifications are not anticipated to result in any new on-site noise sources or increase the noise from operating such equipment beyond the noise levels currently generated within the existing facilities. In addition, it is expected that existing facilities are located in areas zoned for industrial uses, which are environments that are developed and disturbed. Therefore, long-term operational-related noise impacts associated with the Proposed Amendments would be **less than significant**.

14. Population and Housing

Impact 14-1: Short-Term Construction-Related and Long-Term Operational-Related Impacts on Population and Housing

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The alternative phase out pathway will require decorative chrome plating facilities to comply with building enclosure requirements by January 1, 2026, and cease use of hexavalent chromium by January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as building enclosures, air pollution control equipment, best management practices, and source testing. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the State, which could result in an increase in heavy-duty truck traffic along State haul routes and potentially other modes of transportation such as trains along State rail routes.

Construction activities that would occur with implementation of the Proposed Amendments may involve conversion of existing hexavalent chromium plating facilities to trivalent chromium operations, which could involve, but not be limited to, site preparation for new plating equipment and the installation of trivalent plating equipment. Owners or operators of decorative plating facilities that elect the alternative phase out pathway will be required to comply with the building enclosure requirements, which may require construction involving the installation or upgrading of building enclosures. Owners or operators of functional chrome plating facilities would also be required to install additional control within their facilities, including modifications such as installing air pollution control devices, relocating hexavalent

chromium tanks, installing tank enclosures, and upgrading building enclosures. It is assumed that all improvements and modifications would occur within the current footprint of existing facilities as well as within existing building structures, and no expansion of the footprint of existing facilities or construction of new building structures to accommodate conversion and modification requirements would occur. Although it is not possible to predict exactly where project-related improvements would occur or what each project would involve, these construction activities would occur throughout the State. Modification and maintenance activities occurring within existing facilities would not require a substantial amount of work and are expected to be served by workers currently in the existing local labor pool. Therefore, the construction activities would not result in an increase in population.

Operation of any modified facilities would not generate substantial new employment opportunities. Therefore, the Proposed Amendments would not result in a rise in employment opportunities that would be substantial enough to increase a community's population or require the construction of housing; therefore, impacts would be **less than significant**.

15. Public Services

Impact 15-1: Short-Term Construction-Related and Long-Term Operational-Related Impacts on Public Services

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The alternative phase out pathway will require decorative chrome plating facilities to comply with building enclosure requirements by January 1, 2026, and cease use of hexavalent chromium by January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as building enclosures, air pollution control equipment, best management practices, and source testing. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the State, which could result in an increase in heavy-duty truck traffic along State haul routes and potentially other modes of transportation such as train traffic along State rail routes.

Construction activities that would occur with implementation of the Proposed Amendments may involve conversion of existing hexavalent chromium plating facilities to trivalent chromium operations, which could involve, but not be limited to, site preparation for new plating equipment and the installation of trivalent plating equipment. Owners or operators of decorative plating facilities that elect the alternative phase out pathway will be required to comply with the building enclosure requirements, which may require construction involving the installation or upgrading

of building enclosures. Owners or operators of functional chrome plating facilities would also be required to install additional control within their facilities, including modifications such as installing air pollution control devices, relocating hexavalent chromium tanks, installing tank enclosures, and upgrading building enclosures. It is assumed that all improvements and modifications would occur within the current footprint of existing facilities as well as within existing building structures, and no expansion of the footprint of existing facilities or construction of new building structures to accommodate conversion and modification requirements would occur. Although it is not possible to predict exactly where project-related improvements would occur or what each project would involve, these construction activities would occur throughout the State. Since the construction modifications are expected to be temporary and take place at existing facilities, existing public services would be sufficient to serve the short-term construction activities.

In addition, the Proposed Amendments would not change the operations of these existing facilities in a manner that would substantially increase the number of workers needed to operate the facility. Generally, an increased need for public services is associated with a permanent growth in population. As discussed under Impact 14-1, the Proposed Amendments are not expected to result in an increase in employment opportunities that is great enough to substantially increase a community's population. Since the construction modifications and operations are expected to take place at existing facilities, existing public services would be sufficient to serve these operations. As such, short-term constriction-related and long-term operational-related impacts on fire protection, police protection, schools, parks, and other facilities associated with the Proposed Amendments would be **less than significant**.

16. Recreation

Impact 16-1: Short-Term Construction-Related and Long-Term Operational-Related Impacts on Recreation

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The alternative phase out pathway will require decorative chrome plating facilities to comply with building enclosure requirements by January 1, 2026, and cease use of hexavalent chromium by January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as building enclosures, air pollution control equipment, best management practices, and source testing. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the State, which could result in an increase in heavy-duty truck traffic along State haul routes and potentially other modes of transportation such as train traffic along State rail routes.

Construction activities that would occur with implementation of the Proposed Amendments may involve conversion of existing hexavalent chromium plating facilities to trivalent chromium operations, which could involve, but not be limited to, site preparation for new plating equipment and the installation of trivalent plating equipment. Owners or operators of decorative plating facilities that elect the alternative phase out pathway will be required to comply with the building enclosure requirements, which may require construction involving the installation or upgrading of building enclosures. Owners or operators of functional chrome plating facilities would also be required to install additional control within their facilities, including modifications such as installing air pollution control devices, relocating hexavalent chromium tanks, installing tank enclosures, and upgrading building enclosures. It is assumed that all improvements and modifications would occur within the current footprint of existing facilities as well as within existing building structures, and no expansion of the footprint of existing facilities or construction of new building structures to accommodate conversion and modification requirements would occur. Although it is not possible to predict exactly where project-related improvements would occur or what each project would involve, these construction activities would occur throughout the State.

Construction and operation activities associated with the Proposed Amendments would occur within existing facilities and would not displace any recreational facilities. The Proposed Amendments would not increase use of regionals parks or other recreational facilities, such that existing neighborhood and regional parks or other recreational facilities would be substantially deteriorated. An increased need for recreational facilities and the accelerated degradation of existing recreational facilities is typically associated with permanent population growth. As discussed under Impact 14-1, the Proposed Amendments are not expected to result in an increase in employment opportunities that is great enough to increase the population of communities. Therefore, new or expanded recreational facilities would not be needed as a result of the Proposed Amendments, and existing facilities would not experience accelerated degradation. As a result, short-term construction-related and long-term operational-related impacts on recreational facilities associated with the Proposed Amendments would be **less than significant**.

17. Transportation

Impact 17-1: Short-Term Construction-Related Impact on Transportation

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The alternative phase out pathway will require decorative chrome plating facilities to comply with building enclosure requirements by January 1, 2026, and cease use of

hexavalent chromium by January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as building enclosures, air pollution control equipment, best management practices, and source testing. Chrome plating facilities that switch to trivalent chromium must control chromium emissions by meeting the emission limitation or using a wetting agent. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the State, which could result in an increase in heavy-duty truck traffic along State haul routes and potentially other modes of transportation such as train traffic along State rail routes.

Construction activities that would occur with implementation of the Proposed Amendments may involve conversion of existing hexavalent chromium plating facilities to trivalent chromium operations, which could involve, but not be limited to, site preparation for new plating equipment and the installation of trivalent plating equipment. Owners or operators of decorative plating facilities that elect the alternative phase out pathway will be required to comply with the building enclosure requirements, which may require construction involving the installation or upgrading of building enclosures. Owners or operators of functional chrome plating facilities would also be required to install additional control within their facilities, including modifications such as installing air pollution control devices, relocating hexavalent chromium tanks, installing tank enclosures, and upgrading building enclosures. It is assumed that all improvements and modifications would occur within the current footprint of existing facilities as well as within existing building structures, and no expansion of the footprint of existing facilities or construction of new building structures to accommodate conversion and modification requirements would occur. Although it is not possible to predict exactly where project-related improvements would occur or what each project would involve, these construction activities would occur throughout the State.

For this analysis, it is assumed that owners or operators of chrome plating facilities would convert from hexavalent to trivalent chromium plating operations. As shown in Table 3-1 above, it was assumed that it would take six days to install all additional controls and 41 days to convert a chrome plating facility from hexavalent chromium to trivalent chromium plating operations. It was assumed that: ~~decorative hexavalent chromium facilities~~ decorative chrome plating facilities that comply with the originally proposed 2027 phase out date would begin modifying their facilities in early January 2026; decorative plating facilities that elect to comply with the alternative phase out pathway would begin modifying their facilities in early January 2029 to prepare for the 2030 phase out; and hard functional hexavalent chromium facilities would begin modifying their facilities in early January 2038 to prepare for the 2039 phase out. A list of construction equipment and vehicle trips required to install additional controls and convert an existing chrome plating facility to trivalent chromium plating operations are provided in Table 3-2 and Table 3-3, above.

State CEQA Guidelines identifies criteria for analyzing the transportation impacts of a project, including land use projects (Cal. Code Regs., tit. 14, § 15064.3(b)(1)) and transportation projects (Cal. Code Regs., tit. 14, § 15064.3(b)(2)). Implementation of the Proposed Amendments could result in the construction of modified equipment within existing facilities. Construction activities would be anticipated to require relatively small crews, and demand for these crews would be temporary (e.g., 6 days to 2 months per project) and would not result in unplanned population growth. Therefore, short-term construction would not drive development of urban areas, residential development, major employment generation, or transportation projects. Thus, increased vehicle miles traveled (VMT) from construction-related activities would not be substantial and would be short-term.

Construction activities could result in short-term construction traffic (primarily motorized) in the form of worker commute and material delivery trips. The amount of construction activity would fluctuate depending on the particular type, number, and duration of usage of equipment, as well as the phase of construction. These variations would affect the amount of project-generated traffic for both worker commute trips and material deliveries. Given the short-term construction durations and small crews, construction would not generate significant numbers of vehicle trips that would conflict with applicable programs, plans, ordinances, or policies (e.g., performance standards, congestion management). Construction activities would be limited to areas within existing footprints of chrome plating facilities and would not be expected to result in hazardous design features and emergency access issues from road closures, detours, and obstruction of emergency vehicle movement, especially due to project-generated heavy-duty truck trips.

As such, short-term construction-related impacts to transportation associated with the Proposed Amendments would be **less than significant**.

Impact 17-2: Long-Term Operational-Related Impacts on Transportation

Compliance with the Proposed Amendments would require the installation of new equipment within existing facilities. However, these facilities are not anticipated to result in any new vehicle trips from operating such equipment beyond the trips that are currently associated with the existing facilities. Therefore, the modified facilities would not affect transportation in terms of VMT, emergency access, or hazards because operations would be similar to current activities and locations. Therefore, long-term operational-related transportation impacts associated with the Proposed Amendments would be **less than significant**.

18. Tribal Cultural Resources

Impact 18-1: Short-Term Construction-Related and Long-Term Operational-Related Impacts on Tribal Cultural Resources

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The alternative phase out pathway will require decorative chrome plating facilities to comply with building enclosure requirements by January 1, 2026, and cease use of hexavalent chromium by January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as building enclosures, air pollution control equipment, best management practices, and source testing. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the State, which could result in an increase in heavy-duty truck traffic along State haul routes and potentially other modes of transportation such as locomotive and aircraft.

Tribal cultural resources include sites, features, places, cultural landscapes, sacred places, and objectives with cultural value to a California Native American tribe. Construction activities would include, but are not limited to, the removal of existing hexavalent chromium plating equipment, site preparation for new plating equipment, and the installation of trivalent plating equipment. In addition to converting existing chrome plating facilities to using an alternative to hexavalent chromium, such as trivalent chromium, owners or operators may have to install additional controls within their facilities. These additional controls would require modifications such as installing air pollution control devices, removing or relocating hexavalent chromium tanks, and upgrading or installing building enclosures. It is assumed that all improvements and modifications would occur within the current footprint of existing facilities as well as within existing building structures, and no expansion of the footprint of existing facilities or construction of new building structures to accommodate conversion and modification requirements would occur. Modifications to existing facilities would not require any ground-disturbing activities or otherwise impact tribal cultural resources. Therefore, construction activities would not affect tribal cultural resources.

