SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

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

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EXECUTIVE SUMMARY

South Coast Air Quality Management District (South Coast AQMD) Rule 1469 – Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations (Rule 1469) was adopted in October 1998 and addresses hexavalent chromium emissions from chromium electroplating and chromic acid anodizing operations. It was last amended in 2021.

In December of 2023, the California Air Resources Board (CARB) amended the Airborne Toxic Control Measure for Chromium Plating and Chromic Acid Anodizing Operations (Chrome ATCM). The amended Chrome ATCM includes phase out dates for the use of hexavalent chromium for decorative chromium electroplating as early as 2027, hard chromium electroplating and chromic acid anodizing by 2039 dependent on the findings from two pending technology reviews. The Chrome ATCM prohibits new hexavalent chromium electroplating or chromic acid anodizing facilities and includes many Rule 1469 requirements such as conducting operations within building enclosures and best management practices to control hexavalent chromium emissions from this industry. Finally, facilities that undergo modifications to an electroplating tank using hexavalent chromium or a chromic acid anodizing tank will be required to meet new requirements, including the more stringent emission limits.

Proposed Amended Rule 1469 (PAR 1469) will incorporate the more stringent requirements in the Chrome ATCM while retaining the existing requirements in Rule 1469 in place to prevent backsliding on control of hexavalent chromium emissions. In addition, PAR 1469 also includes clarifications for existing requirements, changes to source test protocol submittal deadlines, a new best management practice, and procedures that assist in implementation.

This Staff Report is organized into four chapters. Chapter 1 provides background information on PAR 1469 and the general description of the different types of operations conducted by affected facilities as well as the regulatory history for this industry. Chapter 2 provides a summary and explanation of amended provisions. Chapter 3 provides a summary of the impact assessments of PAR 1469 and comparative analysis. Chapter 4 provides the comments received from just before and after the public workshop and staff responses to the comments received. Appendix A includes the list of affected facilities. Appendix B includes public comments received and staff responses to comments.

CHAPTER 1 – BACKGROUND

INTRODUCTION

Adopted in October 1998, Rule 1469 – Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations (Rule 1469) addresses hexavalent chromium emissions from chromium electroplating and chromic acid anodizing operations. The rule was last amended in April 2021 to align Rule 1469 with amendments to Rule 1426 – Emissions from Metal Finishing Operations for consistency and to avoid duplicate requirements. The amendments adopted in November 2018 include significant requirements to address uncontrolled sources of hexavalent chromium identified by community investigations in the cities of Newport Beach and Paramount. These requirements included control equipment, building enclosure, enhanced best management practices and routine housekeeping.

In 2023, the California Air Resources Board (CARB) amended the Airborne Toxic Control Measure for Chromium Plating and Chromic Acid Anodizing Operations (Chrome ATCM). The Chrome ATCM requires the phase out of hexavalent chromium use for decorative chrome operations as early as January 1, 2027, but no later than January 1, 2030, for facilities meeting building enclosure requirements. The Chrome ATCM requires the phase out of use of hexavalent chromium for functional chrome operations (i.e., hard chrome plating and chromic acid anodizing) by January 1, 2039, dependent on the findings from two pending technology reviews to be conducted by CARB and released January 1, 2032 and January 2036 to determine the feasibility of viable alternatives to hexavalent chromium. The Chrome ATCM also prohibits new hexavalent chromium electroplating or chromic acid anodizing facilities and included many of Rule 1469 requirements such as conducting operations within building enclosures and best management practices to control hexavalent chromium emissions from this industry. Facilities that undergo modifications to an electroplating tank using hexavalent chromium or a chromic acid anodizing tank will be required to meet new requirements, including the more stringent emission limits, for all electroplating tanks using hexavalent chromium and chromic acid anodizing tanks at the facility.

Health and Safety Code Section 39666(d) mandates the South Coast Air Quality Management District (South Coast AQMD) to implement and enforce ATCMs or enforce equally effective or more stringent rules than ATCMs adopted by CARB. Proposed Amended Rule 1469 (PAR 1469) is being amended to incorporate the more stringent requirements of the Chrome ATCM.

In addition to incorporation of Chrome ATCM requirements, PAR 1469 also includes clarifications of existing requirements, changes to source test document submittal deadlines, and a new best management practice.

INDUSTRY CHARACTERIZATION

Metal finishing is the surface treatment of a metal substrate to give it a desired characteristic. This can include anti-corrosion, durability, and adhesion. Due to the beneficial properties that can be imparted to products, metal finishing supports many industries including fixtures (home, kitchen, and bath), machinery and industrial equipment, and commercial and military aerospace. Facilities subject to Rule 1469 include those using electrolytic chromium tanks for primarily aesthetic purposes (decorative chrome plating), as well as hard chrome and chromic acid anodizing for functional purposes (functional chrome plating).

DECORATIVE CHROME PLATING

Decorative chromium electroplating involves depositing a thin layer of chromium (measured in millionths of an inch), which gives a decorative and protective finish. Examples of parts which are decorative chromium electroplated include furniture components, bathroom fixtures, and car bumpers and wheels. Electroplating duration is measured in seconds or minutes. Decorative chrome plating operations can use either hexavalent chromium or trivalent chromium and the tanks are commonly referred to as decorative chrome plating tanks.

FUNCTIONAL CHROME PLATING

Hard Chromium Electroplating (Hard Chrome Plating)

Hard chromium electroplating involves depositing a "thick" layer of chromium (measured in thousandths of an inch) on a part, imparting corrosion protection, wear resistance, and lubricity and oil retention, among other properties. Examples of parts which are hard chromium electroplated include engine parts and industrial machinery and tools. It is nearly always applied to parts made of steel. Because of the thickness of the electroplating layer, electroplating duration is measured in hours or days. Hard chrome plating operations use hexavalent chromium and the tanks are commonly referred to as hard chrome plating tanks.

Chromic Acid Anodizing

Chromic acid anodizing involves electrolytic oxidation of a surface to produce a wear and corrosion resistant surface without depositing a metallic chromium layer. Anodizing is an electrochemical process during which aluminum is the anode. When an electric current passes through the electrolyte, it converts the metal surface to a durable aluminum oxide. The difference between electroplating and anodizing is that, in anodizing, the oxide coating is integral to the metal substrate as opposed to being a metallic coating deposition. The oxidized surface is hard and abrasion resistant, and it provides some degree of corrosion resistance. Chromic acid anodizing operations use hexavalent chromium, and the tank is commonly referred to as chromic acid anodizing tank.

Continuous Passivation

Continuous passivation is part of an automated process by which parts are passed continuously through an electrolytic hexavalent chromium solution for the purpose of creating a chemically inert surface on the part. These tanks may be referred to as continuous passivation tanks.

Other Tanks with Hexavalent Chromium Emissions (Tiered Hexavalent Chromium Tanks)

Fugitive emissions are emissions that are not collected through air pollution controls. Emissions from the stacks of air pollution controls are known as point source emissions. Recent rules, including Rule 1469, have incorporated requirements such as routine housekeeping and best management practices to prevent fugitive emissions. If the tank's solution leaves the tank, the solution containing hexavalent chromium can become a source of fugitive emissions if not properly maintained through best management practices and routine housekeeping.

Tier I, Tier II, and Tier III Hexavalent Chromium Tanks are tanks that contain hexavalent chromium and may have the potential to be a source of fugitive or point source hexavalent chromium emissions. Decorative chrome plating, hard chrome plating, chromic acid anodizing, and continuous passivation tanks, described above, are categorized as Tier III Hexavalent Chromium Tanks. Other tanks also contain hexavalent chromium due to:

- Tank solution operating specifications (e.g., dichromate seal tanks); and
- Accumulation of hexavalent chromium in the tank from:
    - Specific tank operations (e.g., chrome strip tanks)
    - Tank solution from another tank adhering to part (e.g., rinse tanks).

These tanks can emit hexavalent chromium emissions if the tank is rectified (i.e., stripping tanks), air sparged, or heated above a specific temperature. These emissive tanks make up the other tanks that are categorized as Tier I, Tier II, or Tier Hexavalent Chromium Tanks. Tier III Hexavalent Chromium Tanks being the most emissive tanks have the most stringent requirements, such as air pollution control devices, to control emissions from these tanks. Tier II Hexavalent Chromium Tanks are heated tanks, but due to a combination of hexavalent chromium concentration and temperature, would emit hexavalent chromium at an equivalent emission rate achieved as a controlled Tier III Hexavalent Chromium. As such, Tier II Hexavalent Chromium Tanks are not required to have add-on controls, but still are considered a potential source of fugitive emissions. Tier I Hexavalent Chromium Tanks, the least emissive, are only considered a potential source of fugitive emissions.

Rinse Process

When parts are removed from a chrome plating or chromic acid anodizing tank, facilities will rinse the parts to remove any residual tank solution that is remaining on the parts and conveyance equipment. This is done by use of dragout/rinse tanks, counter-flow rinsing, or spray rinsing. Some rinse tanks, although initially filled with water, can accumulate hexavalent chromium over time. As the rinse tank collects dragout from a tank that contained hexavalent chromium, the hexavalent chromium concentration increases, unless the rinse tank water is changed out on a regular schedule. These tanks are often referred to as stagnant or static rinse tanks.[1] These static rinse tanks, if not changed out frequently enough, may reach the threshold to be considered Tier I, Tier II, or even Tier III Hexavalent Chromium Tanks, depending on the hexavalent chromium concentration of the rinse tank water, operating temperature, and use of air sparging.

HEXAVALENT CHROMIUM

A substance is considered toxic if it has the potential to cause adverse health effects in people. A toxic substance released to the air is considered a "toxic air contaminant" or "TAC." A TAC is defined as an "air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health" (Health and Safety Code Section 39655(a)). TACs are identified by state and federal agencies based on a review of available scientific evidence. In California, the Office of Environmental Health Hazard

[1] U.S. EPA. (2007). *Clean Lines: Strategies for Reducing Your Environmental Footprint - Metal Finishing Operations*. https://www.epa.gov/sites/production/files/2015-03/documents/finishing.pdf

Assessment (OEHHA) is responsible for the scientific evaluation and determination of the health values for TACs that guide regulatory actions, including those of South Coast AQMD. South Coast AQMD Rule 1401 – New Source Review of Toxic Air Contaminants lists these TACs on Table 1 – Toxic Air Contaminants. Metal finishing operations that use tanks to prepare or treat the surface of parts may use solutions that contain metal TACs, including hexavalent chromium.

Hexavalent chromium[2] is one of the most potent carcinogens. Hexavalent chromium is a multi-pathway toxic air contaminant, meaning there are multiple exposure pathways for a person to be exposed, such as inhalation and ingestion. Inhalation of hexavalent chromium can cause both cancer and non-cancer health effects. Inhalation of hexavalent chromium over a long period of time increases the risk of lung cancer and nasal cancer. The non-cancer effects of being exposed to hexavalent chromium at high levels over time can cause or worsen health conditions such as irritation of the nose, throat and lungs; allergic symptoms (wheezing, shortness of breath); and nasal sores and perforation of the membrane separating the nostrils.

REGULATORY HISTORY

Chromium electroplating facilities have been subject to regulation for almost four decades. These facilities are subject to local, state, and federal requirements. These operations may also subject to other rules such as Rule 1426 – Emissions from Metal Finishing Operations, Rule 1402 – Control of Toxic Air Contaminants from Existing Sources, and Rule 1480 – Ambient Monitoring and Sampling of Metal Toxic Air Contaminants, Rule 1469 specifies the control requirements for point sources and fugitive sources of hexavalent chromium emissions. Below is a chronology of regulatory activity prior to 2018.

Pre-2018 Regulatory Efforts at Local, State, and Federal Levels

- In 1986, CARB identified hexavalent chromium as a toxic air contaminant.
- In February 1988, CARB adopted the Chrome ATCM. Compliance with the Chrome ATCM was based on reducing uncontrolled emissions by a specified percentage or meeting an emission limit.
- In June 1988, South Coast AQMD adopted Rule 1169, "Hexavalent Chromium – Chrome Plating and Chromic Acid Anodizing", which met the requirements of the Chrome ATCM.
- In 1995, the U.S. EPA adopted the National Emission Standard for Hazardous Air Pollutants (NESHAP). The federal regulations established emission limits for hard chromium electroplating operations, increasing in stringency with a facility's mass emissions and cumulative rectifier capacity. Decorative chromium electroplating and chromic acid anodizing operations are required to meet an exhaust standard, or maintain their electroplating bath at 45 dynes/cm or less. Trivalent chromium operations are subject to the regulation. Numerous monitoring, recordkeeping and reporting requirements are specified.
- In 1998, the Chrome ATCM was amended for consistency with the NESHAP. The Chrome ATCM was expanded to include trivalent chromium operations, and tightened emission limits for hard chromium electroplating, among other things.

[2] Office of Environmental Health and Hazard Assessment. (2016). *Health Effects of Hexavalent Chromium*. https://oehha.ca.gov/air/health-effects-hexavalent-chromium

- South Coast AQMD Rule 1469 was adopted in 1998 as a replacement to Rule 1169. Rule 1469 incorporates the 1998 Chrome ATCM requirements.
- South Coast AQMD Rule 1469 was amended in 2003 as part of the Governing Board's Chairman's Strategic Alliance Initiative #8 – Negotiated Rulemaking Pilot Program through a negotiated rulemaking pilot program.
- In 2004, the U.S. EPA amended the NESHAP. The amendments addressed the use of fume suppressants in hard chromium electroplating tanks, surface tension limits when using a tensiometer, alternate emission limits for hard chromium electroplating tanks equipped with enclosing hoods, revised definition of electroplating and anodizing tanks, and pressure drop monitoring requirements for composite mesh pad systems.
- In December 2006, CARB amended the Chrome ATCM to maximize hexavalent chromium emission reductions from chromium electroplating and chromic acid anodizing facilities by requiring the use of BACT for all facilities. The regulation also ensured that new facilities are isolated from sensitive receptors.
- On October 24, 2007, the amended Chrome ATCM became effective.
- On December 5, 2008, South Coast AQMD Rule 1469 was amended to incorporate the stricter requirements from the amended Chrome ATCM.
- In September 2012, U.S. EPA amended the NESHAP. The federal regulation reduced emission limits, decreasing a facility's mass emissions. Chromium electroplating and chromic acid anodizing which utilize chemical fume suppressants must maintain their electroplating bath to 40 dynes/cm or less. The addition of perfluorooctane sulfonic acid (PFOS) based fume suppressants would be prohibited.

2018 Amendments to Rule 1469

During the 2018 rule development for Rule 1469, South Coast AQMD identified that the process of air sparging and heating of tanks with solutions containing chromic acid generated hexavalent chromium emissions. Rule 1469 was amended to address these previously uncontrolled sources of hexavalent chromium through point source controls. Additional requirements to control fugitive emissions included enhanced housekeeping and best management practices as well as new building enclosure requirements.

Investigations of several Rule 1469 facilities through ambient air monitoring demonstrated the effectiveness of implementation of these control measures to control emissions, both point source and fugitive emissions. Staff conducted ambient air monitoring of hexavalent chromium near two chromic acid anodizing facilities in the South Coast Air Basin: a facility in Newport Beach and a facility in Paramount, where hexavalent chromium levels were above background levels near those facilities. This monitoring provided information about previously unknown sources of hexavalent chromium emissions. Ambient air monitoring also showed that ambient levels of hexavalent chromium were reduced after the facilities implemented control measures for fugitive emissions and installed add-on controls.

The basis for the 2018 rule amendments to Rule 1469 was that there were hexavalent chromium emissions from uncontrolled tanks determined by ambient air monitoring, emissions testing, and other investigative activities. Additionally, implementing control measures to minimize fugitive emissions, while not quantifiable, were effective in reducing ambient levels of hexavalent

chromium. As a result, the 2018 amendments to Rule 1469 required pollution controls on these tanks to address point source emissions, while fugitive emissions were addressed through building enclosure requirements, enhanced housekeeping, and best management practices. Additional details on the 2018 amendments to Rule 1469 are located in the corresponding Final Staff Report.[3]

2021 Amendments to Rule 1469

Rule 1469 was amended to incorporate provisions under Proposed Amended Rule 1426 (PAR 1426) that affect Rule 1469 facilities to streamline implementation of these rules for these facilities. Additional amendments to Rule 1469 removed a reference to a chemical that is no longer used for testing HEPA filters and to update an incorrect table reference. Additional details on the 2021 amendments to Rule 1469 are in the corresponding Final Staff Report.[4]

2023 Amendments to the Chrome ATCM

In 2023, CARB amended the Chrome ATCM.[5] The amended Chrome ATCM includes many existing requirements included in Rule 1469, such as building enclosure, best management practices, and enhanced housekeeping. The Chrome ATCM also includes phase out requirements for both decorative and functional chrome operations as well as restrictions for new sources of hexavalent chromium (Cr^{+6}), whereas Rule 1469 does not contain such requirements. As such, for existing facilities, Rule 1469 is more stringent than the Chrome ATCM until January 1, 2026, when the lower emission limits for hard chrome plating and chromic acid anodizing becomes effective. For new facilities, the Chrome ATCM is more stringent than Rule 1469. Table 1-1 lists the key requirements and timeline.