Following any short-term construction activities, operation of the facilities with the modifications resulting from compliance responses would not result in any ground disturbance activities because operation activities would occur within the footprint of the existing facilities and would be similar to existing operations. Therefore, operational activities would not have the potential to affect tribal cultural resources.

Therefore, short-term construction-related and long-term operational-related impacts to tribal cultural resources associated with implementation of the Proposed Amendments would be **less than significant**.

19. Utilities and Service Systems

Impact 19-1: Short-Term Construction-Related and Long-Term Operational-Related Impacts on Utilities and Service Systems

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The alternative phase out pathway will require decorative chrome plating facilities to install building enclosures on existing tanks by January 1, 2026, and cease use of hexavalent chromium after January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as building enclosures, air pollution control equipment, best management practices, and source testing. Chrome plating facilities that switch to trivalent chromium must control chromium emissions by meeting the emission limitation or using a wetting agent. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the State, which could result in an increase in heavy-duty truck traffic along State haul routes and potentially other modes of transportation such as train traffic along State rail routes.

Construction activities that would occur with implementation of the Proposed Amendments may involve conversion of existing hexavalent chromium plating facilities to trivalent chromium operations, which could involve, but not be limited to, site preparation for new plating equipment and the installation of trivalent plating equipment. Owners or operators of decorative plating facilities that elect the alternative phase out pathway will be required to comply with the building enclosure requirements, which may require construction involving the installation or upgrading of building enclosures. Owners or operators of functional chrome plating facilities would also be required to install additional control within their facilities, including modifications such as installing air pollution control devices, relocating hexavalent chromium tanks, installing tank enclosures, and upgrading building enclosures. It is assumed that all improvements and modifications would occur within the current footprint of existing facilities as well as within existing building structures, and no expansion of the footprint of existing facilities or construction of new building structures to accommodate conversion and modification requirements would occur. Although it is not possible to predict exactly where project-related improvements would occur or what each project would involve, these construction activities would occur throughout the state. Since the construction of the modifications is expected to be temporary and take place at existing facilities, existing utilities and service systems

that serve the facilities would be sufficient to serve the short-term construction activities.

In addition, the Proposed Amendments would not substantially change the operations of these existing facilities in a manner that would require new or increased utilities and service systems. Converting a chrome plating facility from hexavalent chromium to trivalent chromium operations has the potential to increase the energy consumption of a chrome facility for the lifetime of its operation. However, as discussed in the "Air Quality" section (Section 3) of this ~~Draft~~ Final EA, the Proposed Amendments are anticipated to increase overall grid demand in California by just 0.01 percent (i.e., one hundredth of a percent) by 2039. Due to this small percent increase on the California power grid, it is anticipated that local power utilities would have sufficient services to supply chrome plating facilities who have convert from hexavalent to trivalent operations with electrical power to operate. Consequently, the operation of chrome plating facilities is expected to take place at existing facilities and would not result in a substantial increase energy, wastewater, and water usage that existing utilities and service systems would not be sufficient to serve.

Thus, short-term construction-related and long-term operational impacts on utilities and service systems associated with the Proposed Amendments would be **less than significant**.

20. Wildfire

Impact 20-1: Short-Term Construction-Related and Long-Term Operational-Related Impacts on Wildfire

Under the Proposed Amendments, starting on January 1, 2024, no new chrome plating facilities that use hexavalent chromium would be allowed to be constructed or operate within the State. Existing decorative and functional chrome platers must cease use of hexavalent chromium by January 1, 2027, and January 1, 2039, respectively. The alternative phase out pathway will require decorative chrome plating facilities to comply with building enclosures requirements by January 1, 2026, and cease use of hexavalent chromium after January 1, 2030. Prior to the 2039 phase out date, functional chrome plating facilities are allowed to operate using hexavalent chromium but would be required to implement additional measures such as building enclosures, air pollution control equipment, best management practices, and source testing. Chrome plating facilities that switch to trivalent chromium must control chromium emissions by meeting the emission limitation or using a wetting agent. The Proposed Amendments may also result in a rise in imports of parts plated with hexavalent chromium into the State, which could result in an increase in heavy-duty truck traffic along State haul routes and potentially other modes of transportation such as train traffic along State rail routes.

Construction activities that would occur with implementation of the Proposed Amendments may involve conversion of existing hexavalent chromium plating facilities to trivalent chromium operations, which could involve, but not be limited to, site preparation for new plating equipment and the installation of trivalent plating equipment. Owners or operators of decorative plating facilities that elect the alternative phase out pathway will be required to comply with the building enclosure requirements, which may require construction involving the installation or upgrading of building enclosures. Owners or operators of functional chrome plating facilities would also be required to install additional control within their facilities, including modifications such as installing air pollution control devices, relocating hexavalent chromium tanks, installing tank enclosures, and upgrading building enclosures. It is assumed that all improvements and modifications would occur within the current footprint of existing facilities as well as within existing building structures, and no expansion of the footprint of existing facilities or construction of new building structures to accommodate conversion and modification requirements would occur. Although it is not possible to predict exactly where project-related improvements would occur or what each project would involve, these construction activities would occur throughout the State.

In the event of an emergency, such as a wildfire, evacuation coordination is dealt with at various levels of government through federal, State, or local agencies, as appropriate. The California Department of Forestry and Fire Protection (CAL FIRE) is responsible for coordinating wildfire response and protection within State Responsibility Areas. CAL FIRE does not have responsibility for fire response in Local Responsibility Areas or Federal Responsibility Areas, which are defined based on land ownership, population density, and land use. These areas include densely populated areas, such as cities and towns, agricultural lands, and lands administered by the federal government. In densely populated areas, local fire departments respond to fires and emergencies. Fire response on federal lands is coordinated by the appropriate federal agency. For example, on National Forest System lands, the U.S. Forest Service coordinates fire response; on lands administered by the U.S. Bureau of Land Management (BLM), the BLM coordinates fire response.

Construction and operation-related activities of modified facilities would occur within footprints of existing facilities located in areas that are zoned for industrial or other appropriate uses; therefore, changes or modifications to existing fire response and evacuation plans would not be necessary. In addition, projects implemented under the Proposed Amendments would not create growth substantial enough to impede emergency response or affect evacuation route capacity, as discussed under Impact 14-1, above.

Therefore, short-term construction-related and long-term operational impacts associated with wildfire from the Proposed Amendments would be **less than significant**.

5.0 CUMULATIVE AND GROWTH-INDUCING IMPACTS

A. Approach to Cumulative Analysis

This section satisfies requirements of CEQA to discuss how the project being analyzed would contribute to cumulative impacts. CARB's certified regulatory program (Cal. Code Regs., tit. 17 §§ 60000–60008) does not provide specific direction on a cumulative impacts analysis, and while CARB is exempt from Chapters 3 and 4 of CEQA and corresponding sections of the CEQA Guidelines by virtue of its certified program, the Guidelines nevertheless contain useful guidance for preparation of a thorough and meaningful cumulative analysis. The CEQA Guidelines require a lead agency to discuss a cumulative impact if the project's incremental effects combined with the effects of other projects is "cumulatively considerable" (Cal. Code Regs., tit. 14, § 15130(a)). The discussion of cumulative impacts need not provide as much detail as the discussion of effects attributable to the project alone (Cal. Code Regs., tit. 14, § 15130). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant but must briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

In considering cumulative impacts, an agency may choose from two approaches: it can prepare a list of past, present, and probable future projects that would produce related or cumulative impacts; or it can rely on a summary of projections contained in an adopted planning document or an adopted or certified environmental document for the planning document (Cal. Code Regs, tit. 14, § 15130(b)). Further, the CEQA Guidelines state that the pertinent discussion of cumulative impacts contained in one or more previously certified EIRs may be incorporated by reference pursuant to provisions for tiering and program EIRs, and that no future cumulative analysis is required when the lead agency determines the regional and area wide impacts have already been addressed in the prior certified EIR for that plan (Cal. Code Regs., tit. 14, § 15130).

The CEQA Guidelines state that a previously approved plan for the reduction of criteria and other air pollutant emissions may be used in the cumulative impacts analysis; that the pertinent discussion of cumulative impacts contained in one or more previously certified EIRs may be incorporated by reference (Cal. Code Regs., tit. 14, § 15130(d)). Furthermore, no further cumulative impacts analysis is required when a project is consistent with a general, specific, master, or comparable programmatic plan where the lead agency determines that the regional or area wide cumulative impacts of the proposed project have already been adequately addressed, as defined in section 15152(f), in a certified EIR for that plan (Cal. Code Regs., tit. 14, § 15130(d)). CEQA further directs that a tiered EIR focus on significant environmental effects that were not already analyzed in the previous environmental analysis. (Pub. Resources Code §§ 21068.5 & 21093; see also § 21094l.)

For the purposes of this analysis, CARB is relying on the summary of projections contained in CARB's Community Air Protection Blueprint. CARB prepared the Community Air Protection Blueprint to meet the requirements of AB 617 and provide the structure for the Community Air Protection Program (Program). The Community Air Protection Blueprint is not a regulation but provides commitments from CARB, lays the foundation for the Program, and serves as a guidance document for local Districts, the public, and other stakeholders. In terms of air quality, the Blueprint identifies a suite of strategies that would reduce emissions and exposure of TACs in pollution burdened communities – in other words, the Blueprint includes other measures similar to the Proposed Amendments. For the Community Air Protection Blueprint EA, CARB identified reasonably foreseeable compliance responses, which included the Proposed Amendments as well as many other emission reduction strategies (e.g., Cargo Handling Equipment Amendment, Drayage Trucks at Seaports and Rail Yards Amendment).

The Community Air Protection Blueprint EA provided a program-level review of significant adverse impacts associated with the reasonably foreseeable compliance responses that appeared most likely to occur. The impact discussion includes, where relevant, construction-related effects, operational effects of new or modified facilities, and influences of the recommended actions on GHG and air pollutant emissions. The Community Air Protection Blueprint EA considered cumulative impacts of a full range of reasonably foreseeable compliance responses to all the recommendations, including the Proposed Amendments and considered the cumulative effect of other "closely related" past, present, and future reasonably foreseeable activities undertaken to address air quality at the State level, as well as other activities with "related impacts" (Cal. Code Regs., tit. 14, §§ 15130(a)(1) & 15355(b)).

Consistent with the CEQA Guidelines, CARB has decided to use the "summary of projections" approach, using information from the Community Air Protection Blueprint EA (Cal. Code Regs., tit. 14, § 15130(b)(1)(B)). CARB has determined that the cumulative effects of the Proposed Amendments have been examined at a sufficient level of detail in the Community Air Protection Blueprint EA. Therefore, CARB has determined that for a cumulative analysis of the Proposed Amendments, it is appropriate to rely on the cumulative analysis contained in the Community Air Protection Blueprint EA. The analysis of the Community Air Protection Blueprint EA is hereby incorporated by reference. The portions of the Community Air Protection Blueprint EA relevant to this discussion are also summarized below. The significance conclusions in the Community Air Protection Blueprint EA are given substantial weight in determining whether there would be a cumulative impact because the Community Protection Blueprint consists of a broad and comprehensive suite of strategies that could result in environmental impacts.

The analysis of cumulative impacts includes the following:

1. A summary of the cumulative impacts found for each resource area in the Community Air Protection Blueprint EA (certified by the Board in September 2018).

2. A discussion of the types of compliance responses associated with the Proposed Amendments, pertinent to each resource area.

3. Significance conclusions that determine whether the Proposed Amendments could result in a significant cumulative effect or a considerable contribution to an existing significant cumulative impact.

This approach to cumulative impacts analysis is "guided by the standards of practicality and reasonableness" (Cal. Code Regs., tit. 14, § 15130(b)) and serves the purpose of providing "a context for considering whether the incremental effects of the project at issue are considerable" when judged "against the backdrop of the environmental effects of other projects." (*CBE v. Cal. Res. Agency* (2002) 103 Cal.App.4th 98, 119).

1. Summary of Community Air Protection Blueprint and Reasonably Foreseeable Compliance Responses

The objectives of the Community Air Protection Blueprint are to:

1. Provide core elements for the Program;

2. Provide a process and criteria for the identification, assessment, and selection of communities for community emissions reduction programs and air monitoring;

3. Describe the tools and resources to be used in future planning to identify strategies to reduce exposure and emissions in pollution-burdened communities;

4. Provide the criteria necessary for community air monitoring;

5. Provide the criteria necessary for community emissions reduction programs to achieve the requirements of AB 617 as set out in the Health and Safety Code (see Health & Saf. Code § 44391.2);

6. Provide other measures to ensure the success of the Program, which include regulatory measures that CARB could undertake using its authorities, funding programs, a statewide emission reporting system, a technology clearinghouse, and other resources as described in Section C, below;

7. Further the objectives set forth in AB 617 to support a reduction of emissions of TACs and criteria air pollutants in communities affected by a high cumulative exposure burden; and

8. Develop a strategy that is consistent with and meets the goals of AB 617.

In addition to supporting tools and resources, identification and recommendation of communities, criteria for community air monitoring, and criteria for community emissions reduction programs, the Community Air Protection Blueprint reduces emissions and exposure to TACs through eleven emission reduction strategies: evaluation and potential development of a regulation to reduce idling for all railyard sources, evaluation and potential development of a regulation to reduce emissions from locomotives not preempted under the Clean Air Act, drayage trucks at seaports and rail yards amendment, cargo handling equipment amendment, catalytic converter theft reduction, composite wood products control measure amendments, commercial cooking suggested control measure, heavy-duty on-road and off-road engine in-use testing, incentive funding to support immediate emission reductions, commercial harbor craft amendment, and the Proposed Amendments. The Community Air Protection Blueprint EA evaluated these emission reduction strategies based on the description of the strategies in the Community Air Protection Blueprint. The actual, final version of the strategies that may be proposed for adoption may have slight variations from those identified in the Community Air Protection Blueprint, but the overall impacts identified in the Community Air Protection Blueprint EA are expected to be the same for each strategy.

a) Evaluation and Potential Development of Regulation to Reduce Idling for All Railyard Sources

As described in the Community Air Protection Blueprint EA, this strategy would evaluate and potentially develop a regulation that requires operators to limit idling of all combustion-powered vehicles and mobile equipment operating at rail yards and other locations, as well as reducing emissions from stationary locomotive operations (e.g., maintenance and testing). The scope could include both freight and passenger rail activities, in and around intermodal, classification, and maintenance railyards; at seaports, at warehouses, on sidings, at passenger rail stations; and at maintenance and service locations.

Reasonably foreseeable compliance responses could include:

1. Changing operational practices at facilities, installation of idle-limiting devices or idle-restricting devices, installation of capture and control technology, and replacing equipment with near-zero or zero-emission technology.

2. Temporary increased demand for associated equipment and incentives funds for equipment updates.

3. Construction and operation of infrastructure such as new hydrogen fueling stations and EV charging stations.

4. Increased demand for lead acid and lithium-ion batteries, which could require an increase in manufacturing and recycling facilities and associated increases in lithium mining and exports from countries with raw mineral supplies.

5. Construction and operation of new facilities or modifications to existing facilities to accommodate battery recycling activities.

b) Evaluation and Potential Development of Regulation to Reduce Emissions from Locomotives

As described in the Community Air Protection Blueprint EA, this strategy would evaluate and potentially develop a regulation that requires the retrofit, repower, remanufacture, or replacement of freight and passenger locomotives beginning in 2025. As an alternative, CARB could also consider a voluntary agreement with the major railroads to secure greater community health benefits by reducing emissions from interstate locomotives (the dominant source of emissions and community health risk at rail yards).

Reasonably foreseeable compliance responses could include:

1. Temporary increased replacement rate of locomotives and locomotive engines, requiring that older models be sold outside of California, scrapped, or recycled.

2. Construction of new or modifications to existing manufacturing facilities.

3. Temporary increased demand for incentive funds to assist in replacement, repower, or retrofit of associated equipment.

c) Drayage Trucks at Seaports and Rail Yards Amendment

As described in the Community Air Protection Blueprint EA, this strategy would amend the existing drayage truck regulation, or adopt a new regulation, to direct a transition to zero-emission operations, beginning 2026–2028. Options to be considered include, but are not limited to, requirements for full zero-emission technology (e.g., a battery or fuel-cell electric short-haul truck) and zero-emission mile capability (e.g., a natural gas-electric hybrid that could drive interstate but switch to zero emission electric mode while operating near pollution burdened communities).

Reasonably foreseeable compliance responses could include:

1. Construction and operation of equipment to support zero and near-zero emission technologies, such as new hydrogen fueling stations and EV charging stations as well as new or modified roadway infrastructure.

2. Increased demand for lithium-ion batteries, including an increased demand for refurbishing or reusing batteries as well as new facilities, or modifications to existing facilities to accommodate battery recycling activities.

3. Construction and operation of new facilities or modifications to existing facilities to accommodate battery recycling activities.

4. Disposal or sale of noncompliant equipment to areas outside of California.

d) Cargo Handling Equipment Amendment

As described in the Community Air Protection Blueprint EA, this strategy would amend the existing cargo handling equipment regulation. This regulation applies to equipment including yard trucks, rubber-tired gantry cranes, container handlers, and forklifts. The strategy would propose an implementation schedule for new equipment and infrastructure requirements, with a focus on the transition to zero-emission operation and may include provisions for efficiency improvements.

Reasonably foreseeable compliance responses could include:

1. Manufacturing and use of zero and near-zero emission cargo handling equipment for use within seaports and railyards.

2. Construction and operation of infrastructure such as new hydrogen fueling stations and EV charging stations.

3. Increased demand for lead acid and lithium-ion batteries, which could require an increase in manufacturing and recycling facilities and associated increases in lithium mining and exports from countries with raw mineral supplies.

4. Construction and operation of new facilities or modifications to existing facilities to accommodate battery recycling activities.

5. Recycling, scrapping, and/or disposing of noncompliant equipment, or selling equipment to areas outside of California.

e) Catalytic Converter Theft Reduction

As described in the Community Air Protection Blueprint EA, this potential regulation would require manufacturers to stamp catalytic converters with a vehicle identification number. Compliance assistance would offer free vehicle identification number stamping on converters in communities selected through the community identification and selection process. The strategy would make it easier for the recycler to identify stolen catalytic converters.

Reasonably foreseeable compliance responses could include:

1. Updating the car manufacturing process to etch VINs into catalytic converters and/or install VIN etching equipment within communities selected through the community assessment process.

The Community Air Protection Blueprint EA concluded that this strategy would not result in a physical change in the environment and therefore it was not further evaluated in the EA.

f) Composite Wood Products Control Measure Amendments

As described in the Community Air Protection Blueprint EA, this strategy would amend the existing ATCM to Reduce Formaldehyde Emissions from Composite Wood Products (Composite Wood Products ATCM), to obtain additional formaldehyde emission reductions, clarify requirements and applicability, improve enforceability, and align with U.S. EPA formaldehyde regulation, where appropriate. The Composite Wood Products ATCM, approved in 2007, established formaldehyde emission standards for three types of composite wood products (e.g., hardwood plywood, particleboard, and medium density fiberboard) and requires that all consumer goods that contain such materials (e.g., flooring, cabinets, furniture) destined for sale in California must comply with the Composite Wood Products ATCM.

Reasonably foreseeable compliance responses could include:

1. Development of manufacturing systems or alternative, lower-emitting glues that achieve the same curing rates and strength characteristics as current urea formaldehyde glues.

2. Installation of new manufacturing systems that could result in construction activities.

g) Commercial Cooking Suggested Control Measure

As described in the Community Air Protection Blueprint EA, this strategy involves evaluating California's current emission reduction requirements for commercial cooking operations that prepare food for human consumption, and if necessary, making improvements to achieve additional reductions in respirable and fine particulate matter (PM10 and PM2.5, respectively) and volatile organic compound (VOC) emissions that contribute to ozone formation. In the first of two phases, CARB would conduct a technical assessment to evaluate the stringency of existing local District (e.g., air pollution control and air quality management districts) commercial cooking rules and assess the commercial availability, effectiveness, and cost of more advanced emission control devices or methods, to determine the potential for additional PM10/PM2.5 and VOC emission reductions. In the second phase, CARB would use the results of the technical assessment to develop a path forward for additional emission reductions from commercial cooking operations that could include

adoption of a suggested control measure, or a combination of up-front incentives to install advanced emission controls with a recommended regulatory backstop.

Reasonably foreseeable compliance responses could include:

1. Installation of proven control technologies and applied technologies from other industry sectors that are transferable; typical emissions controls include catalytic oxidizers, self-cleaning ceramic filters, filter-bed filters, thermal incinerators, electrostatic precipitators, wet scrubbers, and carbon absorbers.

2. Improved maintenance and control device certification requirements.

h) Heavy-Duty On-Road and Off-Road Engine In-Use Testing

As described in the Community Air Protection Blueprint EA, this strategy involves real world screening of heavy-duty trucks and off-road engines operating in selected communities to target heavy-duty in-use compliance testing. Engines that are found to be emitting above expected levels would be brought into CARB's in-use compliance program. Engines found to be in noncompliance would be recalled and emission mitigation projects could include deployment of zero-emission technology in selected communities.

Reasonably foreseeable compliance responses could include:

1. Real world testing of heavy-duty and off-road engines.

2. Construction and operation of equipment to support zero and near-zero emission technologies, such as new hydrogen fueling stations and EV charging stations.

3. Increased demand for lead acid and lithium-ion batteries, which could require an increase in manufacturing and recycling facilities and associated increases in lithium mining and exports from countries with raw mineral supplies.

4. Construction of new and modifications to existing facilities to accommodate battery recycling activities.

i) Incentive Funding to Support Immediate Emission Reductions

As described in the Community Air Protection Blueprint EA, this strategy involves using incentive funding for projects to support early action to reduce emissions through the deployment of cleaner mobile source technologies in pollution-burdened communities. The Governor's Fiscal Year 2017-2018 budget included $250 million for this purpose. As directed by the Legislature, these funds were administered through the Carl Moyer Memorial Air Quality Standards Attainment Program, except that at its discretion, a District may allocate up to 40 percent of the funds it receives to incentivize clean trucks

in accordance with CARB's Proposition 1B Goods Movement Emission Reduction Program Guidelines.

Reasonably foreseeable compliance responses evaluated in the Community Air Protection Blueprint EA included:

1. CARB and Districts holding community and stakeholder meetings to determine funding needs, CARB updating or creating funding program guidelines, and CARB interfacing with community groups to provide community funding.

j) Commercial Harbor Craft Amendment

As described in the Community Air Protection Blueprint EA, the strategy would amend the existing commercial harbor craft regulation to include more stringent in-use and new vessel requirements for both freight-related and passenger vessels. The amendments would take into consideration the feasibility of Tier 4 engine technology in Commercial Harbor Craft applications, the performance of advanced retrofit emission control devices, and the availability of zero and near-zero emission technologies for the sector.