Table 1-1 – Key Differences between Chrome ATCM and Rule 1469

Requirements	Chrome ATCM	Rule 1469
New Cr^{+6} Plating or Anodizing Facility	Prohibited	Allowed
Decorative Cr^{+6} Phase-out	2030	[None]
Functional Cr^{+6} Phase-out	2039	[None]
Emission Limit for Cr^{+6} Plating and Anodizing Tanks	0.00075 mg/amp-hr (Functional Chrome and Modified Facilities)	0.0015 mg/amp-hr (0.0011 mg/amp-hr for Facilities that begin operation on or after October 24, 2007)
Source Testing Interval	2 years (Functional only)	5 or 7 years (All)

[3] South Coast AQMD. (2018). *29. Certify Revised Final Environmental Assessment and Amend Rule 1469 – Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations*. https://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2018/2018-nov2-029.pdf

[4] South Coast AQMD. (2021). *26. Determine That Proposed Amendments to Rule 1426 – Emissions from Metal Finishing Operations, and Rule 1469 – Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations, Are Exempt from CEQA, and Amend Rule 1426 and Rule 1469*. https://www.aqmd.gov/docs/default-source/agendas/governing-board/2021/2021-apr2-026.pdf

[5] California Air Resources Board. (2023). *Amendments to the Airborne Toxic Control Measure for Chromium Electroplating and Chromic Acid Anodizing Operations.* https://ww2.arb.ca.gov/sites/default/files/2024-01/Chrome%20Plating%20FRO_clean_23Jan2024.pdf

The effective dates of some of the more notable requirements are:

- January 1, 2024
  - Prohibits new hexavalent chrome plating and chromic acid anodizing facilities
  - Lower emission limit (0.00075 mg/amp-hr) for facilities that undergo a modification
- January 1, 2026
  - Facilities to operate within a building enclosure[6]
  - Lower emission limit (0.00075 mg/amp-hr) for hard chrome plating and chromic acid anodizing
- January 1, 2027 – Phase out of hexavalent decorative chrome plating not within a building enclosure
- January 1, 2030 – Phase out of hexavalent decorative chrome plating within a building enclosure
- January 1, 2039 – Phase out of hexavalent hard chrome plating and chromic acid anodizing (pending two technology reviews to be completed by January 1, 2032, and January 1, 2036)

AFFECTED FACILITIES

Within the South Coast AQMD there are currently 72 known facilities conducting decorative chrome, hard chrome, and chromic acid anodizing operations. Of these 72 facilities, there are 30 decorative chrome plating facilities, 18 hard chromium electroplating facilities, 21 chromic acid anodizing facilities, and 3 that conduct both hard chrome plating and chromic acid anodizing. Table 1-2 lists the different North America Industry Classification System (NAICS) codes for the affected facilities.

Table 1-2 – NAICS Codes for the 72 Affected PAR 1469 Facilities

Industry	NAICS Code	Number of Facilities
Fabricated metal product manufacturing	**332**	**66**
Machine Shops	332710	2
Bolt, Nut, Screw, Rivet, and Washer Manufacturing	332722	1
Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers	332812	2
Electroplating, Plating, Polishing, Anodizing, and Coloring	332813	60
Plumbing Fixture Fitting and Trim Manufacturing	332913	1
Other Manufacturing	**334 and 336**	**5**
Totalizing Fluid Meter and Counting Device Manufacturing	334514	1
Aircraft Manufacturing	336411	1
Other Aircraft Parts and Auxiliary Equipment Manufacturing	336413	3
Repair and maintenance	**811**	**1**
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	811310	1

[6] Rule 1469 requires a Tier I, II, or III Hexavalent Chromium Tank to be operated within a building enclosure

NEED FOR PROPOSED AMENDED RULE 1469

As previously discussed, while the 2023 amendments to the Chrome ATCM incorporate many of the requirements of Rule 1469, there are additional requirements that include the phase out of the use of hexavalent chromium for decorative chrome plating operations by January 1, 2030, and the phase out of the use of hexavalent chromium for functional chrome operations by January 1, 2039. The Chrome ATCM also prohibits new hexavalent chrome plating and chromic acid anodizing facilities that would be subject to Rule 1469, includes more stringent requirements for existing facilities that undergo a modification, and more stringent requirements beginning January 1, 2026, for functional chrome operations.

PAR 1469 is needed to ensure that Rule 1469 is at least as strict as the current Chrome ATCM by incorporating the more stringent requirements that includes the prohibition of new hexavalent chromium for new chrome plating or chromic acid anodizing facilities, new requirements for modified facilities as well as the more stringent requirements for functional chrome plating operations prior to the phase out of the use of hexavalent chromium for decorative chrome plating operations and functional chrome operations.

Additionally, there are existing requirements in Rule 1469 which need to be amended to:

- Clarify applicability of requirements for specific facilities
- Clarify the timeframe for cleaning prior to roof cutting activities
- Further prohibit actions that would generate fugitive emissions
- Clarify the acceptable methods to comply with best management practices

Further discussion on the requirements and changes are discussed in Chapter 2.

Health and Safety Code Section 39666(d) mandates the South Coast AQMD to implement and enforce ATCMs or enforce equally effective or more stringent rules than ATCMs adopted by CARB. Proposed Amended Rule 1469 (PAR 1469) is being amended to incorporate the more stringent requirements of the Chrome ATCM.

PUBLIC PROCESS

Development of PAR 1469 is being conducted through a public process. A PAR 1469 Working Group was formed to provide the public and stakeholders an opportunity to discuss important details about the proposed amended rule and provide staff with input during the rule development process. The Working Group is composed of representatives from businesses, environmental groups, public agencies, and consultants. South Coast AQMD has held two working group meetings conducted virtually using Zoom. The meetings were held on March 11, 2025, and July 23, 2025. Since the adoption of the Chrome ATCM, two regulatory advisories have been released. The first regulatory advisory[7] was sent out March 2024 to facilities subject to Rule 1469 to inform them that the South Coast AQMD planned to amend Rule 1469 to incorporate the provisions of

[7] South Coast AQMD. (2024). *REGULATORY* ADVISORY *Implementation of South Coast AQMD Rule 1469 and CARB Airbourne Toxic Control Measure*. https://www.aqmd.gov/docs/default-source/rule-book/support-documents/rule-1469/2024-chrome-atcm-regulatory-advisory-for-rule-1469-facilities-032724.pdf

the Chrome ATCM. The advisory was also appended to Rule 1469 to increase awareness for stakeholders. Another regulatory advisory[8] was sent out to stakeholders in June 2025 to remind the facilities of the more stringent Chrome ATCM requirements for functional chrome facilities required by January 1, 2026. In addition, a Public Workshop was held on August 27, 2025, to present the proposed amended rule and receive public comment.

[8] South Coast AQMD. (2025). *REGULATORY ADVISORY Upcoming Deadlines and Compliance Requirements*. https://www.aqmd.gov/docs/default-source/rule-book/proposed-rules/1469-(2025)/par-1469-2025-regulatory-advisory_final.pdf

CHAPTER 2 – SUMMARY OF PROPOSED AMENDED RULE 1469

OVERVIEW OF PAR 1469

Rule 1469 applies to owner or operator of any facility performing chromium electroplating or chromic acid anodizing. PAR 1469 does not change the applicability of the rule.

PAR 1469 requirements incorporate the more stringent requirements in the Chrome ATCM. These can be categorized into three key types:

- New facility and modified facility requirements;
- Phase out dates for decorative chrome and functional chrome operations; and
- New emission limits and more frequent source testing.

PAR 1469 prohibits new facilities that use hexavalent chromium for chromium electroplating or chromic acid anodizing. PAR 1469 requires facilities, upon completion of the modification (as defined by PAR 1469), to meet all the new requirements such as emission limits. Furthermore, PAR 1469 requires all electroplating and chromic acid anodizing tanks using hexavalent chromium at a facility that underwent a modification to meet the new emission limit.

PAR 1469 will require the phase out of the use of hexavalent chromium for decorative chrome plating by January 1, 2030. The phase out date of the use of hexavalent chromium for functional chrome plating is referenced to a date specified in the Chrome ATCM, currently January 1, 2039. PAR 1469 will also require functional chrome facilities to submit application(s) to update permits to incorporate new emission limits and for evaluation to ensure compliance with the more stringent requirements.

Additional changes being proposed beyond the Chrome ATCM, include, but are not limited to:

- Further prohibit activities as to prevent fugitive emissions
- Clarify that secondary containment devices may not be used to comply with certain existing requirements
- Labelling of tanks with open permit application
- Capitalize defined terms throughout the rule
- Clarify applicability of existing requirements

PROPOSED AMENDED RULE 1469

Applicability – Subdivision (b)

The applicability was not changed. This rule applies when a facility performs chromium electroplating or chromic acid anodizing. A facility may have an assortment of equipment where certain ones are subject to a specific rule, so the facility itself is subject to multiple rules.

For example, a facility that conducts chromium electroplating or chromic acid anodizing, may have a paint booth that applies coatings with VOCs. This equipment would not be subject to PAR 1469 or its requirements as the paint spray booth is not associated with chrome plating.

Definitions – Subdivision (c)

PAR 1469 deleted the following terms as they were used in previous rule language related to new facilities which are no longer allowed.

- MAXIMUM CUMULATIVE POTENTIAL RECTIFIER CAPACITY (deleted)

PAR 1469 added or modified the following terms used in the proposed amendment. Please refer to PAR 1469 for actual definitions.

- APPROVED CLEANING METHOD (modified)
- AUTOMATED LINE (added)
- ASSOCIATED PROCESS TANK (modified)
- AUTOMATED LINE (added)
- BASE MATERIAL (deleted)
- CHROMIUM ELECTROPLATING (added)
- CONTAINMENT DEVICE (added)
- CONTINUOUS PASSIVATION (added)
- ENCLOSED HEXAVALENT CHROMIUM TANK (added)
- FUNCTIONAL CHROME PLATING (added)
- HARD CHROMIUM ELECTROPLATING (modified)
- MODIFICATION (modified)
- NEW FACILITY (deleted)
- PACKED-BED SCRUBBER (modified)
- RECENT FACILITY (added)
- RINSE TANK (added)
- SECONDARY CONTAINMENT (added)

- SPLASH GUARD (added)
- TIER I HEXAVALENT CHROMIUM TANK (modified)
- TIER II HEXAVALENT CHROMIUM TANK (modified
- TIER III HEXAVALENT CHROMIUM TANK (modified)
- TRIVALENT CHROMIUM PROCESS (modified)

ASSOCIATED PROCESS TANK was modified to align with the Chrome ATCM to clarify that these tanks may contain hexavalent chromium in lower concentrations than Tier I Tanks.

AUTOMATED LINE was added to clarify the distinction between automated and non-automated lines for best management practice requirements in subdivision (g). Automated lines move the base material (parts) along a well-defined path through the line of tanks. The movement of the parts includes the use of cranes, hoists, or other mechanized conveyance equipment such as rollers.

BASE MATERIAL was deleted. Part is used in rule language to represent the workpiece or part being processed within tanks subject to this rule. The workpiece or part being processed does not affect the requirements. PAR 1469 requirements are dependent on operation and type of material (e.g., containing hexavalent chromium, trivalent chromium). Therefore, defining the workpiece or material did not provide any added value.

CHROMIUM ELECTROPLATING was added to establish a term encompassing hexavalent and trivalent chromium electroplating. Chromic acid anodizing would be excluded from this definition. This approach also aligns with the Chrome ATCM for existing and new requirements.

CONTAINMENT DEVICE was added to clarify the broad category of devices to capture or direct spills, dragout, or overspray.

Examples of a Containment Device include a drip tray, Splash Guards, portable devices (e.g., a cart or oil catch pan) and Secondary Containment (an area typically found on the floor underneath a raised Tank Process Area).

Secondary Containment or Splash Guard are specific types of Containment Devices, each with their own definitions.

Requirements regarding operation and maintenance of a Containment Device are discussed in subdivision (f) and subdivision (g) in this chapter.

CONTINUOUS PASSIVATION was added to align with the Chrome ATCM to include an electrolytic process not previously identified. The Chrome ATCM classifies this operation as hard chrome plating. This operation is not synonymous with the passivation process typically occurring in hexavalent chromic acid anodizing (subject to Rule 1469) or non-hexavalent anodizing (e.g., sulfuric acid anodizing) where a chemical reaction passivates the surface of a part. Staff has not identified any facilities using this process in South Coast AQMD.

ENCLOSED HEXAVALENT CHROMIUM TANK was added to clarify which equipment is subject to the parametric monitoring requirements in the two appendices.

FUNCTIONAL CHROME PLATING was added to align with the Chrome ATCM to simplify references in requirements that apply to both hard chromium electroplating and chromic acid anodizing. Continuous Passivation is included to align with the Chrome ATCM.

HARD CHROMIUM ELECTROPLATING has been modified to align with the Chrome ATCM with the removal of the alternative term Industrial Chromium Electroplating that is no longer used in rule language.

MAXIMUM CUMULATIVE POTENTIAL RECTIFIER CAPACITY was deleted as it was no longer used in rule language.

MODIFICATION has been modified to clarify that increase in hexavalent chromium emissions are from the facility as a whole rather than a permit unit. While the Chrome ATCM included language that construction of building enclosures to meet requirements does not constitute a modification, South Coast AQMD facility construction has already been implemented thus this addition was not needed. The Chrome ATCM also states that the changes related to conversions from hexavalent chromium to alternative technologies also do not constitute a modification. As the addition of non-hexavalent chromium equipment would not result in the increase of hexavalent chromium emissions, this addition was not needed in the definition.

NEW FACILITY was deleted and replaced with RECENT FACILITY to avoid confusion. Rule 1469 used the term New Facility relative to the date of the 2008 amendment. The Chrome ATCM prohibits a new facility from beginning the use of hexavalent chromium for purposes of chromium electroplating or chromic acid anodizing.

PACKED-BED SCRUBBER has been modified to align with the Chrome ATCM with removal of unnecessary information.

RECENT FACILITY was added to replace former NEW FACILITY (deleted). The definition for RECENT FACILITY was taken from NEW FACILITY and modified with a date range to include only those facilities previously considered a NEW FACILITY that were subject to existing rule requirements prior to PAR 1469 adoption.

For example, a facility that began chromium electroplating or chromic acid anodizing operations in 2023 would be considered a Recent Facility. A facility that would begin conducting chromium electroplating in 2027 would be a new facility that is prohibited by PAR 1469 and the Chrome ATCM. Additional details regarding the prohibition of this facility is discussed in subdivision (v) of this chapter.

SECONDARY CONTAINMENT has been added to define a type of Containment Device which is a space or structure on the floor. This Containment Device is used to contain tank solutions (liquid) in the event of a failure of tank integrity (e.g., earthquake cracks the tank and tank solution is released). It serves a backup of the primary container(s), in this case the plating tank structure. With the use of Secondary Containment, if there was a failure of the tank integrity, tank solutions

would not release its contents in the facility where it could end up in sewage systems, storm drains, or tracked out by workers. The rule distinguishes the use of Secondary Containment from other types of Containment Devices.

An example of Secondary Containment used for plating operations is a lined containment area with a berm (wall) along the perimeter designed to hold a required minimum volume of liquid from leaks from equipment above. The Secondary Containment is located beneath one or more elevated tanks with associated walkways.

SPLASH GUARD has been added to provide further clarification on what Containment Devices are considered Splash Guards.

TIER I HEXAVALENT CHROMIUM TANK/TIER II HEXAVALENT CHROMIUM TANK/TIER III HEXAVALENT CHROMIUM TANK have been modified to clarify that the classification is based on either how the tank operated or if a permit allows the operation of the tank to meet the criteria. These definitions have also been restructured to clarify the tank designation would be based on the highest applicable tier.

For example, a tank permitted to operate a maximum concentration of 10,000 ppm and up to 190 degrees Fahrenheit would be considered a Tier III Hexavalent Chromium Tank even if it has sometimes operated at a concentration of 750 ppm and at ambient temperature. To lower the applicable tier, the permit must be modified to limit operations to prevent the tank from being operated at a higher tier. This can include modifying the permit to reduce the allowable maximum concentration of hexavalent chromium, to lower maximum operating temperature, to prohibit air sparging, or to prohibit electrolytic operations. If the tank were to operate contrary to permit conditions (e.g., operating the tank so that it is considered a higher-tiered tank), the owner or operator may be subject to enforcement action for violating permit conditions and not complying with applicable higher-tiered tank PAR 1469 requirements. These revisions are for clarification as the classification methodology and justification were discussed during the 2018 development of Rule 1469.

TRIVALENT CHROMIUM PROCESS has been modified to align with the Chrome ATCM with minor edits including the strikeout of the word thin and the replacement of the term chromic acid with hexavalent chromium. This modification is intended to include all electroplating that uses trivalent chromium.

Requirements – Subdivision (d)

Paragraph (d)(1) has been modified to clarify that the requirement is applicable for only Chromium Electroplating and Chromic Acid Anodizing Tanks instead of all rectified tanks. This would exclude electrolytic stripping tanks or non-Chromium Electroplating tanks, such as a nickel plating tank or a cadmium plating tank. Other electrolytic tanks would be regulated by Rule 1426 and permit conditions may still require installation of the ampere-hour meters.

Paragraph (d)(2) has been modified to correct the references of the certification process for Chemical Fume Suppressants. The certification process was conducted jointly by South Coast AQMD and CARB. Certified products are listed on a South Coast AQMD website. This

modification does not change the requirements for Chemical Fume Suppressants and only serves to correct the reference.

Requirements for Building Enclosures for Tier II and Tier III Hexavalent Chromium Tanks – Subdivision (e)

Paragraph (e)(9) has been moved to subdivision (r) as it is an exemption.

Housekeeping Requirements – Subdivision (f)

Subdivision (f) specifies the required housekeeping requirements. This includes how materials are handled and stored, including chemicals and waste containing hexavalent chromium, as well equipment potentially contaminated with hexavalent chromium. Routine cleaning using approved cleaning methods of specified areas and equipment at specified intervals and prompt cleanup of accidental spills are required.

Paragraph (f)(3) has been modified to clarify the housekeeping requirements to address liquid or solid spilled materials that may contain hexavalent chromium. The owner or operator would be required to address spills by at least one of the following:

- Capture the material using a Containment Device
- Clean the material immediately but no later than one hour after being spilled

A Containment Device used to contain a spill or redirect tank solutions would be subject to weekly cleaning requirements now clarified by inclusion into paragraph (f)(4) as it is a surface that would be potentially contaminated with Hexavalent Chromium.