Reasonably foreseeable compliance responses as identified in the Community Air Protection Blueprint EA, could include:

1. Increase in manufacturing and use of Tier 4 engine technology, advanced retrofit emission control devices, and new vessels containing such technologies.
2. Potential acceleration of turnover of engines, vessels, and their components, which may increase recycling, scrapping, and/or disposing of these materials within or outside of California or selling these materials outside of California.
3. Potential acceleration of adoption of zero and near-zero emission technologies, which could require construction and operation of equipment to support zero and near-zero emission technologies, such as new hydrogen fueling stations and electric vehicle charging stations.
4. Increased demand for lead acid and lithium-ion batteries, which could require an increase in manufacturing and recycling facilities and associated increases in lithium mining and exports from countries with raw mineral supplies.
5. Construction of new or modifications to existing battery recycling facilities to meet an increased demand for refurbishing or reusing batteries.
6. Potential effects on electricity demand, which would depend on factors such as timing of charging demand and diurnal supply patterns associated with new renewable electricity sources.

2. Summary of the Community Air Protection Blueprint Environmental Impacts

The Community Air Protection Blueprint EA evaluated the environmental impacts related to the reasonably foreseeable compliance responses described above. Table 5-1 provides a summary of the conclusions of these impacts.

Table 5-1: Summary of the Community Air Protection Blueprint Environmental Analysis by Resource

Resource Areas and Impact Categories	Significance Determination
Aesthetics	
Construction and Operational Impacts	Potentially Significant and Unavoidable
Agriculture and Forestry Resources	
Construction and Operational Impacts	Potentially Significant and Unavoidable
Air Quality	
Air Quality Construction Impacts	Potentially Significant and Unavoidable
Air Quality Operational Impacts	Beneficial
Odor Construction and Operational Impacts	Less Than Significant
Biological Resources	
Construction Impacts	Potentially Significant and Unavoidable
Operational Impacts	Potentially Significant and Unavoidable
Cultural Resources	
Construction and Operational Impacts	Potentially Significant and Unavoidable
Energy	
Construction Impacts	Less Than Significant
Operational Impacts	Beneficial
Geology and Soils	
Construction and Operational Impacts	Potentially Significant and Unavoidable
Greenhouse Gas Emissions	
Construction and Operational Impacts	Beneficial
Hazards and Hazardous Materials	
Construction Impacts	Potentially Significant and Unavoidable
Operational Impacts	Less Than Significant
Hydrology and Water Quality	
Construction Impacts	Potentially Significant and Unavoidable
Operational Impacts	Potentially Significant and Unavoidable
Land Use and Planning	
Construction and Operational Impacts	Potentially Significant and Unavoidable
Mineral Resources	
Construction Impacts	Less Than Significant
Operational Impacts	Potentially Significant and Unavoidable
Noise	
Construction Impacts	Potentially Significant and Unavoidable
Operational Impacts	Potentially Significant and Unavoidable
Population and Housing	
Construction and Operational Impacts	Less Than Significant

Resource Areas and Impact Categories	Significance Determination
Public Services	
Construction and Operational Impacts	Less Than Significant
Recreation	
Construction and Operational Impacts	Less Than Significant
Transportation	
Construction Impacts	Potentially Significant and Unavoidable
Operational Impacts	Potentially Significant and Unavoidable
Tribal Cultural Resources (topic addressed in Cultural Resources)	
Construction and Operational Impacts	N/A
Utilities and Service Systems	
Operational Impacts	Potentially Significant and Unavoidable
Wildfire (topic addressed in Hazards and Hazardous Materials)	
Operational Impacts	N/A

Source: Final Environmental Analysis, Final Draft Community Air Protection Blueprint, CARB, September 14, 2018.

B. Significance Determinations and Mitigation

Implementation of the Proposed Amendments was determined to potentially result in cumulatively considerable contributions to significant cumulative impacts to certain resource areas, as discussed below. While suggested mitigation is provided for each potentially cumulatively considerable impact, the mitigation needs to be implemented by lead agencies responsible for permitting compliance-response projects. Where impacts cannot be feasibly mitigated, this ~~Draft~~ Final EA recognizes the impact as significant and unavoidable. The Board will need to adopt Findings and a Statement of Overriding Considerations for any significant and unavoidable environmental effects of the project as part of the approval process.

C. Cumulative Impacts by Resource Area

1. Aesthetics

The Community Air Protection Blueprint EA found that implementation of the reasonably foreseeable compliance responses for the various measures could result in a significant impact to aesthetic resources from construction and operational activities associated with new or modified facilities or infrastructure and increased lithium consumption. As discussed in the Community Air Protection Blueprint EA, the exact location or character of these new facilities or the modification of existing facilities is uncertain. Depending on hours of construction, sources of glare or light may also be present. Construction activities would introduce typical off-road construction equipment and on-road heavy duty vehicles, as well as staging areas and other typical construction activities. Development of new facilities is expected to occur in areas that are appropriately zoned; however, new facilities can also introduce or increase

presence of visible artificial elements (e.g., heavy-duty equipment, new or expanded buildings) in areas of scenic importance, such as visibility from State scenic highways. Facilities may also introduce substantial sources of glare, exhaust plumes, and nighttime lighting for safety and security. The increase in demand for lithium could cause adverse visual effects due to increases in mining.

CARB cannot determine with certainty that implementing mitigation measures would reduce these impacts to a less-than-significant level because the authority to determine project-level impacts and require project-level mitigation lies with land use and/or Districts for individual projects. Thus, implementation of the Community Air Protection Blueprint could result in a significant cumulative impact.

The Proposed Amendments' contribution to this significant impact would not be cumulatively considerable since construction and operations would result in modifications within the footprint of existing facilities. Thus, the Proposed Amendments would not significantly adversely affect the visual quality and character of a landscape or scenic vista. Therefore, the Proposed Amendments would result in a **less-than-significant** contribution to a significant cumulative impact on aesthetic resources, which would not be cumulatively considerable.

2. Agriculture and Forestry Resources

The Community Air Protection Blueprint EA found that implementation of the reasonably foreseeable compliance responses for the various measures could result in a significant impact to agriculture and forestry resources from construction and operational activities associated with new or modified facilities or infrastructure and increased lithium consumption. As discussed in the Community Air Protection Blueprint EA, the exact location or character of these new facilities or modification of existing facilities is uncertain. However, new facilities could be located on important farmland, forest land, or timberland. Land use policies could generally avoid conversion of agricultural and forest lands, but the potential remains for conversion. Lithium extraction from brines occurs in desert areas that are generally not valuable for agriculture or forestry, but hard rock mining could result in the loss of agricultural or forest lands.

CARB cannot determine with certainty that implementing mitigation measures would reduce these impacts to a less-than-significant level because the authority to determine project-level impacts and require project-level mitigation lies with land use and/or Districts for individual projects. Thus, implementation of the Community Air Protection Blueprint could result in a significant cumulative impact.

The Proposed Amendments' contribution to this significant impact would not be cumulatively considerable since construction and operations would result in modifications within the footprint of existing facilities. Thus, the Proposed Amendments would not convert agricultural land to urban uses, or otherwise adversely

affect areas currently zoned for or supporting agriculture and forest resources. Therefore, the Proposed Amendments would result in a **less-than-significant** contribution to a significant cumulative impact on agricultural and forestry resources, which would not be cumulatively considerable.

1. Air Quality

The Community Air Protection Blueprint EA found that implementation of the reasonably foreseeable compliance responses for the various measures could result in significant impacts to air quality from construction activities associated with new or modified facilities or infrastructure. As discussed in the Community Air Protection Blueprint EA, the exact location or character of these new facilities or modification of existing facilities is uncertain. However, construction and modification of facilities would emit criteria air pollutants and toxic air contaminants from a variety of activities, such as grading and excavation, operation of off-road construction equipment, and construction worker commute trips. Based on typical emission rates and other parameters for above mentioned equipment and activities, construction activities could result in hundreds of pounds of daily NOx and PM emissions (amount generated from two to four pieces of heavy-duty equipment working eight hours per day), which may exceed general mass emissions limits of a local or regional District, depending on the location of the emissions. Thus, implementation of new, or amended, regulations and/or incentives could generate levels that conflict with applicable air quality plans, exceed or contribute substantially to an existing or projected exceedance of State or national ambient air quality standards, or expose sensitive receptors to substantial pollutant concentrations.

Implementation of mitigation measures may not reduce these impacts to a less-than-significant level because the authority to determine project-level impacts and require project-level mitigation lies with land use and/or Districts for individual projects. Thus, implementation of the Community Air Protection Blueprint could result in a significant cumulative impact.

The Proposed Amendments' contribution to this significant impact during construction would be cumulatively considerable, as concluded in Chapter 4.0, due to an exacerbation of health complications to nearby sensitive receptors associated with ozone and PM10 exposure from construction-generated emissions. Implementation of the project-level mitigation identified in Chapter 4.0 could effectively reduce the incremental contribution from the Proposed Amendments to a less-than-considerable level, but authority to require that mitigation would rest with other agencies that would be authorizing site-specific projects, and not with CARB. Thus, the Proposed Amendments could result in a **cumulatively considerable contribution to a significant cumulative impact on air quality** during construction.

The Community Air Protection Blueprint EA found that implementation of the reasonably foreseeable compliance responses for the various measures could cause

some increases in odors related to use of diesel equipment for construction as well as odors related to increased mining that can disturb odiferous compounds. However, these odors would be short term or generated in areas away from sensitive receptors. The Community Air Protection Blueprint EA concluded this impact would be less than significant, which would result in less-than-significant cumulative impacts. The Proposed Amendments would not include activities or processes that are associated with major odor sources (e.g., landfills). Therefore, the Proposed Amendments would result in a **less-than-significant** contribution to a less-than-significant cumulative odor impact, which would not be cumulatively considerable.

The Community Air Protection Blueprint EA found that implementation of the reasonably foreseeable compliance responses for the various measures could result in beneficial impacts to air quality from operational activities. The purpose of the Blueprint is to improve air quality conditions in pollution-burdened communities, thus decreasing adverse air quality-related health effects. The measures within the Blueprint are designed to result in substantial long-term reductions in criteria air pollutants and TACs. Although it is possible that certain aspects of the Blueprint may cause comparatively small emission increases, these potential incremental increases would be offset by the overall substantial long-term reductions in criteria air pollutants and TACs. As a result, long-term operational impacts related to air quality as a result of the Community Air Protection Blueprint would be beneficial.

Thus, the Proposed Amendments would also minimize emissions associated with operation of chrome plating facilities and would assist in the implementation of the air pollutant emission reduction strategies contained in the Community Air Protection Blueprint. Emission reductions resulting from the implementation of the Proposed Amendments are expected to far outweigh any long-term operational-related emissions increases and would result in high net positive overall health benefits over the life of the Proposed Amendments. Therefore, the Proposed Amendments would result in a **cumulatively beneficial contribution to reducing air toxic emissions** during operations.

2. Biological Resources

The Community Air Protection Blueprint EA found that implementation of the reasonably foreseeable compliance responses for the various measures could require construction and operational activities associated with new or modified facilities or infrastructure and increased mining activities. The exact location of these new facilities or the modification of existing facilities is uncertain. Construction could require disturbance of undeveloped area, such as clearing of vegetation, earth movement and grading, trenching for utility lines, erection of new buildings, and paving of parking lots, delivery areas, and roadways. These activities would have the potential to adversely affect biological resources (e.g., species, habitat) that may reside or be present in those areas. Because there are biological species that occur, or even thrive, in developed settings, resources could also be adversely affected by construction and

operations within disturbed areas at existing manufacturing facilities or at other sites in areas with zoning that would permit the development of manufacturing or industrial uses.

CARB cannot determine with certainty that implementing mitigation measures would reduce these impacts to a less-than-significant level because the authority to determine project-level impacts and require project-level mitigation lies with land use and/or Districts for individual projects. Thus, implementation of the Community Air Protection Blueprint could result in significant cumulative impacts on biological resources.

The Proposed Amendments' contribution to this significant impact would not be cumulatively considerable since construction and operations would result in modifications within the footprint of existing facilities. The implementation of the Proposed Amendments would not result in modifications to existing habitat, wetlands, and/or other sensitive natural wildlife habitats and plant communities; interference with wildlife movement or wildlife nursery sites; loss of special-status species; and/or conflicts with the provisions of adopted habitat conservation plans, natural community conservation plans, or other conservation plan or policies to protect natural resources. Therefore, the Proposed Amendments would result in a **less-than-significant** contribution to a significant cumulative impact on biological resources, which would not be cumulatively considerable.

3. Cultural Resources

The Community Air Protection Blueprint EA found that implementation of the reasonably foreseeable compliance responses associated with the recommended actions could require construction and operational activities associated with new or modified facilities or infrastructure and increased mining activities. The exact location of these new facilities or the modification of existing facilities is uncertain. Construction activities could require disturbance of undeveloped area, such as clearing of vegetation, earth movement and grading, trenching for utility lines, erection of new buildings, and paving of parking lots, delivery areas, and roadways. Demolition of existing structures may also occur before the construction of new buildings and structures. The cultural resources that could potentially be affected by ground disturbance activities could include, but are not limited to, prehistoric and historical archaeological sites, paleontological resources, historic buildings, structures, or archaeological sites associated with agriculture and mining, and heritage landscapes. Properties important to Native American communities and other ethnic groups, including tangible properties possessing intangible traditional cultural values, also may exist. Historic buildings and structures may also be adversely affected by demolition-related activities.

CARB cannot determine with certainty that implementing mitigation measures would reduce these impacts to a less-than-significant level because the authority to

determine project-level impacts and require project-level mitigation lies with land use and/or Districts for individual projects. Thus, implementation of the Community Air Protection Blueprint could result in a significant cumulative impact.

The Proposed Amendments' contribution to this significant impact would be cumulatively considerable. While modifications to existing facilities would be nominal and limited to areas within the footprint of the existing facilities, implementation of the Proposed Amendments could result in modification of existing historic structures. Thus, the Proposed Amendments would result in **cumulatively considerable impacts** from construction activities.

Following any short-term construction activities, operation of the facilities with the compliance responses would not result in project-specific or contribute to cumulative impacts to cultural resources because operation activities would occur within the footprint of the existing facilities. Therefore, operational impacts would be **less than significant and not cumulatively considerable**.

Implementation of the project-level mitigation identified in Chapter 4.0 could effectively reduce the incremental construction-related contribution from the Proposed Amendments to a less-than-considerable level, but authority to require that mitigation would rest with other agencies that would be authorizing site-specific projects, and not with CARB. Thus, the Proposed Amendments could result in a construction-related **cumulatively considerable contribution to a significant cumulative impact** on cultural resources.

4. Energy

The Community Air Protection Blueprint EA found that implementation of the recommended measures within the various source categories would result in less-than-significant construction and operational impacts. Temporary increases in energy demand associated with new facilities would include fuels used during construction, and gas and electric operational demands. Typical earth-moving equipment that may be necessary for construction includes graders, scrapers, backhoes, jackhammers, front-end loaders, generators, water trucks, and dump trucks. While energy would be required to complete construction for any new or modified facilities or infrastructure projects, it would be temporary and limited in magnitude such that a reasonable amount of energy would be expended. In the long term, the Community Air Protection Blueprint would increase the amount of renewable energy supplies because vehicular fuels would increase the use of electricity (50 percent of which would be renewable by 2030) and decrease the use of petroleum through increased use of plug-in hybrid electric vehicles, ZEVs, and low-emission diesel fuels. Therefore, the Community Air Protection Blueprint would not have a cumulatively significant impact on energy.

The Proposed Amendments would result in temporary increases in energy demand during construction, which would be similar to the construction and maintenance activities already occurring throughout the State. Additionally, operation-related energy demand would be similar to that for existing ongoing activities. Therefore, the Proposed Amendments would result in a **less-than-significant** contribution to a significant cumulative impact on energy demand, which would not be cumulatively considerable.

5. Geology and Soils

Implementation of the reasonably foreseeable compliance responses associated with the recommended measures in the proposed Community Air Protection Blueprint could result in a significant cumulative impact related to geology and soils from construction and operational activities associated with new or modified facilities or infrastructure. New facilities and infrastructure, and expansion of agricultural lands to support low-emission diesel fuel feedstock, could be located in a variety of geologic, soil, and slope conditions with varying amounts of vegetation that would be susceptible to soil compaction, soil erosion, and loss of topsoil during construction. The exact location of these new facilities or the modification of existing facilities is uncertain. Construction and operation could be located in a variety of relatively high-risk geologic and soil conditions that are considered to be potentially hazardous. For instance, the seismic conditions at the site of a new facility may have high to extremely high seismic-related fault rupture and ground shaking potential associated with earthquake activity. New facilities could also be subject to seismic-related ground failure, including liquefaction and landslides. Construction and operational activities could be located in a variety of geologic, soil, and slope conditions with varying amounts of vegetation that would be susceptible to soil erosion. Strong ground shaking could also trigger landslides in areas where the natural slope is naturally unstable or is over-steepened by the construction of access roads and structures. Construction and operation could also occur in locations that would expose facilities and structures to expansive soil conditions. Development of new facilities could be susceptible to the presence of expansive soils, particularly in areas of fine-grained sediment accumulation typically associated with playas, valley bottoms, and local low-lying areas.

CARB cannot determine with certainty that implementing mitigation measures would reduce these impacts to a less-than-significant level because the authority to determine project-level impacts and require project-level mitigation lies with land use and/or Districts for individual projects. Thus, implementation of the Community Air Protection Blueprint could result in a significant cumulative impact.

The Proposed Amendments' contribution to this significant impact would not be cumulatively considerable since modifications to existing facilities would be limited to areas within the existing footprints and no ground-disturbing activities are anticipated. Any modification to existing structures would comply with State and local building

codes. Therefore, the Proposed Amendments would result in a **less-than-significant** contribution to a significant cumulative impact on geology and soils, which would not be cumulatively considerable.

6. Greenhouse Gas Emissions

The Community Air Protection Blueprint EA found that implementation of the recommended measures within the various source categories could require construction and operational activities associated with new manufacturing facilities to support increased market penetration of electric, battery, hydrogen fuel cell and other zero emission technologies. Overall, the proposed Blueprint would result in substantial long-term GHG reductions, although certain aspects of the Blueprint would cause comparatively small short-term GHG emission increases. When these short-term construction-related GHG emissions associated with construction activities are considered in relation to the overall long-term operational GHG benefits, they are not considered substantial. Therefore, the Blueprint would not have a cumulatively significant impact on GHG emissions.

The Proposed Amendments would result in a less than significant GHG emissions impact. Construction would result in nominal GHG emissions, but as discussed in Chapter 4.0, impacts were determined to be below thresholds and less than significant. Therefore, based on the known information, the Proposed Amendments would result in **less-than-significant** cumulative GHG impacts and minimize cumulative climate change impacts.

7. Hazards and Hazardous Materials

The Community Air Protection Blueprint EA found that implementation of the reasonably foreseeable compliance responses associated with the recommended actions in the proposed Draft Blueprint could require construction and operational activities associated with new or modified facilities or infrastructure and increased mining activities. Construction activities generally use heavy-duty equipment requiring periodic refueling and lubricating. Large pieces of construction equipment (e.g., backhoes, graders) are typically fueled and maintained at the construction site. There would be a potential risk of accidental release during fuel transfer activities. Although precautions would be taken to ensure that any spilled fuel is properly contained and disposed, and such spills are typically minor and localized to the immediate area of the fueling (or maintenance), the potential still remains for a substantial release of hazardous materials into the environment.

CARB cannot determine with certainty that implementing mitigation measures would reduce these impacts to a less-than-significant level because the authority to determine project-level impacts and require project-level mitigation lies with land use and/or Districts for individual projects. Thus, implementation of the Blueprint could result in a significant cumulative impact during construction.

The Blueprint EA concludes that operational impacts would be less than significant, due to performance-based requirements and standards for lithium-ion batteries and hydrogen fueling stations. Therefore, the cumulative impact on hazards and hazardous materials would be less than cumulatively significant.

The Proposed Amendments' contribution to this significant impact would be cumulatively considerable, as concluded in Chapter 4.0, due to potential for accidental release of hazardous materials into the environment during construction and operations, and exposure to health hazards during operations. Implementation of the project-level mitigation identified in Chapter 4.0 could effectively reduce the incremental contribution from the Proposed Amendments to a less-than-considerable level, but authority to require that mitigation would rest with other agencies that would be authorizing site-specific projects, and not with CARB. Therefore, the Proposed Amendments could result in a **cumulatively considerable contribution to a significant cumulative impact** regarding hazards and hazardous materials.

8. Hydrology and Water Quality

The Community Air Protection Blueprint EA found that implementation of the reasonably foreseeable compliance responses associated with the recommended actions could result in construction and operation activities, such as those associated with new or modified facilities or infrastructure and increased mining activities. Specific construction projects would be required to comply with applicable erosion, water quality standards, and waste discharge requirements. Depending on the location of construction activities, there could be adverse effects on drainage patterns and exposure of people or structures to areas susceptible to flood, seiche, tsunami, or mudflow.

CARB cannot determine with certainty that implementing mitigation measures would reduce these impacts to a less-than-significant level because the authority to determine project-level impacts and require project-level mitigation lies with land use and/or Districts for individual projects. Thus, implementation of the Blueprint could result in a significant cumulative impact.

The Proposed Amendments' contribution to this significant impact would not be cumulatively considerable since modifications to existing facilities would not result in ground disturbance, changes to drainage patterns, or other impacts to hydrology and water quality; compliance with existing applicable laws and regulations aimed at reducing water quality impacts during construction activities would be implemented during modifications to existing facilities. Additionally, operation of the facilities would occur within the footprint of the existing facilities and would be similar to existing operations, including compliance with existing applicable laws and regulations aimed at protecting water quality during operations. Thus, the Proposed Amendments would not modify drainage or otherwise affect water quality except for the potential benefits that could result. Indeed, as identified in Chapter 4.0, the Proposed Amendments

could have a potential benefit to water systems due to the elimination of PFAS fume suppressants and removal of hexavalent chrome from potential water contamination. Therefore, the Proposed Amendments would result in a **less-than-significant** contribution to a significant cumulative impact on hydrology and water quality, which would not be cumulatively considerable.

9. Land Use and Planning

The Community Air Protection Blueprint EA found that implementation of the recommended measures within the various source categories would result in the construction and operation of new or modified facilities or infrastructure. Planning efforts associated with the implementation of compliance responses associated with the Blueprint would be made in coordination with local, State, or federal jurisdictions. However, individual projects that implement the Blueprint could result in land use compatibility impacts, inconsistency with plans and programs, division of established communities, or conflicts with conservation plans of local lead agencies. Thus, the Blueprint would have a cumulatively significant impact on land use and planning.