Examples of spills include:

- Liquid in Containment Device that is accidentally bumped and the liquid falls out of the Containment Device onto a walkway
- Chromic acid flakes being transported in a closed container accidentally dropped and releasing its contents onto the floor
- During the transfer of waste from weekly cleaning of an open floor area around a Tier III Hexavalent Chromium Tank to a closed container in an Enclosed Storage Area, the waste is partially spilled onto the floor.

PAR 1469 specifically excludes materials that are meeting the requirements of either paragraph (g)(1) for Dragout or (g)(2) for overspray from the requirements in paragraph (f)(3), as the material would be captured/directed or contained with a Containment Device. In the event, Dragout or overspray is not properly captured, directed or contained, the facility may not be in compliance with paragraph (g)(1) or (g)(2) and the material would be considered a spill and subject to the requirements of paragraph (f)(3). Further discussion on Dragout or overspray is found in the discussion of paragraph (g)(1) or (g)(2).

Paragraph (f)(5) requires that containers with chromium-containing waste be kept closed except when waste is being added to the container or emptied. For facilities that use hexavalent chromium

for chrome plating operations, the 2023 Chrome ATCM includes a new requirement to store these closed containers in an Enclosed Storage Area.[9] An Enclosed Storage Area shall be designated only for storage to prevent spills and other accidental releases. As such a Building Enclosure by itself would not satisfy this requirement unless the entire Building Enclosure is exclusively used for storage only. To align with the Chrome ATCM, clause (f)(5)(C)(i) has been added in PAR 1469 to include an additional requirement to store Hexavalent Chromium-containing waste in a container that is inside an Enclosed Storage Area. Enclosed Storage Areas include, but are not limited to cabinets, closets, sheds, drums, totes, bins, or other spaces or structures that meet the definition to prevent its contents from being emitted into the atmosphere. Images below show examples that would satisfy the requirement of an Enclosed Storage Area.

Waste containers are typically stored in separate enclosed storage rooms or areas where there is a physical barrier to separate it from other non-storage activities. However, changeout of tank solutions, which occurs infrequently, might result in larger volume of waste solutions. Some facilities might not have a designated storage area for the temporary storage of the large volume of waste generated from tank changeouts. As such, PAR 1469 clause (f)(5)(C)(ii) includes an equally effective compliance pathway by allowing the use of physical barriers to designate a storage area within a Building Enclosure to prevent spills and other accidental releases. The physical barriers may be either portable or permanent, including use of building walls, welding screens, plastic strip curtains, or other equipment that serves as a physical barrier to personnel and

[9] California Air Resources Board. (2022). Staff Report: Initial Statement of Reasons. https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2023/chromeatcm2023/isor.pdf

equipment. Images below show examples of physical barriers that can be used to create a designated storage area within a Building Enclosure.



Requirements in paragraph (f)(8) for roof cutting of Building Enclosures was modified to specify the earliest roof surfaces could be cleaned before roof cutting activities start and additionally requires that both HEPA vacuuming and wet wiping be conducted prior to roof cutting activities. Rule 1469 did not specify a timeframe when the roof cleaning would need to occur, so a roof cleaning that occurred two years earlier could have met this requirement. The original intent was to require measures just prior to roof cutting activities to prevent the generation of fugitive emissions. If roof cleaning is conducted too far in the past, residual Hexavalent Chromium material may redeposit over time. The timeframe restriction of 48 hours is based on the minimum time prior to notifying South Coast AQMD that roof cutting activities will occur. Roof cutting activities include preparation of the work area such as setting up equipment needed for the roof cutting and site cleanup afterwards. The following timeline outlines the appropriate steps to meet the requirements.

January 1, 2026
- 7:00 AM - Notify South Coast AQMD when roof cutting activities will begin (i.e. January 4, 2026 8:00 AM)

January 2, 2026
- 5:00 PM – Roof cleaning completed

January 4, 2026
- 8:00 AM – Roof cutting activities begin

Best Management Practices Requirements – Subdivision (g)

Subdivision (g) specifies the best management practices that a facility is required to comply with to minimize fugitive emissions.

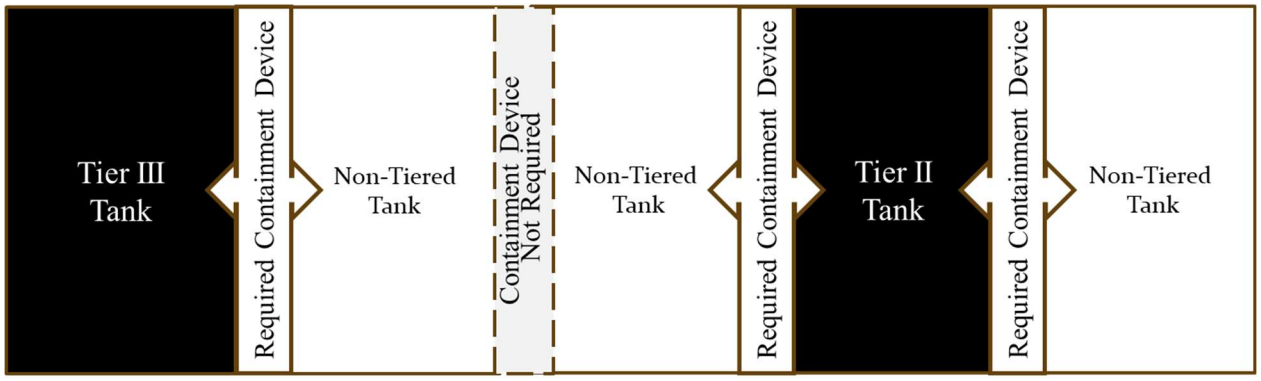
Paragraph (g)(1) has been modified to clarify the requirements for an Automated Line and non-Automated Line to reduce Dragout. A process line or individual tank that does not meet the definition of an Automated Line would be subject to the requirements of a non-Automated Line.

Automated Lines

Automated lines are characterized by using additional equipment to hang parts and move them from tank to tank in a defined path. Hoist, cranes, or other conveyance equipment are used when large or many parts are processed at once in a series of large tanks. The tanks are positioned adjacent to each other, where the defined path for the part is over a tank. As the part is over a tank, Dragout would mostly return to a tank, except when Dragout falls in between two tanks or on the lip of a tank. A common industry practice is to use a sloped containment device that returns Dragout back to a tank. These containment devices are commonly referred to as drip trays. However, if Dragout falls where there is no drip tray, additional containment devices may be needed to prevent Dragout from falling outside a tank. Preventing loss of tank solutions due to Dragout helps reduce costs incurred by the facility by reducing the amount chemicals needed to prepare new tank solutions as well as hazardous waste disposal fees required for waste generated due to required cleaning.

Subparagraph (g)(1)(A) requires that for Automated Lines, all Dragout is captured by Containment Device. Containment Devices for Automated Lines are required to be installed and maintained between a Tier I, Tier II, and Tier III Hexavalent Chromium Tank and the adjacent tank in the tank line. Figure 2-1 illustrates an example of where Containment Devices are required in a tank line with Tier II and Tier III Hexavalent Chromium Tanks (Tier II and III Tank) and adjacent tanks.

Figure 2-1 – Example of Required Containment Devices for an Automated Line*

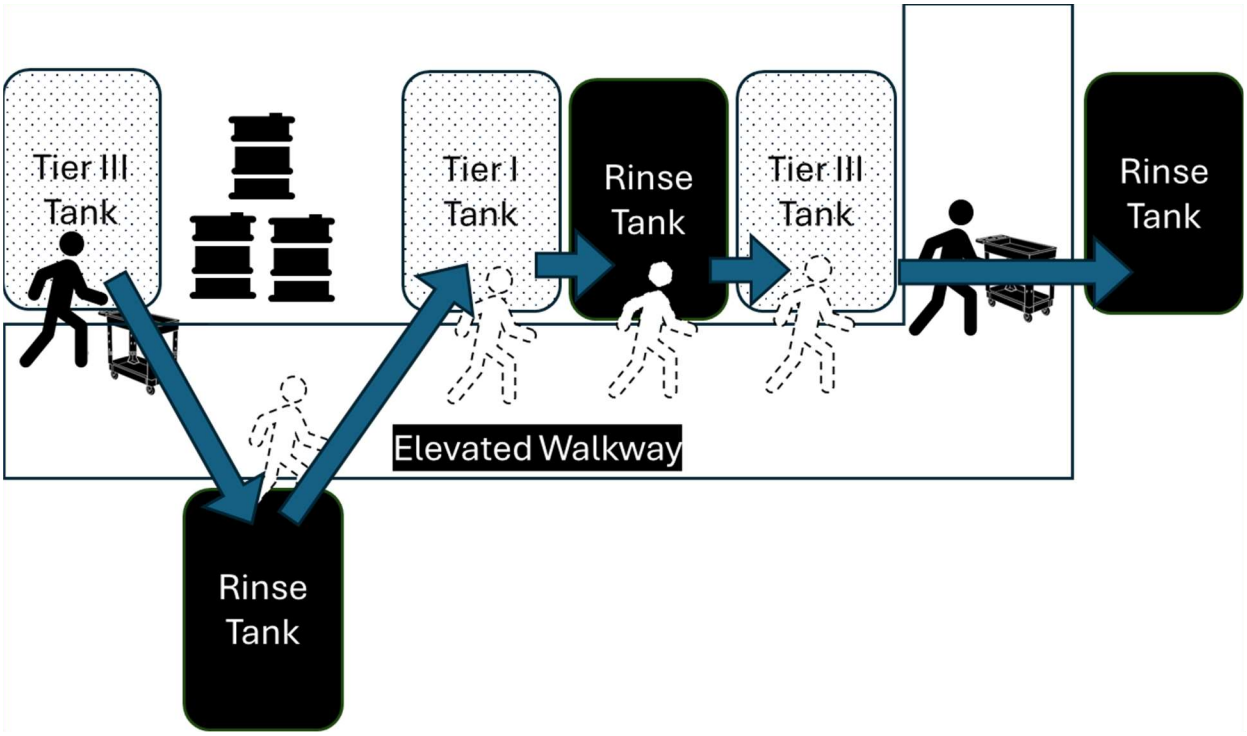


** Additional Containment Devices may be needed to prevent Dragout from falling outside a tank*

Non-Automated Lines

Non-Automated lines differ from Automated Lines where parts and hangers are manually moved from tank to tank by workers. Tanks in a Non-Automated Line may be adjacent to each other or located across walkways or further away in the tank process area. While a Containment Device can be installed between adjacent tanks to address Dragout, when tanks are not adjacent, workers will use portable containment devices such as trays or carts to capture and contain the Dragout so that it does not fall onto walkways. Figure 2-2 illustrates the route a part may be treated in a non-Automated Line where a worker manually moves part, using a cart across walkways to capture Dragout, and treats the part in multiple tanks. As illustrated, the part follows a path going from non-adjacent tanks or crossing a walkway to get to the next tank in the process line. As such, it would not be practical to install a permanent device as required by an Automated-Line.

Figure 2-2 – Example a Non-Automated Line



Non-Automated Lines are required by subparagraph (g)(1)(B) to either utilize a Containment Device or handle the part or equipment such that no Dragout is dripped outside the tanks. A portable Containment Device, such as a catch pan, tray, or cart, may be used provided the Dragout that is captured by the Containment Device is returned to a tank.

For both Automated and non-Automated Lines, PAR 1469 clarifies that Secondary Containment would not be an acceptable method to meet these requirements. The Chrome ATCM and Rule 1469 have prohibited this action since 2008, as Dragout would be falling between tanks to land

onto Secondary Containment that are on the floor beneath the tank line. Use of Secondary Containment is not an acceptable method to prevent Dragout, as Dragout that is not captured and sent back to a tank may become a potential source of fugitive emissions. PAR 1469 requires Dragout captured by a Containment Device is returned to the tank and cleaned on weekly basis to align with the Chrome ATCM.

Spray rinsing requirements from subparagraph (g)(1)(B) have been relocated into paragraph (g)(2) that specify other spray rinsing requirements. Paragraph (g)(2) has been restructured to incorporate the requirement.

Paragraph (g)(3) specify tank labeling requirements for tanks located within a Tank Processing Area. The original intent behind labeling was to assist both operators and South Coast AQMD inspectors in identifying Tier I, II and III Hexavalent Chromium Tanks and to ensure the appropriate operating conditions are maintained. Tank labeling must be legible and visible to the reader from the walkway adjacent to the tank. PAR 1469 has moved the existing tank labeling requirements to subparagraph (g)(3)(A). A tank label would need to be updated to reflect any new operating parameters if a permit is reissued by the South Coast AQMD.

Subparagraph (g)(3)(B) has been added to include additional labeling for a tank that has been physically altered and has not yet been issued a permit or reissued a new permit by the South Coast AQMD. An application for an existing tank may be submitted due to 1) Proposed modifications to the tank (e.g., permitted or previously exempt), or 2) Align the permit to operate for a previously altered tank (which is not allowed and usually the result of a Notice issued to a facility). After issuance of the new permit to operate, there would no longer be an open permit application, and the additional labeling would no longer be required as a new tank label pursuant to subparagraph (g)(3)(A) would reflect all the current information. This provision facilitates the proper identification of each tank.

Subparagraph (g)(3)(C) has been added to include labeling information required by the Chrome ATCM for tanks that contain trivalent chromium to align with the Chrome ATCM.

Paragraph (g)(7) has been added to prohibit walking or standing on Containment Devices unless measures have been taken to minimize track-out of material that may generate fugitive emissions. South Coast AQMD recently observed a practice where operators walked on a Containment Device and stored materials on the Containment Device. This practice could lead to track-out of hexavalent chromium laden liquid and contamination of objects stored on the Containment Device. To prevent the generation of fugitive hexavalent chromium emissions, the practice would be prohibited unless preventative measures are followed. Staff has not observed this as a common practice and it is not anticipated to impact a significant number of facilities.

Air Pollution Control Technique Requirements – Subdivision (h)

A footnote has been added to Table 1 to clarify that Functional Chrome Plating tanks would be subject to more stringent requirements that are specified in a later subdivision. This is to provide clarity to the structure of PAR 1469. Revisions were made to make clearer who is subject to the specific requirements in this subdivision.

Subparagraph (h)(2)(B), (C), and (D) have been modified to clarify that the requirements are only applicable to specific facilities permitted between 2007 to [Date of Adoption]. The term New Facility has been replaced by Recent Facility in rule language and the table. These requirements are retained for enforceability purposes in the event a Recent Facility has not met these requirements. The term New Facility has been replaced by Recent Facility in other relevant parts of the rule.

Subparagraph (h)(3) specifies the emission standards for tanks using a Trivalent Chromium Process. PAR 1469 was updated to align with Chrome ATCM where the emission standards are not limited to decorative purposes only but for any chrome plating using a Trivalent Chromium Process.

Paragraph (h)(6) has been modified to include an alternative ventilation velocity approved by the Executive Officer. During the development of Rule 1469 (2018) an acceptable capture velocity was either based on *Industrial Ventilation, A Manual of Recommended Practice for Design* or an alternate velocity approved by the Executive Officer. This compliance alternative was included in paragraph (k)(7), which established the source testing requirements for capture efficiency. However, this was not incorporated into paragraph (h)(6), which specified the appropriate capture velocity an air pollution control technique. PAR 1469 corrects this oversight and allows an alternative ventilation velocity under both (h)(6) and (k)(9).

Training and Certification – Subdivision (j)

Paragraph (j)(1) has been modified to remove training and certification requirements for new facilities which are now prohibited.

Source Test Requirements and Test Methods – Subdivision (k)

Subdivision (k) specifies the source testing related requirements for Tier II and Tier III Hexavalent Chromium Tanks to demonstrate compliance with the applicable emission limits. This includes the submission of a source test protocol with applicable methods and procedures to be approved by the South Coast AQMD. A source test is required to be conducted pursuant to the approved source test protocol to demonstrate compliance with the emission limit.

A footnote has been added to Table 3 to clarify that Functional Chrome Plating tanks would be subject to more stringent requirements that are specified in a later subdivision. This is to provide clarity to the structure of PAR 1469.

Paragraphs (k)(2) through (k)(4) have been added to incorporate the more stringent source testing requirements in the Chrome ATCM for facilities undergoing a modification (as defined by PAR 1469) or for Functional Chrome Plating facilities. This includes requirements for:

- Protocol submission;
- Addendum submission;
- Due date for the first source test to demonstrate meeting the new emission limit;
- Conducting the source test;

- Measurement and calculation of the emission rate; and
- Subsequent source test.

Facilities subject to existing Rule 1469 have been required to conduct a periodic source test to verify the emission limits. While PAR 1469 does not expand the type of sources that would be required to conduct a source, PAR 1469 modifies how to calculate the emission rate (this is further discussed later in discussion of subdivision (x)). To verify the source test, conducted no earlier than 2024, used to demonstrate compliance with the new applicable emission limit was conducted pursuant to the PAR 1469 subdivision (k), facilities would be required to submit an addendum that identifies the differences between the source test conducted to meet the new emissions limit and the most recently approved source test protocol. Based on the information, the Executive Officer may require the submission of a new or updated source test protocol. If the addendum demonstrates the source test conducted earlier meets the applicable requirements, no further action needs to be taken. If the conducted source test does not meet the requirements of PAR 1469 subdivision (k), the source test could not be used to demonstrate compliance with the more stringent emission limits.

For example, if a Functional Chrome Plating Facility's source test separately evaluated emissions from plating and non-plating Tier III Hexavalent Chromium Tanks connected to the same Add-on Air Pollution Control Device, this source test could not be used to meet the applicable source test requirements. The facility would need to submit a new protocol for approval and conduct the source test as required for Functional Chrome Plating facilities specified in subdivision (x).