Implementation of the Proposed Amendments is not anticipated to divide an established community or conflict with a land use plan, policy, or regulation. It is expected that existing facilities are located in areas zoned for industrial uses, which are environments that are developed and disturbed, and modifications to existing facilities would occur within the footprint of existing facilities. Modifications to existing facilities would be required to be designed to comply with applicable land use plans and zoning requirements. Therefore, the Proposed Amendments would result in a **less-than-significant** contribution to a significant cumulative impact on land use and planning, which would not be cumulatively considerable.

10. Mineral Resources

The Community Air Protection Blueprint EA found that implementation of the recommended measures within the various source categories would result in the construction and operation of new or modified facilities or infrastructure. Reasonably foreseeable compliance responses would likely occur within existing footprints or in areas with consistent zoning where original permitting and analyses considered the availability of mineral resources within specific project sites. In addition, increased manufacturing and use of electric, battery, and hydrogen fuel cell locomotives would require increased battery production and increased lithium mining. In the case that new lithium mines are required, they would go through independent environmental review at the appropriate federal, State, or local level, and it is assumed that any new mines would be located in areas with appropriate zoning, and subject to federal, State, and/or local requirements. Worldwide demand of global lithium is estimated to be below 20 million metric tons for the period of 2010 through 2100, which is well-below the estimated worldwide reserves and resources currently known to exist worldwide. In addition, lithium-ion battery recycling potential could supplement future

increased demands. Appendix G of the CEQA Guidelines considers an impact on mineral resources to be the result in the loss of availability of a known mineral resource that would be of value to a local entity, a region, or the State. This type of impact could result from actions such as building a structure over an area that contains mineral resources, thereby prohibiting access to mining activities or the consumption of a mineral resource. Because compliance responses could result in an increased development where mining for lithium is feasible, they could conceivably affect the availability of these mineral resources if access to resources becomes impeded, and result in significant cumulative impacts.

The Proposed Amendments' contribution to this significant impact would not be cumulatively considerable because implementation would not require new mining activities, mineral resources, or develop land that may contain mineral resources. Therefore, the Proposed Amendments would result in a **less-than-significant** contribution to a significant cumulative impact on mineral resources, which would not be cumulatively considerable.

11. Noise

The Community Air Protection Blueprint EA found that implementation of the reasonably foreseeable compliance responses associated with the recommended actions could require construction and operational activities associated with new or modified facilities or infrastructure and increased mining activities. Implementation of reasonably foreseeable compliance responses could result in the generation of short-term construction noise from use of heavy-duty equipment and vehicle trips. New long-term operational sources of noise could be associated with manufacturing plants and mining activities. Depending on the proximity to existing noise-sensitive receptors, construction and operational noise levels could exceed applicable noise standards and result in a substantial increase in ambient noise levels, resulting in a significant noise impact.

CARB cannot determine with certainty that implementing mitigation measures would reduce these impacts to a less-than-significant level because the authority to determine project-level impacts and require project-level mitigation lies with land use and/or Districts for individual projects. Thus, implementation of the Blueprint could result in a significant cumulative impact.

The Proposed Amendments' contribution to this significant impact would be cumulatively considerable for construction due to potential increases in noise levels in excess of applicable standards or that result in a substantial increase in ambient levels at nearby sensitive receptors. Operational noise sources would be similar to those under existing conditions. Therefore, the Proposed Amendments would result in a construction-related **cumulatively considerable contribution to a significant cumulative impact** for noise.

12. Population and Housing

The Community Air Protection Blueprint EA found that implementation of the reasonably foreseeable compliance responses associated with the recommended actions could require construction and operational activities associated with new or modified facilities or infrastructure and increased mining activities. There is uncertainty as to the specific location of new facilities or the modification of existing facilities. Construction and operation of these facilities could result in increased job opportunities in the communities surrounding a project site. However, it would be expected that locations of these facilities would be selected such that an appropriate employment base existed to support construction and operation or where local jurisdictions have planned for increased population and employment growth. Therefore, the Blueprint would not have a cumulatively significant impact on population and housing.

The Proposed Amendments would not ~~generate~~ substantially increase communities' populations, require the construction of housing, or displace housing. Modification and maintenance activities occurring within existing facilities would not require a substantial amount of work and is expected to be served by workers currently in the existing local labor pool. Additionally, operation of any modified facilities would not generate substantial new employment opportunities. Thus, the Proposed Amendments would not result in a rise in employment opportunities that would be substantial enough to increase a community's population or require the construction of housing. Therefore, the Proposed Amendments would result in a **less-than-significant** contribution to a significant cumulative impact on population and housing, which would not be cumulatively considerable.

13. Public Services

The Community Air Protection Blueprint EA found that implementation of the reasonably foreseeable compliance responses associated with the recommended actions could require construction and operational activities associated with new or modified facilities or infrastructure and increased mining activities. There is uncertainty as to the specific location of new facilities or the modification of existing facilities. Construction and operation of the reasonably foreseeable compliance responses would not require a substantial amount of new additional housing to accommodate new populations or generate changes in land use and, therefore, would not be expected to increase population levels such that the provisions of public services would be substantially affected. Therefore, the Blueprint would not have a cumulatively significant impact on public services.

The Proposed Amendments would not result in significant impacts related to public service responses or require new construction to public services that could result in significant environmental impacts. Since the construction modifications are expected to be temporary and take place at existing facilities, existing public services would be

sufficient to serve the short-term construction activities. Additionally, the Proposed Amendments would not change the operations of these existing facilities in a manner that would substantially increase the number of workers needed to operate the facility. Therefore, existing public services are expected to be sufficient to serve the operations and would result in a **less-than-significant** contribution to a significant cumulative impact on public services, which would not be cumulatively considerable.

14. Recreation

The Community Air Protection Blueprint EA found that implementation of the recommended measures within the various source categories would result in the construction and operation of new or modified facilities or infrastructure (i.e., hydrogen refueling stations, lithium battery manufacturing facilities, lithium mines, battery recycling and disposal centers, electrical infrastructure). There is uncertainty as to the specific location of new facilities or the modification of existing facilities. While implementation of Blueprint would produce long-term employment, it would be anticipated that a sufficient employment base would be available. The minimal increase in employment opportunity would not create an increased demand on recreational facilities within communities containing new plants and facilities. Therefore, the Blueprint would not have a cumulatively significant impact on recreation.

The Proposed Amendments would not substantially increase communities' population or employment that could affect recreational resources. Implementation of the Proposed Amendments would occur within existing facilities and would not displace existing recreational facilities nor increase use of regionals parks or other recreational facilities, such that existing neighborhood and regional parks or other recreational facilities would be substantially deteriorated. Therefore, the Proposed Amendments would result in a **less-than-significant** contribution to a less-than-significant cumulative impact on recreation, which would not be cumulatively considerable.

15. Transportation

The Community Air Protection Blueprint EA found that implementation of the recommended measures within the various source categories could result in a significant cumulative traffic impact from construction and operational activities associated with new or modified facilities or infrastructure. Although detailed information about potential specific construction activities is not currently available, it would be anticipated to result in short-term construction traffic (primarily motorized) from worker commute- and material delivery-related trips. Implementation of the Blueprint could result in increased demand for Low-Emission Diesel fuels such as R99, R100, or biomethane, and increased demand for feedstocks and inputs used to produce Low-Emission Diesel. While the total volume of fuel demanded in California is not anticipated to be affected by the proposed Low-Emission Diesel measure, it is anticipated to change the types of fuels consumed, which could result in substantial

long-term effects on local routes' traffic patterns due to differences in where feedstocks are sourced, and how the finished fuels are transported. In addition, transportation patterns may change in relation to the location and operational shipping needs of new facilities. Depending on the number of trips generated and the location of new facilities, implementation could conflict with applicable programs, plans, ordinances, or policies (e.g., performance standards, congestion management); and/or result in hazardous design features and emergency access issues from road closures, detours, and obstruction of emergency vehicle movement, especially due to project-generated heavy-duty truck trips.

CARB cannot determine with certainty that implementing mitigation measures would reduce these impacts to a less-than-significant level because the authority to determine project-level impacts and require project-level mitigation lies with land use and/or Districts for individual projects. Thus, implementation of the Blueprint could result in a significant cumulative impact.

The Proposed Amendments' contribution to this significant impact would not be cumulatively considerable since construction would be nominal and not require substantial numbers of construction vehicles or workers, and, based on known, nonspeculative information, operations would be similar to existing conditions. Therefore, the Proposed Amendments would result in a **less-than-significant** contribution to a significant cumulative impact on transportation, which would not be cumulatively considerable.

16. Tribal Cultural Resources

The Community Air Protection Blueprint EA found that implementation of the reasonably foreseeable compliance responses associated with the recommended actions could require construction and operational activities associated with new or modified facilities or infrastructure and increased mining activities. The exact location of these new facilities or the modification of existing facilities is uncertain. Construction activities could require disturbance of undeveloped area, such as clearing of vegetation, earth movement and grading, trenching for utility lines, erection of new buildings, and paving of parking lots, delivery areas, and roadways. Demolition of existing structures may also occur before the construction of new buildings and structures. Resources important to Native American communities and other ethnic groups, including tangible properties possessing intangible traditional cultural values, may exist and be significantly impacted.

CARB cannot determine with certainty that implementing mitigation measures would reduce these impacts to a less-than-significant level because the authority to determine project-level impacts and require project-level mitigation lies with land use and/or Districts for individual projects. Thus, implementation of the Community Air Protection Blueprint could result in a significant cumulative impact.

The Proposed Amendments' contribution to this significant impact would not be cumulatively considerable because modifications to existing facilities would occur within the footprints of existing facilities and would not require any ground-disturbing activities or otherwise impact tribal cultural resources. Operations would be similar to existing activities within existing facilities and would also not have the potential to affect tribal cultural resources. Therefore, the Proposed Amendments would result in a **less-than-significant** contribution to a significant cumulative impact on tribal cultural resources, which would not be cumulatively considerable.

17. Utilities and Service Systems

The Community Air Protection Blueprint EA found that implementation of the recommended measures within the various source categories could result in a significant cumulative impact to utilities and service systems from construction and operational activities associated with new or modified facilities or infrastructure (i.e., natural gas and hydrogen refueling stations, lithium battery manufacturing facilities, lithium mines, battery recycling and disposal centers, vehicle emission testing centers, zero emission and advanced technology (ZEAT) and near-zero emission technology manufacturing facilities, and infrastructure associated with low emission diesel production). Projects associated with the Blueprint could result in new demand for water, wastewater, electricity, and gas services for new manufacturing facilities. Changes in land use associated with biofuel feedstock production are likely to change water demand to support new crop types, depending on the size, location, and existing uses. This could result in an increase or decrease in water demand and would be subject to availability and regulatory requirements. The specific location and type of construction needs is not known and would be dependent upon a variety of market factors that are not within the control of CARB including: economic costs, product demands, environmental constraints, and other market constraints. Thus, the specific impacts from construction on utility and service systems cannot be identified with any certainty, and individual compliance responses could potentially result in significant environmental impacts.

CARB cannot determine with certainty that implementing mitigation measures would reduce these impacts to a less-than-significant level because the authority to determine project-level impacts and require project-level mitigation lies with land use and/or Districts for individual projects. Thus, implementation of the Blueprint could result in a significant cumulative impact.

The Proposed Amendments' contribution to this significant impact would not be cumulatively considerable because construction of the modifications is expected to be temporary and take place at existing facilities, with existing utilities and service systems that serve the facilities being sufficient to serve the short-term construction activities. Additionally, the Proposed Amendments would not change the operations of these existing facilities in a manner that would require new or increased utilities and service systems. Therefore, the Proposed Amendments would result in a

less-than-significant contribution to a significant cumulative impact on utilities and service systems, which would not be cumulatively considerable.