A source test conducted in calendar year 2024 or 2025 could serve as the first source test if it was conducted consistent with the requirements of PAR 1469 and demonstrated to meet the more stringent emission limit. An emission screening test (one-run test) would not meet the requirements of the first source test.

Subsequent source tests are due every two calendar years for Functional Chrome Plating facilities. The following provides an example of a source testing schedule that would meet the requirements of both the initial and subsequent source test, provided no modifications are made to the equipment.

- 1st Source Test: February 1, 2025
- 2nd Source Test Due Date: December 31, 2027
- 3rd Source Test Due Date: December 31, 2029

A decorative electroplating facility that underwent a modification would be required to conduct a source test to demonstrate compliance with the more stringent emission limit but would not be subject to the subsequent source testing requirements of the new paragraph. However, decorative electroplating facilities are still subject to the retest schedule of once every 60 or 84 months as specified in Table 3 – Source Tests Schedules, found in paragraph (k)(1).

Paragraph (k)(6) has been modified to exclude a facility subject to subdivision (w) (modifications) or (x) (new Tier III Tank requirements) from utilizing an emission screening test to demonstrate

compliance with the applicable limit. This incorporates the more stringent requirement of the Chrome ATCM, which does not allow the use of an emission screening test. As subdivision (w) or (x) have specific effective dates, an emission screening test meeting the applicable requirements would be acceptable prior to the effective date. Decorative electroplating facilities could continue to conduct an emission screening test to demonstrate compliance with the applicable emission limit(s) in paragraph (h)(2) or (h)(4), unless they modify and are required to meet the requirements to subdivision (w).

Subparagraph (k)(7)(B) has been modified to require the submission of source test protocol if the Executive Officer requests an updated or new source test protocol. This is consistent with other recently adopted South Coast AQMD rules.

Wetting Agent Chemical Fume Suppressant Requirements – Subdivision (l)

The heading for subdivision (l) has been changed as the certification and approval process for certified chemical fume suppressants are conducted outside this rule.

Paragraphs (l)(4) through (l)(9) have been deleted as they are no longer needed. These paragraphs were relevant if South Coast AQMD decertified a chemical fume suppressant based on the evaluation of emissions of PFAS (per- and polyfluoroalkyl substances) commonly referred to as forever chemicals. Stakeholders were concerned with these emissions during the 2018 PAR 1469 rulemaking. U.S. EPA had already banned the use of PFOS (perfluorooctane sulfonate), a subgroup of PFAS. South Coast AQMD conducted an evaluation of the PFAS emissions, finding the emissions of PFAS to be low. These results were presented to the South Coast AQMD Governing Board during the November 2019 Stationary Source Committee.[10] As a result, no chemical fume suppressants were removed from certification. Emissions of PFAS are expected to decrease with the staggered phase out of the use of Hexavalent Chromium for both Decorative Chromium Electroplating and Functional Chrome Plating operations that use chemical fume suppressants containing PFAS to comply with emission limits for Hexavalent Chromium.

Parameter Monitoring – Subdivision (m)

Subdivision (m) includes parameter monitoring requirements for add-on air pollution devices and add-on non-ventilated air pollution control devices. Parameter monitoring verifies that both the capture of emissions and operation of the control devices are working as designed in between source tests. The Chrome ATCM requires more frequent source tests and did not add the parameter monitoring requirements from Rule 1469. PAR 1469 retains the parameter monitoring requirements, but makes the following modifications:

- Monitoring frequency for air velocities at collection slots measurements (slot velocity) and push air manifold pressure at Functional Chrome Facilities

- Procedures to monitor air velocities at collection slots

[10] South Coast AQMD. (2019). NOVEMBER STATIONARY SOURCE COMMITTEE MEETING – Item #4. https://www.aqmd.gov/docs/default-source/agendas/ssc/ssc-agenda-11-15-19.pdf?sfvrsn=6cd4c561_16

PAR 1469 has modified the parameter monitoring schedule to assess slot velocity and push air pressure to be based on the most recent source test date as both parametric measurements are also conducted as part of the source tests. Additionally, the parameter monitoring frequency for slot velocities and push air pressure measurements were modified from once every 180 days to once every 365 days. The modification to the parameter monitoring schedule for slot velocities and push air pressure measurements was due to an increase in source test frequency and a determination that an evaluation every 365 days was sufficient for facilities that conduct source tests every two years (i.e., Functional Chrome Plating facilities). The frequency of conducting a smoke test remains unchanged to retain a periodic evaluation of capture efficiency to ensure emissions are being captured and vented to control equipment. All other parametric monitoring requirements remain in place to ensure pollution control equipment are operated in compliance to control hexavalent chromium emissions between source tests.

Decorative Chrome Plating parameter monitoring frequency remains unchanged.

Footnotes have been added to Table 5 to clarify the location where slot velocity measurements and pressure measurements would occur and to clearly state that alternative slot velocities less than 2,000 fpm would be based on the most recently approved source test report.

For example, if the approved source test report showed that the equipment met the emission limit at 1,800 fpm, then a measurement of at least 1,710 fpm (i.e., 95%) would be the acceptable measurement. Additionally, the source test report may indicate that an alternative velocity would be allowed due to the control configuration (e.g., a pull-pull system).

Inspection, Operation, and Maintenance Requirements – Subdivision (n)

Paragraph (n)(5) has been modified to specify the requirement to maintain an operation and maintenance plan that reflects the current operation. Rule 1469 did not specify when the operation and maintenance plan would be required to be prepared. PAR 1469 clarifies the requirement by requiring the operation and maintenance to be maintained (updated and kept current). This incorporates the updating requirements from former paragraph (n)(9).

Paragraph (n)(8) has been modified to specify how changes to the operation and maintenance plan would be documented: Changes would now be incorporated into a revised plan instead of in an addendum.

Paragraph (n)(9) (amended operations and maintenance plan) has been deleted as the requirements have been incorporated into paragraph (n)(5) (operation and maintenance plan).

Recordkeeping – Subdivision (o)

Subdivision (o) requires that records are maintained to demonstrate compliance with requirements from other subdivisions of this rule such as emission limits, parameter monitoring, inspections, and maintenance.

Paragraph (o)(12) has been added to specify how to demonstrate the first rinse tank following a tiered tank is not a Tier I, Tier II, or Tier III Hexavalent Chromium Tank. Rule 1426 has a similar process to exempt a rinse tank from certain housekeeping requirements.

Rinse tanks that follow process tanks will gradually accumulate metals from the process tank solution still adhering to the parts or equipment. As discussed in Chapter 1, rinse tanks may be static (no automatic addition of water, no treatment of water to remove metals) where the metal concentration can build up or be part of the counter-flow system/counter-flow rinsing. Counter-flow rinsing is the process of utilizing multiple rinse tanks connected in series. Fresh water flows into the rinse tank located furthest from the process tank and overflows, in turn, to the rinse tanks closer to the process tank. This technique is called counter-flow rinsing because the work piece and the rinse water move in opposite directions. Over time, the first rinse becomes increasingly contaminated with drag-out. The second rinse tank has a lower concentration of hexavalent chromium compared to the first rinse tank. The more counter-flow rinse tanks, the lower the water flow needed for adequate removal of the process solution.

A rinse tank that is designed to be continuously refreshed or connected to an on-site water treatment system where the metals are removed would also be exempt from laboratory analysis of its tank solution. As the concentration may vary, periodic analysis of the tank solution or records of tank solution change-outs (e.g., photographs or work orders) may also be used to exempt a first rinse tank from the requirement of laboratory analysis of its tank solution. In general, since rinse tanks accumulate metals slower than stripping, etch, or electropolish tanks, the tank solution change out or testing interval required is at least once every 12 calendar months. However, if the hexavalent chromium concentration of the rinse tank increases where the rinse tank meets the definition of a Tier I, Tier II, or Tier III Hexavalent Chromium Tank, the rinse tank would still be subject to the respective requirements regardless of the preventative maintenance undertaken.

The first rinse tank is the rinse tank that would rinse the part after it has been treated in a Tier I, Tier II, or Tier III Hexavalent Chromium Tank. An assessment of subsequent rinse tanks would not be required as the potential accumulation of hexavalent chromium would be highest from the first rinse tank. If a rinse tank is a Tier I Hexavalent Chromium Tank, the subsequent rinse tank would be considered the first rinse tank, as it the first rinse tank following a Tier I Hexavalent Chromium Tank. South Coast AQMD may collect a sample of any tank to verify the concentration of hexavalent chromium to determine the applicable requirements.

Paragraph (o)(13) has been modified to clarify that the most recent source test is required to be kept on site, even if it is more than two years old. Most South Coast AQMD rules require records be kept on site for two years and maintained for five years. However, there are some source tests that may have been conducted more than five years ago (i.e., decorative chrome tank on 84-month schedules). PAR 1469 modifies the requirement to assist the owner, operator and South Coast AQMD verify the compliance status of various requirements by having the most recent source test of the applicable equipment on-site.

Reporting to Meet the Requirements of Rule 1469 – Subdivision (p)

Subdivision (p) specifies the reporting required to demonstrate compliance with Rule 1469 requirements. Other equipment or operations at the facility that are not related to chrome plating

would not be subject to the reporting requirements in PAR 1469. For example, paint coatings used for a paint spray booth independent from chrome plating would not be subject to PAR 1469 but may be subject to other rules for VOCs or other toxics. The title for this subdivision was revised to clarify the intent.

Subparagraph (p)(1)(A) has been modified to change the notification to the Executive Officer from 60 days to 14 days for a scheduled source test. This change still provides sufficient notice to the Executive Officer while allowing facilities additional flexibility as they can schedule source tests 14 days instead of 60 days ahead with their source testing contractors. This schedule is consistent with other South Coast AQMD recent rules. Notifications should be emailed to sourcetesting@aqmd.gov and should include the facility's South Coast AQMD ID number, date and time of scheduled source test, what permitted equipment will be tested, and contact information in case there are questions.

Subparagraph (p)(5)(A) has been modified to include additional information required by the Chrome ATCM that accompanies the initial reporting requirements for facilities that begin operations of tanks using a Trivalent Chromium Process.

Exemptions – Subdivision (r)

Subdivision (r) specifies exemptions for facilities or equipment subject to this rule from specific requirements of this rule.

Paragraph (r)(3) has been added to provide exemptions for roof openings during the installation of air pollution control equipment. This exemption incorporates the requirements specified in Rule paragraph (e)(9) which has been removed. The exemption limits the duration a temporary opening would be excluded from building enclosure requirements. This is to prevent circumvention of subdivision (e) (building enclosure requirements).

Paragraphs (r)(4), (r)(5), and (r)(6) have been added to exempt tanks subject to more stringent requirements from the existing requirements in Rule 1469.

Paragraph (r)(7) has been added to exempt facilities that have tanks using trivalent chromium process and do not have any Tier I, II, or III Hexavalent Chromium Tanks from housekeeping requirements intended to address material containing hexavalent chromium.

Conditional Requirements for Permanent Total Enclosure – Subdivision (t)

Subparagraph (t)(1)(A) has been modified to include references to the source test requirements of newly added paragraphs (k)(2) and (k)(3) for functional chrome plating facilities to meet the new emission requirements.

Phase out of Use of Hexavalent Chromium for Chromium Electroplating and Chromic Acid Anodizing Operations – Subdivision (v)

This subdivision has been added to implement the phase out of the use of hexavalent chromium required by the Chrome ATCM. This does not include the incidental formation of hexavalent chromium as a byproduct during plating or anodizing using trivalent chromium.

Paragraph (v)(1) prohibits new facilities conducting chromium electroplating or chromic acid anodizing using hexavalent chromium. This does not affect facilities that have permitted (i.e., permit to construct or permit to operate) equipment that uses hexavalent chromium for chromium electroplating or chromic acid anodizing.

Paragraph (v)(2) incorporates the Chrome ATCM requirement to phase out the use of hexavalent chromium for decorative chromium electroplating by January 1, 2030. The Chrome ATCM phases out the use of hexavalent chromium for decorative chromium electroplating by January 1, 2027, but allows for a longer phase out date (January 1, 2030), for facilities meeting building enclosure requirements. Rule 1469 requires facilities to meet building enclosure requirements currently. Therefore, it is appropriate to use the later phase out date for facilities within South Coast AQMD. A facility that violates building enclosure requirements would be in violation of the respective requirement, but would not be subject to a different phase-out date.

For facilities switching to non-hexavalent alternatives, the Chrome ATCM allows for an extension for the use of hexavalent chromium if the alternative technology takes additional time to procure or install. PAR 1469 allows for facilities to extend the use of hexavalent chromium from one year after the issuance of a permit to construct for the alternative equipment (up to January 1, 2031) if certain criteria are met. Facilities that are not replacing the decorative chromium electroplating tanks using hexavalent chromium with an alternative technology, such as trivalent chromium, would not be eligible for this extension.

A facility issued a permit to construct after January 1, 2029, would be eligible for an alternative phase out date to phase out from the use of hexavalent chromium, provided a complete application was submitted and notification was made to the Executive Officer in a timely manner. Further documentation is not required for an alternative phase out date to phase out from the use of hexavalent chromium.

A facility would be eligible for an alternative phase out date to phase out from the use of hexavalent chromium regardless to when the permit construct was issued, provided an extension to permit to construct was granted due to delays in implementing the alternative equipment.

A facility could use both compliance pathways. For example, if a facility has a permit to construct issued on July 29, 2029, for alternative technology, provided timely submissions are made, would be eligible for an alternative phase out date of one year from the issuance of the permit to construct at the latest. If the permit to construct is extended beyond the one year, then the phase out date could be delayed, provided the extension was due to delays in implementing the alternative equipment.

Paragraph (v)(3) incorporates the Chrome ATCM requirement to phase out the use of hexavalent chromium for functional chromium electroplating after January 1, 2039. The phase-out is dependent on two technology reviews. PAR 1469 references the Chrome ATCM in the event the date of the phase out is updated in the future. If a phase out is not required by the Chrome ATCM, PAR 1469 would not require a phase out of Hexavalent Chromium for the purposes of functional chrome plating.

Requirements for Facilities Undergoing Modifications – Subdivision (w)

This subdivision has been added to implement the requirements for any facility undergoing a Modification, as defined in subdivision (c), on or after January 1, 2024. This amendment incorporates the more stringent requirements of the Chrome ATCM for facilities that undergo a modification. This requirement is applicable to any facility that conducts a modification of a chromium electroplating tank using Hexavalent Chromium or chromic acid anodizing tank. Demonstration of the emission limit would be made with a source test conducted to meet the requirements of paragraph (k)(4). Periodic source tests every two calendar years would be required for functional chrome plating facilities while decorative chrome facilities would continue to follow the 60 or 84 month schedule specified in Table 3 of paragraph (k)(1).

New Requirements for Tier III Hexavalent Chromium Tanks at Functional Chrome Plating Facilities Beginning January 1, 2026 – Subdivision (x)

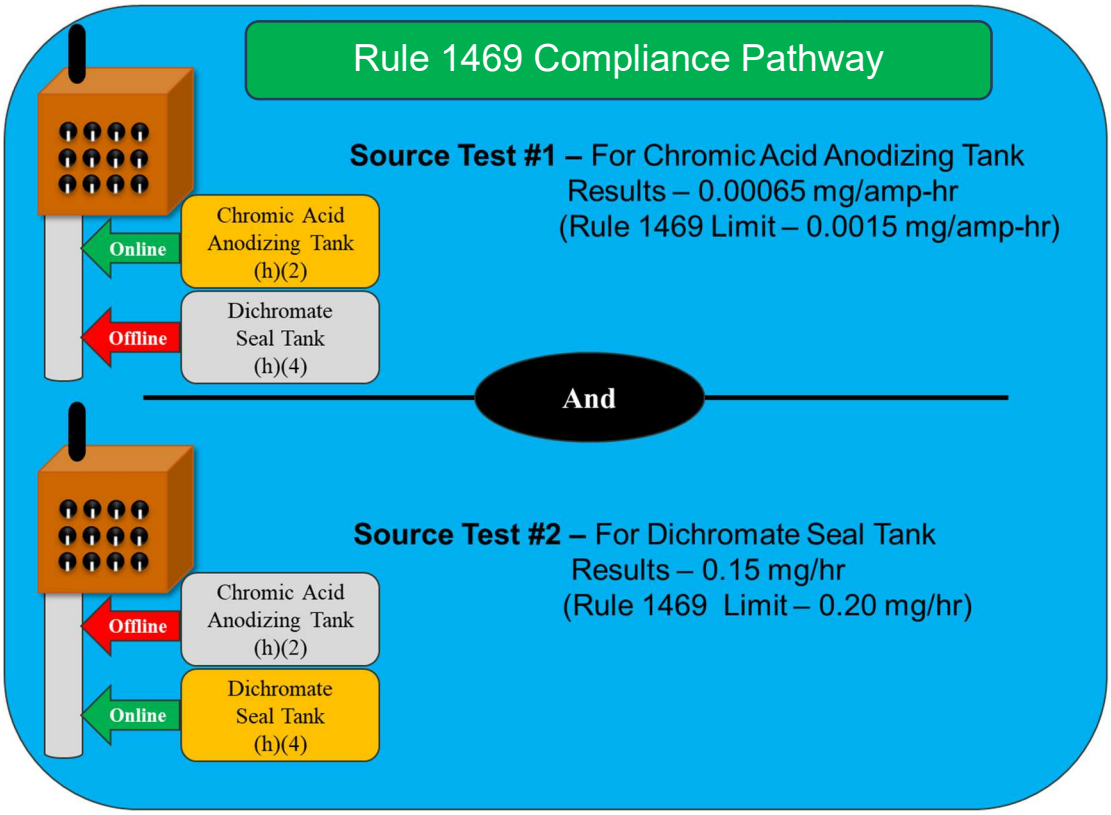
This subdivision has been added to implement the new requirements for Tier III Hexavalent Chromium Tanks at Functional Chrome Plating facilities. This amendment incorporates the more stringent requirements of the Chrome ATCM for this type of equipment.

Paragraph (x)(1) specifies the emission limit for chromium electroplating tanks using Hexavalent Chromium and chromic acid anodizing tanks. Demonstration of the emission limit would be through source test(s) conducted to meet the requirements of paragraph (k)(2). A tank used for both functional and decorative plating would be subject to these requirements, but a tank used exclusively for decorative plating using Hexavalent Chromium would not be subject to these requirements.

Paragraph (x)(2) specifies the emission limits for Tier III Hexavalent Chromium Tanks that are not subject to the requirements of paragraph (x)(1), such as chromium electroplating tanks using Hexavalent Chromium and chromic acid anodizing tanks. Demonstration of the emission limit would be made with the source test(s) pursuant to the requirements of paragraph (k)(2).

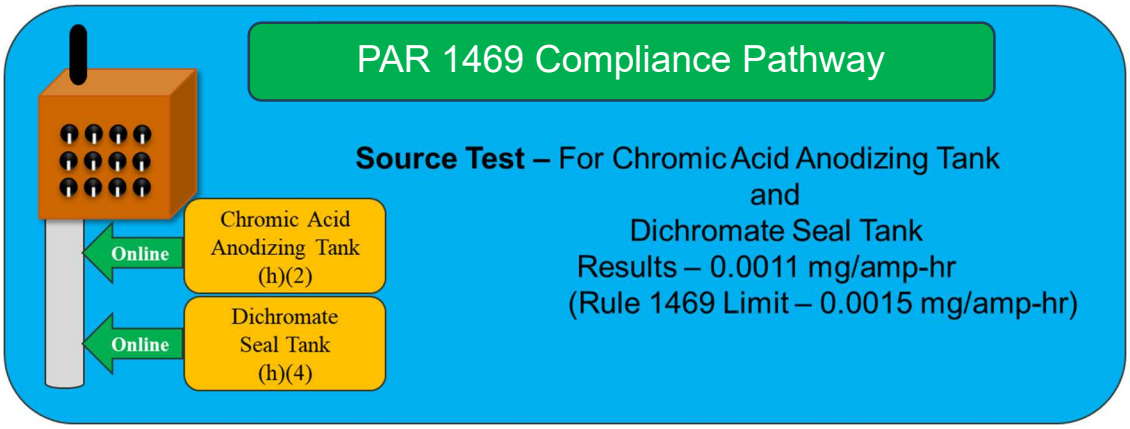
Paragraph (x)(2) lists different emission limits depending on the type of Tier III Hexavalent Chromium Tanks, and size and configuration of air pollution control device. Subparagraph (x)(2)(A) is for Tier III Hexavalent Chromium Tanks vented to the same air pollution control device as a chromium electroplating tank using Hexavalent Chromium or a chromic acid anodizing tank. While existing Rule 1469 allowed separate source tests for tanks subject to the emission limits specified in paragraphs (h)(2) and (h)(4). Figure 2-3 below shows an example how a facility with a single chrome plating tank (chromic acid anodizing tank) and a single Tier III non-plating tank (dichromate seal tank) controlled by the same air pollution control device currently could conduct two separate source tests to comply with Rule 1469.

Figure 2-3 – Example How Facility Could Conduct Source Tests Separately to Demonstrate Compliance with Existing Rule 1469



PAR 1469 would require the emission limit be based on all Tier III Hexavalent Chromium Tanks (and any Tier II electing to meet Tier III requirements by controlling emissions using air pollution control equipment) controlled by the shared add-on air pollution control device per the ATCM. Figure 2-4 below shows an example of how a source test must be conducted to comply with PAR 1469 in the same tank and air pollution control configuration as Figure 2-4.

Figure 2-4 – Example of PAR 1469 Compliance Pathway for a Tier III Tank Vented to Same Control as a Chrome Plating Tank

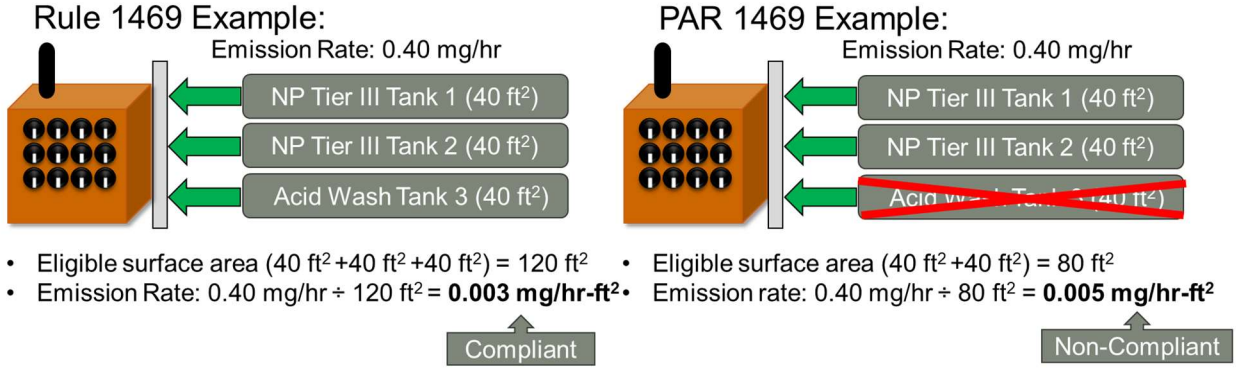


Rule 1469 also allows the compliance pathway shown in Figure 2-4 with a single source test (or sum up emission rates from multiple source tests) to demonstrate compliance with a single emissions limit. PAR 1469 only allows this compliance pathway. While PAR 1469 would result in fewer compliance pathways and a lower emission limit, an evaluation of source tests of Tier III Hexavalent Chromium Tanks subject to this requirement indicated that a minimal number of facilities may be impacted by this modification as most facilities conducted a source test consistent with Figure 2-4.

Subparagraphs (x)(2)(B) and (x)(2)(C) specifies the emission limits for Tier III Hexavalent Chromium Tank that is not vented to the same air pollution control device as a chromium electroplating tank using Hexavalent Chromium or a chromic acid anodizing tank, depending on the ventilation rate of the air pollution control equipment based on the manufacturer's specifications submitted to the South Coast AQMD. This information is included during the permitting process for evaluation and typically incorporated into the permit to operate for air pollution control equipment.

PAR 1469 and Rule 1469 has the same emission limit for a Tier III Hexavalent Chromium Tanks, excluding a Functional Chromium Plating Tank, equipped with air pollution control device with a maximum exhaust rate greater than 5,000 cubic feet per minute. However, the emission limit is calculated differently in PAR 1469. Rule 1469 bases the emission limit on the surface area of the tanks required to be controlled, which can include non-Hexavalent Chromium tanks such tanks as nitric acid or sulfuric acid tanks. PAR 1469 and the Chrome ATCM bases the emission limit only on the surface area of Tier II or Tier III Hexavalent Chromium Tanks controlled by the add-on air pollution control device. Figure 2-5 below illustrates a scenario where the emission rate of equipment would increase due to the exclusion of surface area from previously included tanks.

Figure 2-5 – Rule 1469 vs. PAR 1469 Calculations on Square Footage for Air Pollution Control Device with Exhaust Rate Greater than 5,000 Cubic Feet per Minute



Permits to Operate Subject to Emission Limit Requirements in Subdivision (x) – Subdivision (y)

Subdivision (y) has been added to ensure that the permit conditions, for equipment subject to the lower emission limit in PAR 1469, reflect the more stringent emission limit. As discussed, the Chrome ATCM established a new lower emission limit for functional chrome plating facilities. To implement this new requirement, PAR 1469 requires a permit update to reflect the new rule

requirements. This would include an engineering evaluation to verify compliance with the new lower emission limit. Fees would be assessed at rates consistent with Rule 301 – Permitting and Associated Fees.

Appendices

As discussed earlier, minor corrections have been made throughout the appendices for capitalization and references. The following provides an overview of the substantive edits made to the appendices.

Appendix 4 – Table 4-2 Additional Inspection and Maintenance Requirements of Tier I, Tier II, and III Hexavalent Chromium Tank(s)

Table 4-2 has been amended to exclude Tier I Hexavalent Chromium Tanks that do not have a heating element (e.g., burner, electrical heat coil) and not permitted to have a heating element from being required to install a temperature gauge. Temperature gauges are required on Tier I, Tier II, and Tier III Hexavalent Chromium Tanks, in order to verify the temperature of the tank. If a facility installs a heating element for Tier I Hexavalent Chromium Tank, the tank would no longer be eligible for this exclusion. In addition, a Tier I Hexavalent Chromium Tank may become a Tier II or Tier III Hexavalent Chromium Tank if heated above a certain temperature. Additionally, the frequency for slot velocity and push air measurements beginning [date of adoption] at Functional Chrome Plating facilities was added to align with amendments in subparagraph (m)(1)(B).

Inspection and maintenance requirements have been updated to reflect the applicable changes in requirements discussed throughout this chapter.

Appendix 8 – Smoke Test to Demonstrate Capture Efficiency for an Add-on Air Pollution Control Device(s) Pursuant to Paragraph (k)(9)

This appendix has been amended to allow a smoke test to be conducted using an alternative number of points, provided this alternative method is consistent with the most recently approved source test protocol. Due to the variety of sizes of a tank, the twelve-point matrix may not be necessary for a tank with a small surface area, where the measurement points would be minimally spaced apart. Consistent with other recent toxic rules, PAR 1469 would allow an appropriate alternate measurement procedure that has been reviewed and approved by South Coast AQMD. The evaluation and approval would occur during the assessment of a source test protocol for the tank. If an alternate measurement procedure is approved, the owner or operator may use either the specified twelve-point matrix or the alternate measurement procedure.

Appendix 10 – Tier II and Tier III Hexavalent Chromium Tank Thresholds

This appendix has been amended to reflect the new emission limits referenced in paragraph (x)(2). Item #4 requirements for hexavalent chromium concentration include clarification of verification options similar to the options available to verify the concentration of a rinse tank (discussed earlier).

Appendix 11 – Implementation Schedule

This appendix has been amended to reflect the implementation schedule of the new requirements required by the ATCM in paragraph (g)(1).

CHAPTER 3 – IMPACT ASSESSMENT

AFFECTED SOURCES

Based on South Coast AQMD permit database, and internet searches, there are a total of 72 facilities that conduct decorative chrome plating, hard chrome plating, or chromic acid anodizing.

EMISSIONS IMPACT

Impacts from Building Enclosure, Best Management Practices, and Enhanced Housekeeping

Based on an evaluation of best available information for facilities, all facilities subject to Rule 1469 already implemented practices and measures to reduce fugitive emissions of hexavalent chromium in the Chrome ATCM using building enclosure, best management practices, and enhanced housekeeping. PAR 1469 further clarifies the allowed methods to meet these requirements and actions needed to prevent the generation of fugitive emissions. By specifying the allowed methods, a decrease in fugitive emissions should occur as practices that may have led to generating more fugitive emissions are prohibited. While these provisions are intended to reduce fugitive emissions, quantifying the fugitive source emission reductions associated with these provisions is difficult as there are no source tests or other ways to measure the reductions. Monitoring data included in the 2018 Rule 1469 Final Staff Report demonstrated that ambient air concentrations of metals are reduced after the implementation of similar measures.

Impacts from Facility Modification

Functional Chrome Facilities would be subject to the same stringent emission limits if they elected to modify their operations or not. Discussion on Functional Chrome Facilities emission impacts is below.

Decorative Chrome Facilities using Hexavalent Chromium would be subject to the more stringent emission limits if they elected to modify their operations. It is not feasible to estimate the number of facilities that would elect to modify their operations. However, as Decorative Chrome Facilities using Hexavalent Chromium would be subject to a phase-out effective as earlier as January 1, 2030, it is unlikely for a Decorative Chrome Facility using Hexavalent Chromium to undergo a modification. No emission reduction is quantified from these requirements.

Impacts from More Stringent Emission Limit for Functional Chrome Facility

Despite requiring functional chrome tanks to meet a more stringent emission limit of 0.00075 mg/amp-hr compared to the current Rule 1469 emission limit of 0.0015 mg/amp-hr (or 0.0011 mg/amp-hr for facilities that begun operations after October 24, 2007, and before the anticipated date of rule adoption), all of these facilities are expected to comply without the need to modify or install additional control equipment based on evaluation of available source test records and feedback from affected facilities. As it is expected that all facilities will be able to meet the more stringent emission limit of 0.00075 mg/amp-hr without modification to control equipment, no emission reduction is expected.

Phase Out of Use of Hexavalent Chromium at Decorative Chrome and Functional Chrome Facilities

By 2030, 26 decorative chromium electroplating facilities would be required to phase out their use of hexavalent chromium for decorative chromium electroplating. Assuming no change to the Chrome ATCM phase out date for functional chrome by 2039, 42 facilities would be required to phase out the use of hexavalent chromium for hard chromium electroplating and chromic acid

anodizing operations by 2039. Table 3-1 shows the distribution of affected facilities by county. Four facilities are excluded from Table 3-1 because they only use trivalent chromium for decorative electroplating.

Estimated emission reductions of hexavalent chromium from the phase out of its use for both decorative and functional chrome were calculated based on CARB data for all affected facilities in California. There were 51 decorative and 62 functional chrome plating facilities required to phase out hexavalent chromium in California that were identified by CARB on *Table IX.4 Approximate Number of Facilities by Type* in the Initial Statement of Reasons (staff report).[9] There are 26 decorative chrome plating facilities in South Coast AQMD comprising 51% of those in California. There are 42 functional chrome plating facilities in South Coast AQMD comprising 67.7% of those in California. Table 3-1 shows the distribution of affected facilities by county.

Table 3-1 - Number of Facilities Phasing Out Hexavalent Chromium by County

County	Phase Out of Use of Hexavalent Chromium	
	Decorative Chromium Electroplating Facilities by January 1, 2030	Functional Chrome Plating Facilities by January 1, 2039*
Los Angeles	18	30
Orange	7	11
Riverside	1	1
San Bernardino	0	0
Total	**26**	**42**

* Two technology assessments by CARB staff to be completed by 2032 and 2036, based on these reviews, CARB staff may recommend amendments to the phase out dates

The staff report for CARB Chrome ATCM,[9] included an estimation on the annual emission reductions for the entire state summarized below:

- Decorative chrome plating – 1.3 lbs/year
- Functional chrome plating – 8.8 lbs/year

Based upon CARB's estimated reductions and the share of facilities located in South Coast AQMD, it is estimated a maximum reduction of 0.66 lbs/year of hexavalent chromium (1.3 lbs/year x 51% located in South Coast AQMD) could be achieved from the phase out of decorative chrome plating.

For functional chrome plating, based upon CARB's estimated reductions of hexavalent chromium from the phase out for the functional chrome plating operations and the share of facilities located in South Coast AQMD, it is estimated there would be a reduction 5.9 lbs/year (8.8 lbs/year x 67.7%) located in South Coast AQMD) due to the phase out for functional chrome plating.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

Pursuant to the California Environmental Quality Act (CEQA) Guidelines Sections 15002(k) and 15061, the proposed project (PAR 1469) is exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3). A Notice of Exemption will be prepared pursuant to CEQA Guidelines Section 15062, and if the proposed project is approved, the Notice of Exemption will be filed with the county clerks of Los Angeles, Orange, Riverside, and San Bernardino counties, and with the State Clearinghouse of the Governor's Office of Land Use and Climate Innovation.

SOCIOECONOMIC IMPACT ASSESSMENT

On March 17, 1989, the South Coast Air Quality Management District (South Coast AQMD) Governing Board adopted a resolution which requires an analysis of the socioeconomic impacts associated with adopting and amending rules and regulations. In addition, Health and Safety Code Sections 40440.8 and 40728.5 require a socioeconomic impact assessment for proposed and amended rules resulting in significant impacts to air quality or emission limitations. Thus, this Socioeconomic Impact Assessment has been prepared in accordance with Health and Safety Code and South Coast AQMD Governing Board requirements. Lastly, Health and Safety Code Section 40920.6 requires an incremental cost-effectiveness analysis for a proposed rule or amendment which imposes Best Available Retrofit Control Technology (BARCT) or "all feasible measures" requirements relating to emissions of ozone, carbon monoxide (CO), sulfur oxides (SOx), nitrogen oxides (NOx), volatile organic compounds (VOC), and their precursors. Because the focus of PAR 1469 is to control and reduce emissions of hexavalent chromium, a toxic air contaminant, and not criteria pollutants or their precursors, a cost-effectiveness analysis is not required and has not been prepared.

Introduction

Rule 1469 addresses hexavalent chromium emissions from chromium electroplating and chromic acid anodizing operations. Health and Safety Code Section 39666 mandates the South Coast AQMD to implement CARB's ATCMs or adopt equally effective or even more stringent rules. In 2023, CARB amended the Chrome ATCM to phase out the use of hexavalent chromium in decorative and functional chrome plating operations and PAR 1469 aims to incorporate its more stringent requirements accordingly. Additionally, PAR 1469 includes clarifications for existing requirements, changes to source test document submittal deadlines, a new best management practice, and procedures that assist in rule implementation. Upon full implementation, PAR 1469 is projected to reduce hexavalent chromium emissions by approximately 6.56 pounds per year, based on CARB's annual emission reduction estimates.

Because CARB previously analyzed the compliance costs associated with implementing the requirements in the Chrome ATCM in its Standardized Regulatory Impact Assessment (SRIA) and Staff Report: Initial Statement of Reasons (ISOR)[11,12], this Socioeconomic Impact Assessment analyzes a range of probable compliance costs of implementing only the new provisions in PAR 1469 which are not related to the Chrome ATCM for the affected facilities and industries, including small-businesses. It is important to note, however, that for some provisions taken directly from the

[11] California Air Resources Board. (2022). Standardized Regulatory Impact Analysis. https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2023/chromeatcm2023/isor_appc-1.pdf.