18. Wildfire

Appendix G of the State CEQA Guidelines was amended in late 2018, after certification of the Community Air Protection Blueprint EA, to include several questions related to wildfire. The CEQA Guidelines Appendix G questions address: impairment of an adopted emergency response plan or emergency evaluation plan; the potential to exacerbate wildfire risks and associated pollutants and uncontrolled spread of wildfire; the requirement to install or maintain infrastructure that could exacerbate fire risk; and the exposure of people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

The Community Air Protection Blueprint EA evaluated some fire risks in its discussion of hazards. The Community Air Protection Blueprint EA discussed the potential for lithium-ion batteries to overheat and ignite, but also concluded that the risk is increased in the case of poor packaging, damage, or exposure to fire or a heat source. When packaged and handled properly, lithium-ion batteries pose no environmental hazard. Additionally, existing methods and recommendations exist for battery system performance to assure that a single point fault would not result in fire or explosion. The Community Air Protection Blueprint would not result in a significant cumulative impact related to wildfire.

The Proposed Amendments would not exacerbate wildfire risks because construction and operation would occur within the footprint of existing facilities and would operate in a similar manner without exacerbating fire hazards. Therefore, the Proposed Amendments would result in a **less-than-significant** contribution to a less-than-significant cumulative impact on wildfire, which would not be cumulatively considerable.

D. Growth-Inducing Impacts

A project would be considered growth-inducing if it removes an obstacle to growth, includes construction of new housing, or establishes major new employment opportunities. The reasonably foreseeable compliance responses associated with the Proposed Amendments would not directly result in any growth in population or housing, as the Proposed Amendments are meant to reduce toxic air emissions associated with hexavalent chromium. The compliance responses would not require relocation of employees.

6.0 MANDATORY FINDINGS OF SIGNIFICANCE

Consistent with the requirements of the CEQA Guidelines section 15065 and Section 18 of the Environmental Checklist, this ~~Draft~~ Final Environmental Analysis (~~Draft~~ Final EA) addresses the mandatory findings of significance for the Proposed Amendments.

A. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

A finding of significance is required if a project "has the potential to substantially degrade the quality of the environment" (Cal. Code Regs., tit. 14, § 15065(a)). In practice, this is the same standard as a significant effect on the environment, which is defined as "a substantial or potentially substantial adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance" (Cal. Code Regs., tit. 14, § 15382). As with all of the environmental effects and issue areas, the precise nature and magnitude of impacts would depend on the types of projects authorized, their locations, their aerial extent, and a variety of site-specific factors that are not known at this time but that would be addressed by environmental reviews at the project-specific level. For projects within California, all of these issues would be addressed through project-specific environmental reviews that would be conducted by local land use agencies or other regulatory bodies at such time the projects are proposed for implementation. Outside of California, other State and local agencies would consider the proposed projects in accordance with their laws and regulations. CARB would not be the agency responsible for conducting the project-specific environmental or approval reviews because it is not the agency with authority for making land use or project implementation decisions.

This ~~Draft~~ Final EA addresses and discloses potential environmental effects associated with implementation of the Proposed Amendments, including direct, indirect, and cumulative impacts. As described in Chapter 4.0, this ~~Draft~~ Final EA discloses potential environmental impacts, the level of significance prior to mitigation, mitigation measures, and the level of significance after the incorporation of mitigation measures.

B. Does the project have impacts that are individually limited, but cumulatively considerable?

A lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has potential environmental effects that are individually limited, but cumulatively considerable (Cal. Code Regs., tit. 14, § 15065). Cumulatively considerable means "that the incremental effects of an individual

project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects" (Cal. Code Regs., tit. 14, § 15065(a)(3)). Cumulative impacts are discussed in Chapter 5.0 of this ~~Draft~~ Final EA.

C. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

A lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to cause substantial adverse effects on human beings, either directly or indirectly (Cal. Code Regs., tit. 14, § 15065(a)(4)). Under this standard, a change to the physical environment that might otherwise be minor must be treated as significant if people would be significantly affected. This factor relates to adverse changes to the environment of human beings generally, and not to effects on particular individuals. While changes to the environment that could indirectly affect human beings would be represented by all of the designated CEQA issue areas, those that could directly affect human beings include air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, population and housing, public services, transportation/traffic, and utilities, which are all addressed in Chapter 4.0, "Impact Analysis and Mitigation Measures," of this ~~Draft~~ Final EA.

7.0 ALTERNATIVES ANALYSIS

This chapter provides an overview of the regulatory requirements and guidance for alternatives analyses under CEQA; a description of each of the alternatives to the Proposed Amendments; a discussion of whether and how each alternative meets the objectives of the Proposed Amendments; and an analysis of each alternative's environmental impacts.

A. Approach to Alternatives Analysis

CARB's certified regulatory program (Cal. Code Regs, tit. 17, §§ 60000–60008) requires that, where a contemplated action may have a significant effect on the environment, a staff report shall be prepared in a manner consistent with the environmental protection purposes of CARB's regulatory program and with the goals and policies of CEQA. Among other things, the staff report must address feasible alternatives to the proposed action that would substantially reduce any significant adverse impact identified.

The certified regulatory program provides general guidance that any action or proposal for which significant adverse environmental impacts have been identified during the review process shall not be approved or adopted as proposed if there are feasible mitigation measures or feasible alternatives available which would substantially reduce such an adverse impact. For purposes of this section, "feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors, and consistent with the Board's legislatively mandated responsibilities and duties (Cal. Code Regs, tit. 14, § 15364).

While CARB, by virtue of its certified program, is exempt from Chapters 3 and 4 of CEQA and corresponding sections of the CEQA Guidelines, the CEQA Guidelines nevertheless contain useful information for preparation of a thorough and meaningful alternatives analysis. The CEQA Guidelines speaks to evaluation of "a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of the basic project objectives but would avoid or substantially lessen any of the significant effects and evaluate the comparative merits of the alternatives" (Cal. Code Regs, tit. 14, § 15126.6(a)). The purpose of the alternatives analysis is to determine whether different approaches to, or variations of, the project would reduce or eliminate significant project impacts, within the basic framework of the objectives, a principle that is consistent with CARB's regulatory requirements.

Alternatives considered in an environmental document should be potentially feasible and should attain most of the basic project objectives. It is critical that the alternatives analysis define the project's objectives. The project objectives are listed below in Section C of this chapter.

The range of alternatives is governed by the "rule of reason," which requires evaluation of only those alternatives "necessary to permit a reasoned choice" (Cal. Code Regs, tit. 14, § 15126.6(f)). Further, an agency "need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative" (Cal. Code Regs, tit. 14, § 15126.6(f)(3)). The analysis should focus on alternatives that are feasible and that take economic, environmental, social, and technological factors into account. Alternatives that are remote or speculative need not be discussed. Furthermore, the alternatives analyzed for a project should focus on reducing or avoiding significant environmental impacts associated with the project as proposed.

B. Selection of Range of Alternatives

This chapter evaluates a range of alternatives to the Proposed Amendments that could reduce or eliminate significant effects on the environment, while still meeting basic project objectives (Cal. Code Regs, tit. 14, § 15126.6(a)). Pursuant to CARB's certified regulatory program, this chapter also contains an analysis of each alternative's feasibility and the likelihood that it would substantially reduce any significant adverse environmental impacts identified in the impact analysis contained in Chapter 4.0 of this ~~Draft~~ Final EA (Cal. Code Regs, tit. 17, § 60004.2(a)(5)).

CARB has identified four alternatives that allow the public and Board to consider different approaches. CARB has made a good faith effort to identify potentially feasible project alternatives.

For the purposes of this analysis, four alternatives are considered:

- Alternative 1: No-Project Alternative
- Alternative 2: No Phase out Alternative
- Alternative 3: Extended Phase out Alternative
- Alternative 4: Extended Phase out and Additional Technology Reviews Alternative

C. Project Objectives

The Proposed Amendments seek to further protect public health and air quality in communities near chrome plating facilities. Health and environmental benefits would be achieved by substantially reducing the emissions of hexavalent chromium emitted from these facilities. The primary objectives of the Proposed Amendments are the following:

1. Reduce emissions of hexavalent chromium sufficiently so that the source will not result in, or contribute to, ambient levels at or in excess of the level which may cause or contribute to adverse health effects. (Health & Saf. Code §§ 39600, 39650, 39658, 39659, 39666, and 41511).

2. Prior to the phase out of hexavalent chromium in functional chrome plating, reduce health risk from the exposure to hexavalent chromium to the lowest level achievable through application of best available control technology or a more effective control method so that the source will result minimal adverse health effects. (Health & Saf. Code §§ 39600, 39650, 39658, 39659, 39666, and 41511).

3. Eliminate emissions of hexavalent chromium from the chrome plating industry in California following the applicable phase out in order to prevent an endangerment of public health (Health & Saf. Code § 39666(c)).

4. Catalyze the development of technologies that substantially reduce the emissions of hexavalent chromium emitted from chrome plating facilities and accelerate the development of alternative technologies that are more environmentally friendly and that will continue to deliver the performance, practicality, and safety demanded by the market. (Health & Saf. Code § 39650)

5. It is the public policy of the State that emissions of toxic air contaminants should be controlled to levels which prevent harm to the public health. (Health & Saf. Code § 39650).

D. Alternatives Analysis

Detailed descriptions and analyses of each alternative are presented below. The analysis of each alternative includes a discussion of the degree to which the alternative meets the basic project objectives, the degree to which the alternative avoids a potentially significant impact identified in Chapter 4.0, and any environmental impacts that may result from the alternative.

1. Alternative 1: No Project

a) Alternative 1 Description

Alternative 1, the "No-Project Alternative," is included by CARB to provide a good faith effort to disclose environmental information that is important for considering the Proposed Amendments. The No-Project Alternative has also been included by CARB to assist in the analysis and consideration of the Proposed Amendments. As noted in the State CEQA Guidelines, "the purpose of describing and analyzing a no-project alternative is to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project" (Cal. Code Regs, tit. 14, § 15126.6(e)(1)). The No-Project Alternative provides an important point of comparison to understand the potential environmental benefits and impacts of other alternatives.

Under Alternative 1, the Proposed Amendments would not be implemented. Owners or operators of hexavalent chromium plating facilities subject to the existing chrome

regulation would maintain their operations, business as usual, without addressing the additional emissions reductions needed to reduce health and environmental burdens of hexavalent chromium operation statewide. No additional set of actions would be required to reduce hexavalent chromium emissions from chrome plating facilities while operating near California communities. There would be no prohibition of the continued use of hexavalent chromium in chrome plating operations, so owners or operators of existing and future chrome plating facilities would not need to convert from hexavalent chromium to trivalent chromium or another alternative.

b) Alternative 1 Discussion

i) Objectives

Alternative 1 would fail to meet the project objectives listed in Chapter 2 (and reproduced above). There would be no reductions in hexavalent chromium toxic air contaminants and related adverse health effects, meaning there would be no provided public health benefits. Alternative 1 would fail to catalyze development of new technologies to reduce emissions of hexavalent chromium. Alternative 1 also would not accelerate of the development of facilities that are more environmentally friendly while continuing to serve market demands.

ii) Environmental Impacts

Alternative 1 would result in no new environmental impacts because no compliance responses would occur. It is anticipated Alternative 1 would not result in modification of existing decorative and functional hard plating facilities to trivalent chromium, modification of buildings to reduce openings, and manufacturing and installation of add-on pollution control devices at the facilities. This alternative would avoid potential increases in heavy-duty truck traffic along haul routes within the State and potentially other modes of transportation such as train traffic along State rail routes.