[12] California Air Resources Board. (2022). Staff Report: Initial Statement of Reasons.https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2023/chromeatcm2023/isor.pdf.

Chrome ATCM and included in PAR 1469, such as the permit requirements set forth in subdivision (y) and the hexavalent chromium-containing waste material storage requirements set forth in paragraph (f)(5) of PAR 1469, the compliance costs for these specific provisions were not delineated from the overall cost analysis in CARB's SRIA and ISOR for the Chrome ATCM. Thus, while CARB already accounted for these costs when adopting the Chrome ATCM, for informational purposes, this Socioeconomic Impact Assessment also includes and analyzes the portion of the compliance costs that are attributable to the Chrome ATCM which are incorporated into PAR 1469.

Legislative Mandates

The legal mandates directly related to the Socioeconomic Impact Assessment of PAR 1469 include South Coast AQMD Governing Board resolutions and various sections of the Health and Safety Code.

South Coast AQMD Governing Board Resolution

On March 17, 1989, the South Coast AQMD Governing Board adopted a resolution that requires an analysis of the economic impacts associated with adopting and amending rules and regulations which consider all of the following elements:

- Affected industries;
- Range of probable costs;
- Cost-effectiveness of control alternatives; and
- Public health benefits.

Health and Safety Code Requirements

The state legislature adopted legislation which reinforces and expands the South Coast AQMD Governing Board resolution requiring socioeconomic impact assessments for rule development projects. Health and Safety Code Section 40440.8 requires a socioeconomic impact assessment for any proposed rule, rule amendment, or rule repeal which "will significantly affect air quality or emissions limitations."

To satisfy the requirements in Health and Safety Code Section 40440.8, the scope of the analysis should include all of the following information:

- Type of affected industries;
- Impact on employment and the regional economy;
- Range of probable costs, including those to industry;
- Availability and cost-effectiveness of alternatives to the rule;
- Emission reduction potential; and
- Necessity of adopting, amending, or repealing the rule in order to attain state and federal ambient air quality standards.

However, since the focus of PAR 1469 is to reduce emissions of hexavalent chromium emission, a toxic air contaminant, a cost-effectiveness analysis was not conducted because it is not required by Health and Safety Code Section 40440.8. Additionally, the estimated annual cost of PAR 1469 is less than one million dollars, which is less than the threshold at which the macroeconomic

modeling tool provides reliable employment impact estimates. Therefore, a job impact analysis was not conducted.

Health and Safety Code Section 40728.5 requires the South Coast AQMD Governing Board to: 1) actively consider the socioeconomic impacts of regulations; 2) make a good faith effort to minimize adverse socioeconomic impacts; and 3) include small business impacts. To satisfy the requirements in Health and Safety Code Section 40728.5, the socioeconomic impact assessment should include the following information:

- Type of industries or business affected, including small businesses; and
- Range of probable costs, including costs to industry or business, including small business.

Finally, Health and Safety Code Section 40920.6 requires an incremental cost-effectiveness analysis for a proposed rule or amendment which imposes BARCT or "all feasible measures" requirements relating to emissions of ozone, CO, SOx, NOx, VOC, and their precursors. Because the focus of PAR 1469 is to control and reduce emissions of hexavalent chromium, a toxic air contaminant, and not criteria pollutants or their precursors, a cost-effectiveness analysis is not required and has not been prepared.

Affected Facilities and Industries

Implementation of PAR 1469 would affect approximately 72 facilities in the South Coast AQMD jurisdiction with 51 facilities in Los Angeles County, 19 facilities in Orange County, two facilities in Riverside County and zero facilities in San Bernardino County. Table 3-2 presents the distribution of the affected facilities across various industrial sectors under the North American Industrial Classification System (NAICS). As summarized in the table, 92 percent of the affected facilities are from the Fabricated Metal Product Manufacturing industry (NAICS 332), followed by six percent of the facilities from the Transportation Equipment Manufacturing industry (NAICS 336). Other affected industries include Computer and Electronic Product Manufacturing (NAICS 334) and Repair and Maintenance (NAICS 811), each accounting for roughly one percent of the affected facilities.

Table 3-2 - Affected Facilities by Industry

NAICS	Industry Name	Number of Facilities	Percentage of Facilities
332	Fabricated metal product manufacturing	66	92%
336	Transportation Equipment Manufacturing	4	6%
334	Computer and Electronic Product Manufacturing	1	1%
811	Repair and maintenance	1	1%
Total		**72**	**100%**

Small Business Analysis

The South Coast AQMD defines a "small business" in Rule 102 for purposes of fees as one which employs 10 or fewer persons and which earns less than $500,000 in gross annual receipts. The

South Coast AQMD also defines "small business" for the purpose of qualifying for access to services from the South Coast AQMD's Small Business Assistance Office as a business with an annual receipt of $5 million or less, or with 100 or fewer employees. In addition to the South Coast AQMD's definition of a small business, the United States (U.S.) Small Business Administration and the federal 1990 Clean Air Act Amendments (1990 CAAA) each have their own definition of a small business.

The 1990 CAAA classifies a business as a "small business stationary source" if it: 1) employs 100 or fewer employees; 2) does not emit more than 10 tons per year of either VOC or NOx; and 3) is a small business as defined by the U.S. Small Business Administration. Based on firm revenue and employee count, the U.S. Small Business Administration definition of a small business varies by six-digit NAICS codes.[13] The majority of facilities affected by PAR 1469 are within the Electroplating, Plating, Polishing, Anodizing and Coloring industry (NAICS 332813). According to the U.S. Small Business Administration, businesses in this industry with fewer than 500 employees are classified as small businesses.

South Coast AQMD mostly relies on Dun and Bradstreet data to conduct small business analyses for private companies. In cases where the Dun and Bradstreet data are unavailable or unreliable, other external data sources such as Manta, Hoover, LinkedIn, and company website data will be used. The determination of data reliability is based on data quality confidence codes in the Dun and Bradstreet data as well as staff's discretion. Revenue and employee data for publicly owned companies are gathered from Securities and Exchange Commission (SEC) filings. Since subsidiaries under the same parent company are interest-dependent, the revenue and employee data of a facility's parent company will be used for the determination of its small business status.

Employment and revenue estimates from 2024 Dun and Bradstreet data as well as other external sources are available for 71 of the 72 affected facilities. Note that although the employment and revenue data for some facilities are unknown or missing, the current data used for this small business analysis represents the most thorough and accurate information obtainable as of the date of this Draft Staff Report. Table 3-3 presents the number of affected facilities that qualify as small businesses, based on each of the four small business definitions. For the 71 facilities with available employment and revenue data, up to 68 of them may qualify as small businesses. Note that only 39 of the 71 facilities have reported their annual VOC or NOx emissions to South Coast AQMD, of which 27 facilities qualify as small businesses, based on the 1990 CAAA definition.

Table 3-3 - Number of Small Business Based on Various Definitions

Small Business Definition	Number of Facilities
South Coast AQMD Rule 102	12
South Coast AQMD Small Business Assistance Office	61
U.S. Small Business Administration	68
1990 CAAA	27

[13] U.S. Small Business Administration. (2023). Small Business Size Standards. https://www.sba.gov/document/support-table-size-standards.

Compliance Costs

CARB's SRIA for the Chrome ATCM conducted a detailed cost analysis for the phase out of hexavalent chromium, including trivalent chromium equipment and installation, hazardous waste disposal, permit application, source testing, operation and maintenance (O&M) for this equipment. It is important to note, however, that for some provisions taken directly from the Chrome ATCM and included in PAR 1469, such as the permit requirements set forth in subdivision (y) and the hexavalent chromium-containing waste material storage requirements set forth in paragraph (f)(5) of PAR 1469, the compliance costs for these specific provisions were not delineated from the overall cost analysis in CARB's SRIA and ISOR for the Chrome ATCM. While the Chrome ATCM includes requirements for both permit fees and the storage of hexavalent chromium-containing waste, these costs in the SRIA and ISOR are generally described without providing specific values by air district.

In particular to PAR 1469, 42 functional chrome plating facilities will be required to pay one-time permit application fees in order to update their permits to reflect revised emission limits. Additionally, all 42 functional chrome plating facilities and 26 decorative chrome plating facilities will be required to store hexavalent chromium-containing waste in a designated storage area to prevent spills and other accidental releases, which may be achieved through enclosed storage equipment or physical barriers within a building enclosure.

Thus, while CARB already accounted for these costs when adopting the Chrome ATCM, for informational purposes, this Socioeconomic Impact Assessment also includes and analyzes the portion of the compliance costs that are attributable to the Chrome ATCM which are incorporated into PAR 1469.

The following sections present the estimated one-time permit application costs, waste storage equipment-related costs, and total compliance costs related to these requirements for PAR 1469, as well as new requirements that are not in the Chrome ATCM that may result in minimal to no costs. All dollar amounts are presented in 2024 U.S. dollars.

Permit Application Fees for Change of Condition

PAR 1469 contains a provision which requires all existing functional chrome plating facilities to submit one-time permit applications to update their permits to reflect the revised emission limits. Within South Coast AQMD jurisdiction, there are 42 functional chrome facilities comprised of 21 hard chrome plating facilities and 21 chromic acid anodizing facilities that are subject to PAR 1469 which contains a provision which requires all existing functional chrome plating facilities to submit one-time permit applications to update their permits to reflect the revised emission limits. The number of permit applications to be submitted will vary by facility type. For example, each hard chrome plating facility is anticipated to submit seven permit applications, on average, while each chromic acid anodizing facility is anticipated to submit three permit applications on average. In total, 210 permit applications are expected across all functional chrome facilities. The fees for these permit applications are subject South Coast AQMD Rule 301 – Permitting and Associated

Fees, Schedule C.[14] Specifically, the fee rates are outlined in Table Fee Rate-A for fiscal year (FY) 2025-26, which details the permit fees for processing, changes of conditions, and alterations or modifications. In general, the application fee for change of condition is $3,393 per application unless the facility qualifies as a small business as defined in Coast AQMD Rule 102 or is subject to the South Coast AQMD's Title V program as set forth in Regulation XXX – Title V Permits. The fee rate for any facility qualifying as small business as set forth in Rule 102 will be reduced by 50 percent (e.g. $1,696.54 per application) while the fee rate for each Title V facility is $4,252 per application. Of the 42 functional chrome facilities subject to PAR 1469, three facilities qualify as small businesses as defined in Rule 102 small business and two facilities are subject to the Title V program. Based on the applicable fee rates, the total one-time permit application fees for all 42 functional chrome facilities are estimated to be approximately $682,070.

Hexavalent Chromium-Containing Waste Storage

Under PAR 1469, all existing functional and decorative chrome plating facilities that use hexavalent chromium for electroplating or chromic acid anodizing are required to store hexavalent chromium-containing waste in a designated enclosed storage area. These facilities periodically perform tank changeouts by discarding the tank solutions that contain hexavalent chromium and use water to clean the tanks, creating more liquid waste. The waste generated from the infrequent changeout events could either be stored temporarily at the facility until being removed by waste disposal contractors or be immediately pumped out and removed by a vacuum truck. Some facilities may store the large volume of waste generated from changeout events temporarily outdoors or within a building enclosure that is not exclusively designated for storage. This waste is subject to the new Chrome ATCM storage requirements. PAR 1469 includes two compliance options via either an enclosed storage area or by creating physical barrier, as a means to satisfy the requirements in the Chrome ATCM.

Enclosed Storage Area

The use of an enclosed storage area to store closed containers of waste, typically a dedicated storage room, is one way to satisfy the Chrome ATCM. A facility may use enclosed hard-top containers as the enclosed storage area, and these containers can be located either inside a building enclosure or outdoors. Each container costs approximately $5,500, including a 10 percent sales tax, and has an estimated useful life of 15 years based on vendor feedback. Minor assembly costs are estimated at $50 per container, and delivery costs are approximately $500 per facility. Half of the 68 affected facilities (or 34 facilities) are assumed to choose this option, with each facility purchasing three containers capable of accommodating up to six intermediate bulk containers (275-gallon totes). The total cost for creating an enclosed storage area at 34 facilities, including container purchase, installation, and delivery is estimated at $583,100.

Physical Barrier

Alternatively, affected facilities may use portable physical screen barriers to isolate a designated storage area up to 20 feet wide by 20 feet long, within a building enclosure to prevent spills and other accidental releases. Each screen has the dimensions of six feet by 10 feet and is estimated to cost $226, including a 10 percent sales tax. Each screen is expected to have a useful life of 15

[14] South Coast AQMD. (2025). *Rule 301 – Permitting and Associated Fees, Table Fee Rate-A. FY 2025-26 and thereafter, Summary Permit Fee Rates – Permit Processing, Change of Conditions, Alteration/Modification*, p. 68, https://www.aqmd.gov/docs/default-source/rule-book/reg-iii/rule-301.pdf.

years. The delivery cost is estimated at $500 per facility. If 34 facilities elect to use physical barriers, each will need to purchase eight barriers. The total estimated cost of the barriers plus delivery is estimated at $78,472.

Although all 68 facilities would be expected to incur cost impacts for the new waste storage requirements, some of these facilities may already have existing enclosed storage areas to store waste generated from changeout events that would be adequate to satisfy the Chrome ATCM requirements. Instead of storing the tank solution waste onsite, some facilities may elect to have the tank waste pumped out and removed via a vacuum truck, which may result in minimal additional costs during these changeout events. Also, some decorative chrome plating facilities might not have another changeout event prior to the phase out in 2030. Although there are scenarios where the incremental cost to comply with the new waste storage requirements is minimal, the number of facilities that could comply with these less costly alternatives is uncertain. Thus, the analysis assumes the worst-case, e.g., all 68 impacted facilities would incur the estimated cost impacts associated with the new waste storage requirements, which would result in a total one-time cost of approximately $662,000.

PAR 1469 Requirements with Minimal to No Costs

PAR 1469 includes an additional requirement to use wet wiping and HEPA vacuuming to clean the roof surfaces prior to roof cutting activities. Requiring wet wiping is expected to incur minimal to no additional cost as using multiple cleaning methods is a common practice prior to conducting roof cutting activities.

PAR 1469 includes additional labeling requirements for tanks when a permit application seeking to change the parameters that the tank(s) proposed to be operated at is submitted to the South Coast AQMD for evaluation. No cost is attributed to this requirement because the additional labeling requirement in PAR 1469 simply memorializes an existing practice where facilities periodically replace their labels due to wear and tear.

PAR 1469 also includes a prohibition from walking or standing on containment devices unless specific conditions are met (e.g., cleaning). No cost is attributed to this requirement as this is more a preventative measure since employees at the affected facilities do not routinely walk or stand on containment devices for safety reasons. The requirement to maintain all Containment Devices, which are used to satisfy the requirements of paragraph (g)(1) and keep them clear of all objects is also for safety reasons. As such, minimal to no incremental costs are expected.

Total Compliance Costs of PAR 1469

The total compliance costs of PAR 1469 include all of the estimated costs over a 15-year forecast period, from 2025 to 2039. To calculate the present value of the total compliance costs, all of the annual compliance costs were discounted to 2025, the anticipated first year the requirements in PAR 1469 will go into effect. Table 3-4 presents the average annual of the amortized costs from 2025-2039 and the present value of the costs discounted to 2025. The total present value of the amortized compliance cost of PAR 1469 is estimated to be $1,649,861 and $1,323,953 at one percent and four percent discount rate, respectively. The average annual compliance cost is estimated to range from $95,713 to $115,162 at a one percent to four percent real interest rate, respectively.

Table 3-4 - Estimated Compliance Costs of PAR 1469

Cost Categories	Present Worth Value (2025)		Average Annual (2025-2039)	
	1 Percent Discount Rate	4 Percent Discount Rate	1 Percent Real Interest Rate	4 Percent Real Interest Rate
Permitting Fees - Functional: Hard Chrome	$542,807	$428,212	$32,913	$39,349
Permitting Fees - Functional: Chromic Acid Anodizing	$256,565	$202,400	$15,557	$18,599
Wast Storage: Physical Barrier Pathway Equipment	$79,026	$64,424	$4,390	$5,316
Waste Storage: Physical Barrier Pathway Delivery	$21,854	$17,816	$1,214	$1,470
Waste Storage: Enclosed Storage Area Pathway Equipment	$721,197	$587,939	$40,061	$48,516
Waste Storage: Enclosed Storage Area Pathway Delivery	$21,854	$17,816	$1,214	$1,470
Waste Storage: Enclosed Storage Area Pathway Assembly	$6,556	$5,345	$364	$441
Total	**$1,649,861**	**$1,323,953**	**$95,713**	**$115,162**

Macroeconomic Impacts on the Regional Economy

Regional Economic Models, Inc. (REMI) developed the Policy Insight Plus Model (PI+ v3) is a tool that South Coast AQMD typically uses to assess the impacts of rule development projects on the job market, prices, and other macroeconomic variables in the region when the average annual compliance cost is greater than one million current U.S. dollars ($1 MM).[15] However, when the average annual compliance cost of a project is less than $1 MM, the model cannot reliably determine the macroeconomic impacts, because resultant impacts from the project would be too small relative to the baseline economic forecast.

Since the total average annual compliance cost of PAR 1469 is estimated to range from $95,713 to $115,162, at a one percent to four percent real interest rate, respectively, which is less than the $1 MM threshold, a macroeconomic impact analysis has not been conducted for PAR 1469.

DRAFT FINDINGS UNDER HEALTH AND SAFETY CODE SECTION 40727

Requirements to Make Findings

Health and Safety Code Section 40727 requires that prior to adopting, amending or repealing a rule or regulation, the South Coast AQMD Governing Board shall make findings of necessity,

[15] Regional Economic Modeling Inc. (REMI). Policy Insight® for the South Coast Area (70-sector model). Version 3. 2023.

authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the public hearing and in the staff report.

Necessity
PAR 1469 is needed to reduce emissions of hexavalent chromium from chromium electroplating and chromic acid anodizing operations and to incorporate the more stringent requirements found in CARB Airborne Toxic Control Measure for Chromium Electroplating and Chromic Acid Anodizing Operations.

Authority
The South Coast AQMD Governing Board has authority to adopt PAR 1469 pursuant to Health and Safety Code Sections 39002, 39650 *et. seq*., 40000, 40440, 40441, 40702, 40725 through 40728, 41508, and 41700.

Clarity
PAR 1469 is written or displayed so that its meaning can be easily understood by the persons directly affected by it.

Consistency
PAR 1469 is in harmony with and not in conflict with or contradictory to, existing statutes, court decisions or state or federal regulations.

Non-Duplication
PAR 1469 will not impose the same requirements as or in conflict with any existing state or federal regulations (except that it implements Chrome ATCM provisions). The proposed amended rules are necessary and proper to execute the powers and duties granted to, and imposed upon, the South Coast AQMD.

Reference
By adopting PAR 1469, the South Coast AQMD Governing Board will be implementing, interpreting or making specific the provisions of the Health and Safety Code Sections 39666 (airborne toxic control measures), 41700 (nuisance), and federal Clean Air Act Section 112 (Hazardous Air Pollutants) and Section 116 (Retention of State authority).

COMPARATIVE ANALYSIS

Health and Safety Code Section 40727.2 requires a comparative analysis of the proposed amended rule requirements with those of any federal or District rules and regulations applicable to the same equipment or source category.

The following regulations are compared to PAR 1469 in this analysis:

- Federal – National Emission Standards for Hazardous Air Pollutant Emissions: Hard and Decorative Chromium Electroplating and Chromium Anodizing (NESHAP)
- State – Airborne Control Toxic Measures for Hexavalent Chromium Emissions from Chromium Plating and Chromic Acid Anodizing Facilities (ATCM)

Rule Element	PAR 1469	ATCM	NESHAP
Building Enclosures – Tier I, II, and III Hexavalent Chromium Tanks	Only operate a Tier I, Tier II or Tier III Hexavalent Chromium Tank within a Building Enclosure that is designed to minimize fugitive emissions	Same as PAR 1469	None Specified
Housekeeping – Chemicals that may contain hexavalent chromium	Store in closed container and in Enclosed Storage Area	Same as PAR 1469	Store in closed container in enclosed storage area or building
Housekeeping – Spills	Contain or clean spills	Same as PAR 1469	Same as PAR 1469
Housekeeping – Routine Cleaning	Weekly cleaning	Weekly cleaning	Weekly Cleaning

Rule Element	PAR 1469	ATCM	NESHAP
Housekeeping – Wastes	• Keep containers with chromium-containing waste closed except when being filled or emptied; • Store containers with hexavalent chromium-containing waste in an Enclosed Storage Area or in a designated storage area using physical barriers within a building enclosure	• Keep containers with chromium-containing waste closed except when being filled or emptied; • Store containers with chromium-containing waste in an Enclosed Storage Area	Chromium or chromium-containing waste maintained to not lead to fugitive dust and in accordance with hazardous waste requirements
Housekeeping – Buffing, Grinding, or Polishing Areas	• Clean using approved cleaning methods 20 ft of workstations on days operations occurred	• Clean using approved cleaning methods 20 ft of workstations at end of day operations occurred	None Specified
Housekeeping – Other	• Eliminate fabric floors from tank process area • Minimize emissions due to roof cutting • Maintain HEPA vacuum	None Specified	None Specified
Best Management Practices – Dragout from Automated Lines	• Install Containment Device between Tier I, Tier II, or Tier III Hexavalent Chromium Tank(s) and its adjacent tank and return dragout back to a tank • Cleaned weekly with no visible accumulation	• Drip tray or other containment devices between Tier I, Tier II, or Tier III Hexavalent Chromium Tank(s) such that liquid does not fall through space between tanks and returns to a tank • Cleaned weekly with no visible accumulation	Bath solutions maintained by one of the following: • Install drip trays to collect and return any bath solution • Contain and return to the tank any bath solution • Collect and treat in an onsite wastewater treatment plant any bath solution

Rule Element	PAR 1469	ATCM	NESHAP
Best Management Practices – Dragout from Non-automated Lines	• Install Containment Device or not allow dragout to drip outside a Tier I, Tier II, Tier III Hexavalent Chromium Tank or Associated Process Tank • Cleaned weekly with no visible accumulation	• Chromic Acid is not dripped outside the tank, unless the liquid is captured and returned to the tank • Cleaned weekly with no visible accumulation	One of the following: • Drip trays to return solution to tank • Contain and return the solution into tank • Collect and treat using onsite wastewater treatment plant
Best Management Practices – Spray Rinsing	• Not spray rinse parts or equipment that have chromium-containing liquid unless: o Parts are lowered in a tank o Utilize low pressure spray nozzle o Install a splash guard at the tank and liquid returns to the tank	Same as PAR 1469	• Minimize overspray when rinsing parts or equipment that have chromium-containing liquid by utilizing a splash guard
Best Management Practices – Labeling	• Label parameters and pending parameters for each: o Tier I, II, and Tier III Hexavalent Chromium Tanks o Trivalent Chromium containing tanks	• Label parameters for each: o Tier I, II, and Tier III Hexavalent Chromium Tanks o Trivalent Chromium containing tanks	None specified
Best Management Practices – Buffing Grinding	• Separate buffing, grinding, polishing, and compressed air cleaning/drying from tanks electroplating or anodizing operation	Same as PAR 1469	• Separate buffing, grinding, or polishing from electroplating or anodizing operation
Add-on Air Pollution Control Devices and Emission Standards: Tier	• Decorative plating tank (hexavalent) o 0.0015 mg/amp-hr o 0.0011 (former new) • Modified facilities – chrome plating tanks	• Decorative plating tank (hexavalent) o Same as PAR 1469 • Modified facilities – chrome plating tanks o Same as PAR 1469	If not complying using chemical fume suppressants • 0.006 mg/dscm

Rule Element	PAR 1469	ATCM	NESHAP
III Tank Requirements	○ 0.00075 mg/amp-hr Function plating facility (2026) • Functional chrome plating tank ○ 0.00075 mg/amp-hr • Other Tier III Hexavalent Chromium Tank: ○ 0.00075 mg/amp-hr, if also connected to APCD venting a chrome plating tank ○ 0.20 mg/hr, if connected to: ▪ APCD with a maximum exhaust rate of 5,000 cfm or less; or ▪ Add-on nonventilated air pollution control device ○ 0.004 mg/hr-ft^2, if connected to an APCD with an exhaust rate of greater than 5,000 cfm. ▪ Based on the tank surface area of all Tier II and Tier III Hexavalent Chromium Tanks	Function plating facility (2026) • Functional chrome plating tank ○ Same as PAR 1469 • Other Tier III Hexavalent Chromium Tank: ○ Same as PAR 1469	○ New affected sources (hard, decorative, anodizing) • 0.007 mg/dscm ○ Decorative plating tank ○ Anodizing tank • 0.011 mg/dscm ○ Hard chrome plating tank at large facility • 0.015 mg/dscm ○ Hard chrome plating tank at small facility • Other Tier III Hexavalent Chromium Tank: ○ None Specified
Add-on Air Pollution Control Devices and Emission Standards: Tier II Tank Requirements	• Utilize a physical control method; or • Meet the Tier III Tank emission limit requirements	Same as PAR 1469	None Specified
Add-on Air Pollution Control Devices and Emission	Operate air pollution control techniques at the applicable minimum hood induced capture velocity	None Specified	None Specified

Rule Element	PAR 1469	ATCM	NESHAP
Standards: General			
Source Test Requirements for Functional Chrome Facility:	• At least 60 days before the first source test submit: o Previously approved source test protocol; and o Addendum identifying change(s) in operation or procedures to meet new emission limits • First Source Test: o No later than January 1, 2026 o Source test conducted in 2024 or 2025 • Subsequent test: o Every two calendar years • Notify South Coast AQMD at least 14 days before the scheduled source test	• At least 60 days before the source test submit: o Submit source test protocol • Initial Source Test: o Same as PAR 1469 • Subsequent test: o Same as PAR 1469 • Notify the District at least 60 days before the scheduled source test	• Source test protocol submittal not required o Use listed test methods • Initial Source Test: o Prior to beginning operations o Only if not using a chemical fume suppressant • Subsequent test: o None Specified • No prior notification for the scheduled source test required
Source Test Requirements for Decorative Chrome Facility	• At least 60 days after initial start-up of new or modified air pollution control technique submit source test protocol • Initial Source Test: o No later 120 days after approval of protocol • Subsequent source tests: o Every 60 months for facilities permitted for more than 1,000,000 ampere-hours per year o Every 84 months for facilities permitted for less than or equal to 1,000,000 ampere-hours	None Specified	• Source test protocol submittal not required o Use listed test methods • Initial Source Test: o Prior to beginning operations o Only if not using a chemical fume suppressant • Subsequent test: o None Specified

Rule Element	PAR 1469	ATCM	NESHAP
	○ May be demonstrated with an emission screen		• No prior notification for the scheduled source test required
Source Test: Procedures	Each source test conducted: • Pursuant to an approved method and approved source test protocol • Demonstrates ventilation velocities specified in *A Manual of Recommended Practice for Design* or alternative design criteria and ventilation velocities approved by the Executive Officer • Smoke test for all applicable tanks	Each source test conducted: • Pursuant to an approved method and approved source test protocol • Smoke tests for chrome tank covers	Each source test conducted: • Pursuant to listed test methods • No smoke tests required
Wetting Agent Chemical Fume Suppressants (Hexavalent Chromium Tanks)	• Not add PFOS-based fume suppressant to any chromium electroplating or chromic acid anodizing bath • Surface tension below: ○ 40 dynes/cm (stalagmometer) ○ 33 dynes/cm (tensiometer) • Chemical fume suppressant certified by the Executive Officer based on a certification process	• Use a listed chemical fume suppressant • A non-listed chemical fume suppressant may be used if: ○ Approved by the Executive Officer ○ Does not contain PFAS or PFAS compound ○ Meets 0.01 mg/amp-hr when surface tension did not exceed ▪ 45 dynes/cm (stalagmometer) ▪ 35 dynes/cm (tensiometer)	• Not add PFOS–based fume suppressant • Surface tension of the electroplating or anodizing bath shall not exceed: ○ 40 dynes/cm (stalagmometer) ○ 33 dynes/cm (tensiometer)
Parameter Monitoring: Pressure Air Flow	• Monitor the add-on air pollution control device with mechanical gauges measuring the applicable pressures and air flows	• Monitor pressure drop and inlet velocity	Daily pressure drop and inlet velocity monitoring and recording
Add-On Air Pollution Control Device Periodic	• Conduct slot velocity measurement and smoke test every 365 days since the last source test	None Specified	None Specified

Rule Element	PAR 1469	ATCM	NESHAP
Parameter Monitoring	• Shut down a tank due to a failing test until appropriate collection is demonstrated		
Parameter Monitoring: Surface Tension	• Measured daily for 20 operating days, and every third operating day thereafter, but no less than once weekly.	Same as PAR 1469	• Monitor and record surface tension of electroplating baths once every 40 hours of operation.
Inspection and Maintenance and Operation and Maintenance Plan	Maintain and implement an Operation and Maintenance Plan	Same as PAR 1469	Same as PAR 1469
Reporting of Notification of Incidents	Notify the Executive Officer within four hours of an incident	None Specified	None Specified
Chromium Electroplating or Chromic Acid Anodizing Kit Requirements	Removed in 2018 Amendment	• Prohibit for sale in California, chromium electroplating or chromic acid anodizing kits	None Specified
Conditional Requirements for Permanent Total Enclosures: Triggers	Install a PTE due to: • More than one non-passing source test • More than one failure to cease operating a tank due to a failing measurement of the collection system or a failed smoke test, if the facility is greater than 1,000 feet of a sensitive receptor • One failure to cease operating a tank due to a failing measurement of the	None Specified	None Specified

Rule Element	PAR 1469	ATCM	NESHAP
	collection system or a failed smoke test, if the facility is less than or equal to 1,000 feet of a sensitive receptor		
Phaseout of Hexavalent Chromium	Decorative chrome plating • January 2030 Functional chrome plating • Same as ATCM	Decorative chrome plating • January 2027 • January 2030 (if meeting building enclosure requirements) Functional chrome plating • January 2039 (pending two technology reviews)	Not Required

APPENDIX A – LIST OF AFFECTED FACILITIES

LIST OF AFFECTED FACILITIES

Facility ID	COMPANY
154758	A & Z GRINDING INC
25087	AAA PLATING & INSPECTION INC
5137	ACCU CHROME PLATING CO INC
70220	AERO CHROME PLATING
21321	AIRCRAFT X-RAY LABS INC
47835	ALL METALS PROCESSING OR ORANGE CO INC
205903	ALLEN INDUSTRIAL & MACHINE
178908	ALLFAST FASTENING SYSTEM INC
117435	ALLOY PROCESSING
16951	ANAPLEX CORP
144438	ANDRES TECH PLATING INC
205141	ANILLO INDUSTRIES
7011	ANODYNE INC
55661	ARTISTIC SILVER PLATING
147364	AVIATION REPAIR SOLUTIONS INC
121215	BARKEN'S HARDCHROME INC
13618	BARRY AVE PLATING CO INC
146448	BEO-MAG PLATING INC
118602	BOWMAN FIELD, INC - CHROME NICKEL PLATING
18989	BOWMAN PLATING CO INC
42645	BRITE PLATING CO INC
171832	C&R PLATING, INC
9120	CAL ELECTROPLATING INC
147653	CALIFORNIA FAUCETS INC
1953	CAL-TRON PLATING INC
53447	CARTER PLATING INC
18460	CHRISTENSEN PLATING WKS INC
180575	CHROMADORA, INC
6616	CHROMAL PLATING CO
13844	CHROMPLATE CO
107644	CPPG
98554	DECORE PLATING
12748	DIXON HARD CHROME INC
82730	DNR INDUSTRIES, INC.
143630	ELECTRODE TECH INC, REID METAL FINISHING
7978	ELECTROLIZING INC
10005	ELECTRONIC CHROME GRINDING CO INC
45938	EME INC

Facility ID	COMPANY
47329	FINE QUALITY METAL FINISHING
148373	FULLERTON CUSTOM WORKS INC
11818	HIXSON METAL FINISHING
133930	HYDROFORM USA
236	K & L ANODIZING CORP
17168	KRYLER CORP
140017	LA HABRA PLATING CO INC
132333	LM CHROME CORP
41229	LUBECO INC
122365	METAL FINISHING MARKETERS
20280	METAL SURFACES INC
102334	MOOG INC
136913	MORRELL'S ELECTRO PLATING INC
129249	MULTICHROME CO INC/MICROPLATE
8408	OMNI METAL FINISHING INC
80799	PALM SPRINGS PLATING
187040	PEMACO METAL PROCESSING CORP
24129	PENNOYER-DODGE CO
177440	PLATINUM SURFACE COATING
117804	PRODUCT ENGINEERING CORP
52525	QUAKER CITY PLATING
150363	RE-BILT METALIZING CO
15021	S & K PLATING INC
18845	STUTZMAN PLATING INC
181234	SUNVAIR
124325	SUPERIOR PLATING & BUMPERS, INC
131232	THE BOEING COMPANY-C13 FACILITY
153762	TOOL & JIG PLATING COMPANY
186519	TRIUMPH-EMBEE
180918	V&M AEROSPACE LLC
188380	VALENCE SURFACE TECHNOLOGIES - LYNWOOD
109562	VALLEY PLATING WORKS INC
13945	VAN NUYS PLATING INC
52142	YOLANDAS PLATING

APPENDIX B – PUBLIC COMMENTS AND STAFF RESPONSES

PUBLIC COMMENTS AND STAFF RESPONSES

A PAR 1469 public workshop was held on August 27, 2025. In addition to the oral comments at the meeting, staff received written comments for PAR 1469 before and during a comment period that closed on September 5, 2025. The following are responses to these written comments, followed by South Coast AQMD responses. Comments received before the Public Workshop were included because there were no public meetings after Working Group #2 held before the Public Workshop where staff could formally respond to the comments received.

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1. Comments from Hixson Metal Finishing email, submitted 7/25/25

Min Sue

From: Bruce Greene <bruce.greene@hmfgroup.com>
Sent: Friday, July 25, 2025 11:59 AM
To: Min Sue
Subject: [EXTERNAL] PAR 1469 - Concern

Min,

It's been a while, hope you are doing well.

I recently attended the second working group meeting this past Wednesday and I did have a question/concern of one of the new requirements in the PAR.

This refers to section (g)(7) that also refers to section (g)(1)(B) in our case. In our anodize and chemfilm lines we have, what we refer to as "Drip Trays" that are installed at the floor level and then the walkway grating is installed inside these "Drip Trays". These were designed and installed to capture any drag out that might be spilled outside of the tank during processing. These "Drip Trays" are washed down on a daily basis and plumbed to our waste treatment system so any residue or water collected in these trays is treated before entering the OCSD sewer system. I have attached a picture of one of the "Drip Trays" below for reference.

In looking at the definitions of both a "Drip Tray" and a "Containment Devise" neither of these fit since the material possibly containing Hex Chrome is not returned to the tank but is instead treated and disposed of. 1-1

I know this is probably a matter of semantics, but if an inspector sees this as a "Drip Tray" as we have in the past, then technically per (g)(7), we can't walk on or store anything on these drip tray/walkways while processing parts. This would basically make it impossible to access the processing line and/or any of the tanks.

I believe our system, as installed, meets and/or exceeds the spirit of the regulation by capturing any drag out before hitting the containment system but the wording seems to open us up to possible violations. I'm not sure exactly how to fix this except for maybe adding another definition of "Drag Out Capture Tray" that we could point to in the case of a conflict between AQMD enforcement staff and ourselves.

Any ideas and/or suggestions would be most welcome.

Thanks

Bruce Greene
Environmental/Health & Safety

Hixson Metal Finishing
829 Production Place
Newport Beach, CA 92663
Direct: 949.722.3459
Office: 800.900.9798
www.HMFgroup.com

Supporting Flight Excellence

1. Staff Response to Hixson Metal Finishing email, submitted 7/25/25

1-1 Response Rule 1469 currently requires that dragout does not fall outside the tank or be captured by a drip tray or other containment device. To align with the Chrome ATCM, PAR 1469 further requires that dragout that is captured by a containment device be returned back to a tank. Additionally, PAR 1469 (g)(7) prohibits walking on a containment device and that the containment device must be kept free of all objects during operation of the tanks. As such the scenario described in the comment letter does not meet the requirements of PAR 1469.

As discussed in Chapter 1, non-Automated Lines with dragout may use containment devices such as a tray or cart to capture dragout and return the dragout back to a tank.

2. Comments from Communities for a Better Environment email, submitted 8/01/25

August 1, 2025
Min Sue, Neil Fujiwara, Kalam Cheung, and Michael Krause
Planning, Rule Development, and Implementation
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

COMMUNITIES FOR A BETTER ENVIRONMENT
40 years | established 1978

RE: Comments on Proposed Amended Rule 1469: Hexavalent Chromium Emission from Chrome Plating and Chromic Acid Anodizing Operations

Dear Proposed Rule 1469 Staff:

Communities for a Better Environment ("CBE") submit these comments on Proposed Rule 1469 Hexavalent Chromium Emission from Chrome Plating and Chromic Acid Anodizing Operations ("Proposed Rule"). We appreciate the South Coast Air Quality Management District ("AQMD") amending the Proposed Rule to reduce hexavalent chromium emissions in frontline communities given CARB's amended Airborne Toxic Control Measure for Chromium Electroplating and Chromic Acid Anodizing Operations ("Chrome ATCM"). While we applaud AQMD for new control measures, monitoring requirements, and phase out of hexavalent chromium use, we are concerned that the current language still falls short of meaningfully protecting environmental justice communities that already face a disproportionate amount of air pollution from transportation, industry, warehouses, and many other sources.

CBE participates in the Southeast Los Angeles ("SELA") AB 617 Steering Committee and has participated in the first two working groups for the Proposed Rule. The mission of CBE is to build people's power in California's frontline communities to achieve environmental health and justice by preventing and reducing pollution and building green, healthy, and sustainable communities and environments. We support AQMD amending the Proposed Rule to reflect the latest updates to Chrome ACTM given the toxicity and harm from hexavalent chromium exposure and hope that these recommendations are reflected in the Proposed Rule language:

1. Regular and Consistent Source Testing
2. Including a Signage Provision for Facilities next to Sensitive Receptors
3. Need More Worker Protections

I. Regular and Consistent Source Testing

The Proposed Rule lacks consistent and periodic source testing schedules for all facilities that use hexavalent chromium. Given the toxicity of the pollutant, this source testing schedule fails to protect workers and communities from exposures. The Proposed Rule has subsequent source testing 5-7 years after the day of the most recent source test that demonstrates compliance with

2-1

South East LA Office
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Huntington Park, CA 90255
323.826.9771

all applicable requirements[1]. This source testing schedule rule is too lax and instead needs ongoing compliance. Sometimes air pollution control devices, equipment, and best management practices fail to reduce or prevent air pollution, so adding provisions for regular and consistent source testing [yearly] for hexavalent chromium emissions would create additional safeguards for frontline communities and workers.

2-1 (Cont.)

II. Including a Signage Provision that Requires Facilities that Use Hexavalent Chromium to Notify Adjacent Communities of Potential Hexavalent Chromium Exposure

While we applaud AQMD for the process of phasing out hexavalent chromium use and strengthening best management practices, we worry that the amended rule lacks a signage provision, given the toxic nature of hexavalent chromium and its proximity to environmental justice communities. According to CARB, hexavalent chromium is a carcinogen that is the second most potent toxic air contaminant identified by the state, and it is 500 times more toxic than diesel exhaust.[2] This is alarming since SELA communities house several chrome plating facilities which are also next to other polluting industries and heavily trafficked freeways and trucking routes.[3] Additionally, the Proposed Rule lacks fenceline or real-time monitoring, which makes communities susceptible to potential fugitive emissions, with regulators not addressing the problem until after exposure occurs.

2-2

2-3

III. Need More Protections for Frontline Workers

As mentioned previously, hexavalent chromium is a known carcinogen, and no level of exposure is considered safe. CBE understands that AQMD's jurisdiction is to regulate stationary sources of air pollution, but workers' health and safety is weaved into policies that center around mitigating or eliminating toxic air exposures. The Proposed Rule references OSHA in terms of Permanent Total Enclosure[4] and Requirements for Building Enclosures for Tier II and Tier III Hexavalent Chromium Tanks[5] but fails to provide any specificities on how to adhere to OSHA regulations for best management practices or other maintenance operations. The Proposed Rule can be strengthened by including an interagency coordination requirement with OSHA to educate and better protect workers from hexavalent chromium exposure.

2-4

IV. Conclusion

It is critical that AQMD update the Proposed Rule to address any gaps that could potentially put SELA communities at risk of hexavalent chromium exposure. AQMD should not take lightly the dangers of hexavalent chromium exposures and its carcinogenic toxicity. We appreciate AQMD strengthening the Proposed Rule, even stricter than Chrome ATCM, but these recommendations

[1] Initial Rule Language, https://www.aqmd.gov/docs/default-source/rule-book/proposed-rules/1469-(2025)/par-1469_071825_irl.pdf?sfvrsn=59f26e7e_5

[2] https://ww2.arb.ca.gov/news/carb-passes-new-amendments-phase-out-toxic-hexavalent-chromium

[3] https://www.aqmd.gov/nav/find and https://laist.com/brief/news/health/usc-diesel-truck-pollution-map

[4] Initial Rule Language, pg. 50.

[5] Ibid, pg. 13.

South East LA Office
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Huntington Park, CA 90255
323.826.9771

must provide additional safeguards for our communities. We welcome the opportunity to discuss these recommendations.

Sincerely,
Ambar Rivera
Staff Researcher

2. Staff Responses to Communities for a Better Environment email, submitted 8/01/25

2-1 Response Rule 1469 required source tests every five or seven years. PAR 1469 will require functional plating facilities to conduct source tests every two years, which is as stringent as the Chrome ATCM. In addition to source testing, PAR 1469 requires inspection and maintenance of the air pollution control devices and periodic parametric monitoring between source tests to verify the air pollution control device captures and controls hexavalent chromium emissions, which is above and beyond the Chrome ATCM.

2-2 Response PAR 1469 does not have a signage provision. Recent rules that address dust, observable emissions crossing the property line, or odors require signage informing the public who to contact if they observe air quality issues. However, this is not an alert of potential exposure. For inquiries regarding facilities in an area, the public may utilize the South Coast AQMD FIND website database to identify facilities in an area. This would include facilities subject to PAR 1469.

2-3 Response PAR 1469 does not propose fenceline or real-time monitoring but includes requirements to minimize fugitive emissions and control point source emissions. Rule 1480 – *Ambient Monitoring and Sampling of Metal Toxic Air Contaminants* addresses toxic metal emissions not only from facilities subject to PAR 1469, but any other facility that may be emitting metal emissions.

2-4 Response Subdivision (e) refers to OSHA and other agencies in the event another agency creates or has a conflicting requirement with PAR 1469. In this unlikely circumstance, the owner or operator would be allowed to propose an alternate equivalent method to meet the Building Enclosure requirements specified in paragraph (d)(6) or subdivision (e).

Worker protection is outside the scope and purpose of PAR 1469. However, PAR 1469 requirements reduce emissions and may provide a co-benefit to minimize worker exposure (e.g., installation of add-on air pollution control devices, prescriptive handling and storage requirements of materials that may contain hexavalent chromium).

3. Comments from RadTech International email, submitted 8/01/25

August 1, 2025

Mr. Min Sue
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765
msue@aqmd.gov

Re: Public comments on Proposed Amended Rule 1469— Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing

Dear :

RadTech International hereby reiterates the comments we made during the recent working group meeting on proposed amended rule (PAR) 1469. RadTech is the association for the advancement of Ultraviolet/Electron Beam/Light Emitting Diodes (UV/EB/LED) technology. We represent over 800 members nationwide and have sister chapters worldwide. Our processes are environmentally friendly and generate essentially zero VOC emissions. Our technology has been recognized by the district and board members have been very supportive of our industry.

UV/EB/LED materials do not contain chrome and can be used in some operations as potential replacements for conventional materials. We would urge the district to provide incentives to companies who choose to reformulate their process and eliminate emissions of Hexavalent Chrome. Our comments to specific provisions of PAR 1469 follow:

Section (b)—Applicability

PAR 1469 applies to "the owner or operator of any Facility performing Chromium Electroplating or Chromic Acid Anodizing". During the consultation meeting, staff clarified that a UV/EB/LED chrome-free coating process at a facility performing Electroplating or Anodizing would not be subject to the rule as said process would fall under one of the district's coatings rules. We would very much appreciate clarification of Section (b) to incorporate the comments made by staff during the consultation meeting so that there is no confusion about the rule's applicability.

3-1

Section (p)—Reporting

We are concerned that facilities that chose to convert to UV/EB/LED may be subjected to overly prescriptive reporting requirements. A facility may incorporate UV/EB/LED in some of their processes while retaining their conventional materials in other parts of their operation. We request that the rule clearly state that UV/EB/LED operations at facilities that are subject to PAR 1469, will not be subject to the reporting requirements of the rule. As mentioned during the consultation meeting, facilities who choose to eliminate toxics should be encouraged and supported to do so. We are concerned that facilities who convert some or all of their operations to UV/EB/LED will be subjected to Initial Compliance Status Reports and Ongoing Compliance Status and Emissions Reports. Adding yet another regulatory burden as a condition for conversion, is not helpful to businesses or to the district. 3-2

Section (q)-- Procedure for Establishing Alternative Requirements

It is unclear if Section (q) will apply to an operator who choses to replace a chrome based operation with a chrome-free coating process such as UV/EB/LED. We suggest adding language to exempt conversion to UV/EB/LED from these onerous procedures. 3-3

Section (r)—Exemptions

We request the addition of language to exempt UV/EB/LED materials from PAR 1469. The proposed rule includes a specific exemption from trivalent chrome operations and we simply ask for our processes to be given the same consideration. 3-4

Additionally, businesses have expressed concern regarding the financial hardships they face in meeting the requirements of PAR 1469. We urge the district to partner with our industry and the regulated community and provide financial support for conversion to chrome-free projects. 3-5

We appreciate your attention to these issues and look forward to a productive rulemaking effort.

Sincerely

Rita M. Loof
Director, Environmental Affairs

Cc: Kalam Cheung, Michael Krause, Wayne Nastri

3. Staff Responses to RadTech International email, submitted 8/01/25

3-1 Response: As referenced in subdivision (b), PAR 1469 establishes a clear applicability by specifying the type of facilities that would be subject to the requirements of this rule. South Coast AQMD rules specify the applicable sources instead of the non-applicable sources.

3-2 Response: The heading to subdivision (p) has been revised to clarify that the reporting is for meeting the requirements of this rule.

3-3 Response: PAR 1469 subdivision (q) is only applicable to an alternate process to measure surface tension for facilities complying with subparagraph (l)(2)(B). Subdivision (q) is not relevant to the replacement of hexavalent chromium operations with non-hexavalent chromium alternatives.

3-4 Response: Chromium electroplating using trivalent chromium is subject to the requirements of PAR 1469. PAR 1469 paragraph (r)(1) exempts chromium electroplating using trivalent chromium using a wetting agent from subdivisions (m) and (n), which are the monitoring and reporting requirements of this rule. These operations would not have add-on control equipment that would need the verification of operation and recordkeeping.

As discussed in Response 3-1, PAR 1469 specifies the applicability in subdivision (b). As such, UV/EB/LED operations that are separate from chrome plating operations would not be subject to requirements specified in subdivision (m) or (n). Therefore, an exemption from a specific requirement is not warranted for equipment not subject to PAR 1469.

3-5 Response: Incentives are available to convert to chrome free technologies. Prior to and during the development of PAR 1469, industry stakeholders were engaged regarding the availability of incentive funding to transition to a non-hexavalent chromium alternative process. Additionally, a state funded program is being administered by Placer County APCD to assist in the transition to a non-hexavalent chromium alternative process.

4. Comments from The Boeing Company email, submitted 8/04/25

The Boeing Company
4000 Lakewood Blvd.
Long Beach CA 90808-1700

August 04, 2025

S C A Q M D
21865 E. Copley Drive
Diamond Bar, CA 91765

ATTN: Min Sue
Air Quality Specialist
Planning and Rule Development

Re: SCAQMD Rule 1469 Proposed Amendments

Thank you for the opportunity to provide comments relating to the proposed amendments to SCAQMD Rule 1469 (Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations). Boeing requests that the following changes/clarifications be incorporated into the proposed amendments to the rule:

- (c)(27) definition of Enclosed Storage Area states that any space or structure satisfies the requirements. Seek clarification that these types of areas include building enclosures that satisfy the requirements under Section (e). 4-1
- (f)(10) requires that cleaning equipment be kept within Enclosed Storage Areas when not in use. This requirement has resulted in less cleaning operations being performed throughout the day as was done prior to this change in regulatory language. Cleaning equipment (such as HEPA vacuums) are no longer stationed next to or nearby the equipment and readily available to shop floor personnel for a 'clean as you go" basis and now occurs at end of shift. This type of equipment should be excluded from this requirement. 4-2
- (m)(1) imposes parametric monitoring requirements for facilities to follow to assure system compliance between source testing (every five years). CARB has significantly increased source testing requirements (every two years) and the associated costs for these source tests will increase significantly, both due to frequency and consolidation within the industry. SCAQMD should consider adopting an annual requirement for parametric monitoring requirements. 4-3
- Table 4-2 requires temperature gauges for Tier I, Tier II, and Tier III tanks. Request that the requirement be removed for tanks that are not heated/operate at ambient temperature. 4-4
- Appendix 8 details the requirements for conducting smoke tests. The requirements allow no adjustments due to the size of the tanks (minimum 12 points). For our smaller tanks that only have three ventilation slots on each side, the points are only a few inches apart. 4-5

Boeing looks forward to continuing to work with District staff in the development of the proposed amendments to SCAQMD Rule 1469. If you should have any questions or require additional information, please do not hesitate to contact me.

William Pearce
Senior Environmental Engineer
Environmental Services
Environment, Health & Safety

4. Staff Responses to The Boeing Company email, submitted 8/04/25

4-1 Response PAR 1469 has been updated to reflect the requirements of the Chrome ATCM. The intent of the Enclosed Storage Area requirement is to prevent spills and other accidental release of hexavalent chromium-containing waste. As such, physical separation of the stored closed containers from other non-storage areas is required; a building enclosure would not satisfy this requirement unless the entire building is exclusively used for storage only. PAR 1469 includes a compliance pathway where physical barriers may be used to temporarily isolate a designated storage area within a building enclosure. This will allow a facility to temporarily store the unusually large amounts of waste generated from a tank changeout until it can be removed from the facility. Alternately a facility without sufficient space inside a building enclosure may use an enclosed container as the enclosed storage area to store the closed containers.

4-2 Response The storage requirements are in line with the requirements included in the Chrome ATCM. As State law requires a local rule (i.e., PAR 1469) to be at least as stringent as the Chrome ATCM if it is to be implemented in lieu of the Chrome ATCM, the storage requirements in PAR 1469 must be at least as stringent as those in the Chrome ATCM.

4-3 Response PAR 1469 has been updated to allow add-on air pollution control devices subject to the emission limits of subdivision (x) to conduct measurements of slot velocity and push air manifold pressures once every 365 days as they are subject to more frequent source testing.

4-4 Response PAR 1469 has been updated to incorporate the comment.

4-5 Response PAR 1469 has been updated to incorporate the comment.

5. Comments from Metal Finishing Association of Southern California email, submitted 9/05/25

Min Sue

From: Jerry Desmond <jerry@desmondlobbyfirm.com>
Sent: Friday, September 5, 2025 3:48 PM
To: Michael Krause; Min Sue; Neil Fujiwara; Kalam Cheung
Cc: Bryan Leiker (bleiker@klanodizing.com)
Subject: [EXTERNAL] SCAQMD PAR 1469 - Comments of MFASC

Hi Mike, Min, Neil and Kalam –

The Metal Finishing Association of Southern California [MFASC] provides the following comments on the Proposed Amended Rule 1469.

The association requests that the rule language be clear that::

1. The storage enclosure requirements in the rule only apply to hexavalent chromium bearing materials directly related to Rule 1469 processes. 5-1
2. Sealed drums, totes, and bins qualify as compliant storage enclosures. 5-2

Thanks you in advance for the consideration of these comments, and for the ongoing process of stakeholder engaement. MFASC is cretainly available to discuss at your convenience.

Best,
Jerry Desmond

Jerry Desmond, Esq.

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5. Staff Responses to Metal Finishing Association of Southern California email, submitted 9/05/25

5-1 Response The Chrome ATCM requires containers with hexavalent chromium to be closed and stored in an enclosed storage area. This requirement is not limited to hexavalent chromium waste generated from operations subject to the Chrome ATCM or PAR 1469.

5-2 Response Examples have been added to the Staff Report in subdivision (f) in Chapter 2.