Without implementation of the Proposed Amendments, the beneficial impacts of compliance with the Proposed Amendments would not occur. There would be no reductions in hexavalent chromium that would provide public health benefits. Chrome plating facilities would continue to use PFAS fume suppressants that have the potential to negatively impact water quality. As described above, this alternative would fail to meet the basic project objectives and any reduction in environmental impacts realized from the No-Project Alternative due to not implementing compliance responses do not outweigh the overall environmental and health benefits of the Proposed Amendments.

2. Alternative 2: No Phase Out Alternative

a) Alternative 2 Description

Alternative 2 would implement amendments like the Proposed Amendments, except owners or operators of chrome plating facilities would not be required to phase out

hexavalent chromium and thus would not need to convert to an alternative to hexavalent chromium, such as trivalent chromium. As with the Proposed Amendments, hexavalent chromium plating facilities would be required to comply with additional emission control requirements, such as building enclosures, housekeeping requirements, best management practices, air pollution control techniques, and compliance monitoring parameters. In addition, to extend compliance dates, owners or operators of decorative and hard functional chromium plating facilities would have to prepare technology reviews that assess the feasibility of alternatives to the use of hexavalent chromium. Chrome plating facilities would be required to achieve an emission limit of 0.00075 mg/amp-hr with add on control within two years of the effective date of this alternative. Owners or operators of chrome plating facilities may choose to convert their facility's plating operations to an alternative to hexavalent chromium (e.g., trivalent chromium) in lieu of complying with the add-on control requirement.

b) Alternative 2 Discussion

i) Objectives

Alternative 2 would largely achieve most of the project objectives listed in Chapter 2 (and reproduced above), but not to the same magnitude. Alternative 2 would allow hexavalent chrome plating facilities to operate without a phase out date. Although Alternative 2 would not reduce hexavalent chromium emissions to the lowest achievable level, hexavalent chromium emissions would be reduced to below baseline levels by complying with stringent emissions standards through add-on controls and preparation of technology reviews to assess the feasibility of alternatives to the use of hexavalent chromium. While there would be reductions in hexavalent chromium toxic air contaminants and related adverse health effects, the reduction in the levels of air toxics would not be reduced to the lowest achievable levels and it would not be as beneficial as the baseline proposal. Alternative 2 would fail to catalyze development of new technologies to reduce emissions of hexavalent chromium and instead increase add on control techniques.

ii) Environmental Impacts

Alternative 2 would result in lower levels of environmental impacts compared to the baseline because compliance responses would result in similar compliance responses but with no phase out date for hexavalent chromium, and ~~an~~ increased modifications to operations and installation of additional add on control equipment to achieve emissions limits. Since Alternative 2 would allow owners or operators of chrome plating facilities to operate within the State without a phase out date, this alternative is not anticipated to result in an increase in truck traffic and potentially other modes of transportation such as rail traffic from transporting hexavalent chromium plated materials to customers within the State. As described above, this alternative would meet some of the basic project objectives to a lesser degree and would not achieve the same benefits as the Proposed Amendments.

3. Alternative 3: Extended Phase Out Alternative

a) Alternative 3 Description

Alternative 3 would provide owners or operators of chrome plating facilities additional time to phase out hexavalent chromium, which would delay the conversion from hexavalent chromium to trivalent chromium or other alternatives. Under Alternative 3, chrome plating facilities (decorative and functional) would not have to phase out hexavalent chromium until January 1, 2039. Chrome plating facilities would be provided five-year extensions for delays associated with the transition to another cleaner hexavalent chromium free alternative, such as trivalent chromium plating. Chrome plating facilities would be required to achieve an emission limit of 0.00075 mg/amp-hr with add on control within two years of the effective date of this alternative. As with the Proposed Amendments, hexavalent chromium plating facilities would be required to comply with additional emission control requirements, such as building enclosures, housekeeping requirements, best management practices, add-on air pollution control devices, and compliance monitoring parameters.

b) Alternative 3 Discussion

i) Objectives

Alternative 3 would largely achieve most of the project objectives listed in Chapter 2 (and reproduced above), but not as quickly and over a longer time horizon. While there would be reductions in hexavalent chromium TACs and related adverse health effects, the reduction in the levels of air toxics would not be reduced to the lowest achievable levels and it would not be as protective of public health. More people would be exposed to TACs for longer periods of time. Alternative 3 would catalyze development of new technologies to reduce emissions of hexavalent chromium, but over a longer period of time as compared to the Proposed Amendments.

ii) Environmental Impacts

Alternative 3 would result in lower levels of environmental impacts compared to the baseline because compliance responses would result in similar compliance responses but would provide more time for hexavalent chromium platers to discontinue the use of hexavalent chromium in favor of less toxic alternatives. By allowing decorative hexavalent chromium platers to operate until January 1, 2039, health effects from toxic contaminants would occur over a longer period of time as compared to the Proposed Amendments. Impacts from other compliance responses would be similar to the Proposed Amendments. As described above, this alternative would meet most of the basic project objectives, but to a lesser degree, and would not achieve the same benefits as the Proposed Amendments.

4. Alternative 4: Extended Phase Out and Additional Technology Reviews Alternative

a) Alternative 4 Description

Similar to Alternative 3, Alternative 4 would delay the phase out of hexavalent chromium and provide owners or operators of chrome plating facilities additional time to convert their chrome plating operations from hexavalent chromium to trivalent chromium or another alternative. Under Alternative 4, chrome plating facilities (decorative and functional) would not have to phase out hexavalent chromium until January 1, 2039. In addition, to extend compliance dates, CARB staff would have to prepare technology reviews that assess the feasibility of alternatives to the use of hexavalent chromium. These technology reviews would be required every five years after the effective date of the Proposed Amendments. As with the Proposed Amendments, chrome plating facilities would be required to comply with additional emission control requirements, such as building enclosures, housekeeping requirements, best management practices, air pollution control techniques, and compliance monitoring parameters. Chrome plating facilities would be required to achieve an emission limit of 0.00075 mg/amp-hr with add-on controls within two years of the effective date of the Proposed Amendments. Owners or operators of chrome plating facilities may choose to convert their facility's plating operations to trivalent chromium or another cleaner hexavalent chromium free alternative prior to the applicable phase out date to avoid complying with the add-on control requirement.

b) Alternative 4 Discussion

i) Objectives

Alternative 4 would largely achieve most of the project objectives listed in Chapter 2 (and reproduced above), but not as quickly and over a longer time horizon. While there would be reductions in hexavalent chromium toxic air contaminants and related adverse health effects, the reduction in the levels of air toxics would not be reduced to the lowest achievable levels and it would not be as beneficial as the baseline proposal. Alternative 4 would catalyze development of new technologies to reduce emissions of hexavalent chromium, but over a longer period of time.

ii) Environmental Impacts

Alternative 4 would result in lower levels of environmental impacts compared to the baseline because health effects from reduction of TACs would occur over a longer period of time. Impacts would be similar to those that would occur under Alternative 2 until the phase out in 2039 and would then improve to levels that would be achieved by the Proposed Amendments. Like Alternative 2, this alternative would require increased modifications to operations and installation of additional add on control equipment to achieve emissions limits. However, these impacts would likely occur later in time as the phase out date approaches. As described above, this alternative would

meet most of the basic project objectives, but to a lesser degree, and would not achieve the same benefits as the Proposed Amendments.

8.0 REFERENCES

[1] Office of Environmental Health Hazard Assessment/California Air Resources Board, Consolidated Table of OEHHA)/CARB Approved Risk Assessment Health Values. Chemicals That Can Be Evaluated by The HRA Program (Version 2) https://ww2.arb.ca.gov/sites/default/files/classic/toxics/healthval/contable.pdf.

[2] California Air Resources Board, Community Air Protection Blueprint, October 2018. https://ww2.arb.ca.gov/sites/default/files/2020-03/final_community_air_protection_blueprint_october_2018_acc.pdf.

[3] National Institute for Occupational Safety and Health, Occupational Cancer – NIOSH Chemical Carcinogen Policy. https://www.cdc.gov/niosh/topics/cancer/policy.html.

[4] REACH, European Union, Official Journal of the European Union, Commission Regulation EU, No. 348/2013, April 17, 2013. https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32013R0348&from=EN#ntr2-L_2013108EN.01000401-E0002.

[5] South Coast Air Quality Management District, Revised Final Environmental Assessment for Proposed Amended Rule 1469 – Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations, October 2018. http://www.aqmd.gov/docs/default-source/ceqa/documents/aqmd-projects/2018/par-1469-fea_oct_2018---final-with-appendices.pdf?sfvrsn=6.

[6] South Coast Air Quality Management District, South Coast AQMD Air Quality Significance Thresholds, April 2019. http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf.

[7] Ventura County Air Pollution Control District, Ventura County Air Quality Assessment Guidelines, October 2003. http://www.vcapcd.org/pubs/Planning/VCAQGuidelines.pdf.

[8] Bay Area Air Quality Management District, CEQA Air Quality Guidelines, May 2017. https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en&rev=0d2d971e661d41f28a56953f1776bdde.

[9] San Joaquin Valley Air Pollution Control District, Air Quality Thresholds of Significance, March 19, 2015. http://www.valleyair.org/transportation/0714-GAMAQI-Criteria-Pollutant-Thresholds-of-Significance.pdf.

[10] San Diego Air Quality Management District, Rule 20.3 New Source Review Major Stationary Sources and PSD Stationary Sources. https://www.sdapcd.org/content/dam/sdapcd/documents/rules/current-rules/Rule-20.3.pdf.

[11] Feather River Air Quality Management District, Feather River AQMD Thresholds of Significance. June 7, 2010. https://www.fraqmd.org/files/658e76309/Chapter+3.pdf.

[12] Sacramento Metropolitan Air Quality Management District, SMAQMD Thresholds of Significance Table, April 2020. https://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable4-2020.pdf.

[13] United States Environmental Protection Agency, Health Effects of Ozone in the General Population, September 2021. https://www.epa.gov/ozone-pollution-and-your-patients-health/health-effects-ozone-general-population.

[14] California Energy Commission, 2020 Total System Electric Generation. https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation/2020.

[15] California Energy Commission, Renewables Portfolio Standard-Verification and Compliance. https://www.energy.ca.gov/programs-and-topics/programs/renewables-portfolio-standard/renewables-portfolio-standard.

[16] Senate Bill No. 100, California Renewables Portfolio Standard Program: emissions of greenhouse gases, 2018. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB100.

[17] California Energy Commission, Tracking Progress, February 2020. https://www.energy.ca.gov/sites/default/files/2019-12/renewable_ada.pdf.

[18] OSHA. OSHA Occupational Chemical Database. https://www.osha.gov/chemicaldata/537.

[19] CEQA, at Public Resources Code section 21082.2 https://www.califaep.org/docs/2022_CEQA_Statue_and_Guidelines.pdf.

[20] California Code of Regulations, title, section 15145 https://www.califaep.org/docs/2022_CEQA_Statue_and_Guidelines.pdf.

[21] California Air Resources Board, Final Environmental Analysis Prepared for the Final Community Air Protection Blueprint, September 2018. https://ww2.arb.ca.gov/sites/default/files/2020-06/AB%20617%20Final%20EA_acc.pdf.

[22] SCS Engineering, Chrome Plating Facilities to Meet PFAS Mandates in California, November 1, 2019. https://www.scsengineers.com/chrome-plating-facilities-to-meet-pfas-mandates-in-california/#:~:text=PFAS%20has%20been%20widely%20used,facilities%20have%20chromium%20electroplating%20processes.

[23] Vermont Department of Health, Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) in Drinking Water.

https://www.healthvermont.gov/environment/drinking-water/perfluoroalkyl-and-polyfluoroalkyl-substances-pfas-drinking-water.

[24] California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, September 2013. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf.