# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

**Final Environmental Assessment for Proposed Amended Rule 1469 – Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations**

**SCAQMD No. 1008008BAR**
**State Clearinghouse No: 2008101043**

**November 2008**



---

| | | |
|---|---|---|
| **Author:** | Barbara Radlein | Air Quality Specialist |
| **Technical Assistance:** | Eugene Kang | Air Quality Specialist |
| **Reviewed By:** | Steve Smith, Ph.D. | Program Supervisor, CEQA |
| | Cheryl Marshall | Program Supervisor, Rules |
| | Barbara Baird | District Counsel |
| | Jeri Voge | Senior Deputy District Counsel |

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**
**GOVERNING BOARD**

CHAIRMAN: WILLIAM A. BURKE, Ed.D.
Speaker of the Assembly Appointee

VICE CHAIRMAN: S. ROY WILSON, Ed.D.
Supervisor, Fourth District
Riverside County Representative

MEMBERS:

MICHAEL D. ANTONOVICH
Supervisor, Fifth District
Los Angeles County Representative

MICHAEL A. CACCIOTTI
Councilmember, City of South Pasadena
Cities of Los Angeles County, Eastern Region

BILL CAMPBELL
Supervisor, Third District
Orange County Representative

JANE CARNEY
Senate Rules Committee Appointee

RONALD O. LOVERIDGE
Mayor, City of Riverside
Cities Representative, Riverside County

JOSEPH K. LYOU, Ph.D.
Governor's Appointee

GARY OVITT
Supervisor, Fourth District
San Bernardino County Representative

JAN PERRY
Councilwoman, 9th District
City of Los Angeles Representative

MIGUEL A. PULIDO
Mayor, City of Santa Ana
Cities Representative, Orange County

TONIA REYES URANGA
Councilwoman, City of Long Beach
Cities of Los Angeles County, Western Region

DENNIS YATES
Mayor, City of Chino
Cities Representative, San Bernardino County

EXECUTIVE OFFICER:
BARRY R. WALLERSTEIN, D.Env.

## PREFACE

This document constitutes the Final Environmental Assessment (EA) for Proposed Amended Rule (PAR) 1469 – Hexavalent Chromium Emissions from Chromium Electroplating and Chromic Acid Anodizing Operations. The Draft EA was released for a 30-day public review and comment period from October 9, 2008, to November 7, 2008. One comment letter was received from the public on the Draft EA. This letter along with the responses to comments is included in Appendix C of this document.

Subsequent to release of the Draft EA, minor modifications were made to PAR 1469. To facilitate identification, modifications to the document are included as underlined text and text removed from the document is indicated by ~~strikethrough~~. Staff has reviewed the modifications to PAR 1469 and concluded that none of the modifications alter any conclusions reached in the Draft EA, nor provide new information of substantial importance relative to the draft document. As a result, these minor revisions do not require recirculation of the document pursuant to CEQA Guidelines §15073.5. Therefore, this document now constitutes the Final EA for PAR 1469.

## TABLE OF CONTENTS

### Chapter 1 - Project Description



### Chapter 2 – Environmental Checklist



## APPENDICES



## LIST OF FIGURES

## LIST OF TABLES

# CHAPTER 1 - PROJECT DESCRIPTION

**Introduction**

**California Environmental Quality Act**

**Project Location**

**Project Objective**

**Project Background**

**Project Description**

**Methods of Compliance**

## INTRODUCTION

The California Legislature created the South Coast Air Quality Management District (SCAQMD) in 1977[1] as the agency responsible for developing and enforcing air pollution control rules and regulations in the South Coast Air Basin (Basin) and portions of the Salton Sea Air Basin and Mojave Desert Air Basin referred to herein as the district. By statute, the SCAQMD is required to adopt an air quality management plan (AQMP) demonstrating compliance with all federal and state ambient air quality standards for the district[2]. Furthermore, the SCAQMD must adopt rules and regulations that carry out the AQMP[3]. The 2007 AQMP concluded that major reductions in emissions of volatile organic compounds (VOC), oxides of sulfur (SOx) and oxides of nitrogen (NOx) are necessary to attain the air quality standards for ozone (the key ingredient of smog) and particulate matter (PM10 and PM2.5). Ozone, a criteria pollutant, is formed when VOCs react with NOx in the atmosphere and has been shown to adversely affect human health and to contribute to the formation of PM10 and PM2.5.

In addition to the extensive criteria pollutant control program in the AQMP, which includes traditional and innovative rules and policies, the SCAQMD, in cooperation with efforts at the local, state and federal level, has a history of reducing "toxic air contaminants" (TAC) or "air toxics" in the district. A substance is considered toxic if it has the potential to present a hazard to human health[4]. TACs are identified on a list by state and federal agencies based on a review of available scientific evidence. Exposure to TACs can increase the risk of contracting cancer or produce other adverse health effects such as birth defects and other reproductive damage, neurological and respiratory health effects. A health risk assessment is used to estimate the likelihood that an individual would contract cancer or experience other adverse health effects as a result of exposure to listed TACs.

Some TACs have the potential to cause adverse noncancer health impacts. A chronic effect is a noncancer health impact that is the result of exposure to a TAC over a long period of time. Chronic health effects are problems such as birth defects and reproductive damage, neurological, respiratory, and other adverse health effects. Acute effects may result from short-term exposures to a chemical. Examples of acute health effects include headache, respiratory problems, and eye and skin irritation.

In October 2007, the California Air Resources Board (CARB) adopted amendments to the Airborne Toxic Control Measure (ATCM) for Chromium Plating and Chromic Acid Anodizing Operations. The ATCM, as amended, requires more stringent hexavalent chromium emission limits and housekeeping for all chromium plating and chromic acid anodizing operations and restricts the siting of new facilities near sensitive receptors such as residential or mixed-use areas and schools. To incorporate the more stringent measures in the ATCM and further control hexavalent chromium emissions from electroplating and anodizing activities as well as reduce the cancer risks to neighboring residents and businesses, amendments are proposed to Rule 1469 - Hexavalent Chromium Emissions From Chromium Electroplating and Chromic Acid Anodizing Operations.

[1] The Lewis-Presley Air Quality Management Act, 1976 Cal. Stats., ch 324 (codified at Health & Safety Code, §§40400-40540).
[2] Health & Safety Code, §40460 (a).
[3] Health & Safety Code, §40440 (a).
[4] Health & Safety Code, §39655.

## CALIFORNIA ENVIRONMENTAL QUALITY ACT

PAR 1469 regulates hexavalent chromium emissions from chromium electroplating and chromic acid anodizing operations. Because the proposed project requires discretionary approval by a public agency, it is a "project" as defined by the California Environmental Quality Act (CEQA). SCAQMD is the lead agency for the proposed project and has prepared this ~~draft~~ Final Environmental Assessment (EA) with no significant adverse impacts pursuant to its Certified Regulatory Program. California Public Resources Code §21080.5 allows public agencies with regulatory programs to prepare a plan or other written document in lieu of an environmental impact report once the Secretary of the Resources Agency has certified the regulatory program. SCAQMD's regulatory program was certified by the Secretary of the Resources Agency on March 1, 1989, and is codified as SCAQMD Rule 110. Pursuant to Rule 110, SCAQMD has prepared this ~~Draft~~ Final EA.

CEQA and Rule 110 require that potential adverse environmental impacts of proposed projects be evaluated and that feasible methods to reduce or avoid significant adverse environmental impacts of these projects be identified. To fulfill the purpose and intent of CEQA, the SCAQMD has prepared this ~~Draft~~ Final EA to address the potential adverse environmental impacts associated with the proposed project. The ~~Draft~~ Final EA is a public disclosure document intended to: (a) provide the lead agency, responsible agencies, decision makers and the general public with information on the environmental effects of the proposed project; and, (b) be used as a tool by decision makers to facilitate decision making on the proposed project.

SCAQMD's review of the proposed project shows that the project would not have a significant adverse effect on the environment. Further, one comment letter was received relative to the analysis prepared in the Draft EA during the 30-day public review period (from October 9, 2008 to November 7, 2008). This comment letter along with the responses to comments is included in Appendix C of this document. Prior to making a decision on the proposed amended rule, the SCAQMD Governing Board must review and certify that the Final EA complies with CEQA as providing adequate information on the potential adverse environmental impacts of the proposed amended rule. Therefore, pursuant to CEQA Guidelines §15252, no alternatives or mitigation measures are required to be included in this ~~Draft~~ Final EA. The analysis in Chapter 2 supports the conclusion of no significant adverse environmental impacts.

## PROJECT LOCATION

PAR 1469 would apply to facilities that conduct chromium electroplating and chromic acid anodizing operations throughout SCAQMD's entire jurisdiction. The SCAQMD has jurisdiction over an area of 10,473 square miles, consisting of the four-county South Coast Air Basin (Basin) and the Riverside County portions of the Salton Sea Air Basin (SSAB) and the Mojave Desert Air Basin (MDAB) as shown in Figure 1-1. The Basin, which is a subarea of the district, is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The 6,745 square-mile Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The Riverside County portion of the SSAB and MDAB is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley. The federal non-attainment area (known as the Coachella Valley Planning Area) is a subregion of both Riverside County and the SSAB and is bounded by the San Jacinto Mountains to the west and the eastern boundary of the Coachella Valley to the east.

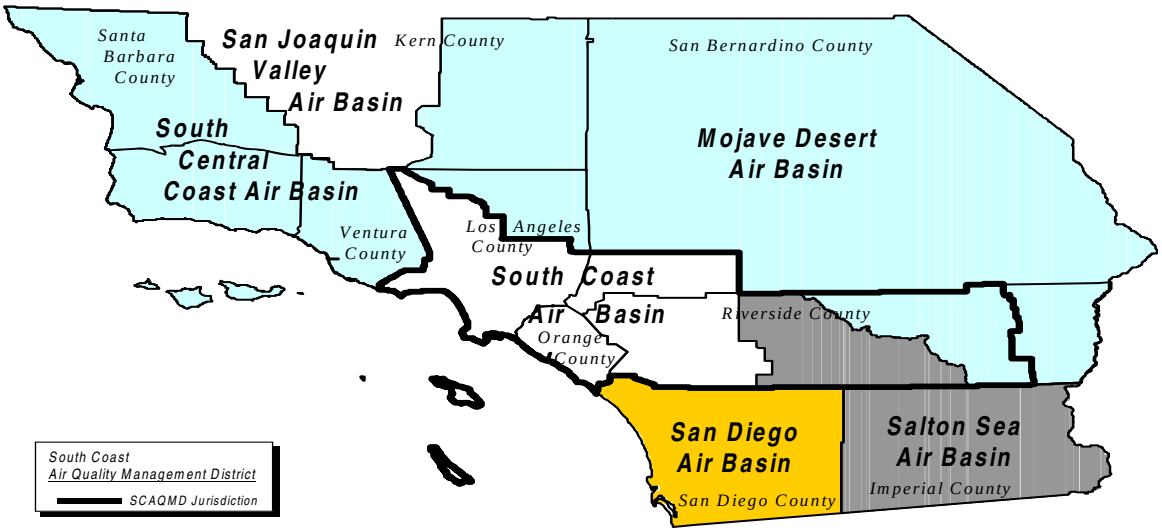


Figure 1-1
Boundaries of the South Coast Air Quality Management District

**PROJECT OBJECTIVE**

The objective of PAR 1469 is to: 1) further reduce the quantity of hexavalent chromium emissions and the associated cancer risk to nearby receptors from the metal finishing industry by incorporating the latest amendments to the ATCM for Chromium Plating and Chromic Acid Anodizing Operations, as adopted by CARB on October 24, 2007[5]; 2) require more stringent controls at affected facilities to reduce public exposure to hexavalent chrome; and 3) protect sensitive receptors including areas zoned for residences and mixed uses, schools, and by prohibiting new facilities within or near the protected land use types. PAR 1469 is estimated to reduce hexavalent chromium emissions by 40 percent. Further, PAR 1469 is expected to achieve a reduction in cancer risk for most chrome plating facilities to less than 25 in a million.

**PROJECT BACKGROUND**

Hexavalent chromium, cadmium, lead, nickel, copper, sodium hydroxide, sulfuric acid, and nitric acid are commonly used in the metal finishing industry and are identified in Table 1 of SCAQMD Rule 1401 - New Source Review of Toxic Air Contaminants as TACs with varying health effects (i.e., they are identified in Rule 1401 as carcinogenic, or having chronic or acute HIs). A chronic effect is a noncancer health impact that is the result of exposure to a TAC over a long period of time. Chronic health effects are problems such as birth defects and other reproductive damage, neurological, respiratory, and other adverse health effects. Acute effects may result from short-term exposures to a chemical. Examples of acute health effects include headache, respiratory problems, and eye and skin irritation.

[5] Health & Safety Code, §39666(d).

Hexavalent chromium is a potent carcinogen. The Office of Environmental Health Hazard Assessment (OEHHA) has assigned hexavalent chromium a cancer risk unit factor of 0.15 $(\mu g/m^3)^{-1}$. Nickel is a carcinogen known to have chronic health effects to the cardiovascular or blood system and acute health effects to the immune system. Cadmium and lead are also classified as carcinogens. Copper, an acute TAC, affects the respiratory system. Sodium hydroxide, an acute toxic, affects the eyes, respiratory system, and skin, while sulfuric and nitric acids are both acute TACs that affect the respiratory system. Similarly, hydrochloric acid is a chronic TAC affecting the respiratory system and an acute TAC affecting the eyes and respiratory system.

**Metal Finishing**

The metal finishing industry is mainly comprised of small businesses that provide support for other industries that rely on the finished metal products produced at these facilities, such as automotive, computer/electronics, machinery/industrial equipment and defense/government. To meet the demand for a wide range of products, the metal finishing industry primarily utilizes two key processes, electroplating and anodizing, in addition to the other related finishing processes used such as metal stripping, bright dipping, immersion plating and paint stripping.

Businesses that conduct electroplating are commonly referred to as plating shops and are classified as either "job shops" or "captive shops". Job shops are independent operators that serve a variety of industries while captive shops are found within companies that manufacture products rather than specialize in metal plating exclusively. Captive shops typically have a higher degree of automation, due to their more predictable finishing requirements. Both job and captive shops utilize similar types of "rack and barrel" systems for their process lines, including manual hoists, hand lines, automated hoists, automated returns and reel-to-reel lines. The most common electroplating processes in job shops use decorative chromium, nickel, copper, and zinc. In captive shops, the most common metals used are decorative chromium, nickel, and zinc. The average number of process lines for plating and anodizing equipment is 4.8 for job shops and 3.1 for captive shops.

<u>Electroplating and Anodizing</u>

Electroplating is an electrochemical process of providing a negative electrical charge to an object while it is immersed in a metal-salt solution such that the positively charged metal ions attach to the object and form a layer of the desired metal coating. In general, the electroplating process can use any metal, though chrome, nickel, cadmium, lead, and copper are the most common. However, the choice of metal used depends on the desired finish and properties of the final product. For example, the chrome chemistry used and the time lapsed for chrome plating varies depending on the purpose or function of the finished product and the desired thickness of the chromium layer. Specifically, hard chromium plating is a process used to impart corrosion protection, wear resistance, lubricity and oil retention among other properties by depositing a thick layer of chromium (measured in thousandths of an inch) on an object over a period of hours or days. Examples of objects that are typically hard chromium plated include engine parts, industrial machinery and tools, and parts made of steel.

Alternately, decorative chromium plating is a less time consuming process used to improve the aesthetics of an object while providing a thin layer of chromium (measured in millionths of an inch) for a protective finish. Examples of decorative chromium plated parts include furniture components, bathroom fixtures, car bumpers and wheels and the process can take anywhere from a few seconds to minutes.

Anodizing, also an electrochemical process, oxidizes the metal surface of an object to produce a wear- and corrosion-resistant surface, without depositing a separate metallic layer. The difference between anodizing and electroplating is that the oxide coating is integral with the metal object or substrate as opposed to the object being coated via metallic deposition. The resulting oxidized surface is hard and abrasion resistant, and it provides some degree of corrosion resistance.

The electroplating and anodizing processes trigger a chemical reaction that causes hydrogen gas to bubble at the cathode while smaller amounts of oxygen gas bubble at the anode. These bubbles are the primary source of pollution because they become coated with a layer of the unused TAC-containing chemical solution from the plating bath which floats to the surface as a mist. For example, during chromium electroplating, the part to be plated is submerged into a bath that contains sulfuric acid and chromic anhydride ($CrO_3$), also known as chromic acid. A maximum of only 20 percent of the chrome from the chromic acid is plated onto the part, thus making the remaining bath solution potentially available for coating the released hydrogen and oxygen bubbles as they break the surface of the plating bath to form a chromic acid mist. The magnitude of emissions generated from these plating processes depends on several variables, including the concentration of the solution (in this example chromic acid) used in the bath, the number of ampere-hours used during plating, the bath temperature, the bath purity and surface tension.

Within the district, there are approximately 137 facilities that conduct hexavalent chromium electroplating and chromic acid anodizing. Table 1-1 identifies the number of facilities that will be affected by PAR 1469 relative to the type of plating activity.

**Table 1-1**
**Summary of Facilities Conducting Electroplating and Chromic Acid Anodizing Within the District**

| Type of Plating Activity | Number of Facilities |
|---|---|
| Decorative Chromium Electroplating | 68 |
| Hard Chromium Electroplating | 34 |
| Chromic Acid Anodizing | 32 |
| Hexavalent Chromium Electroplating and Chromic Acid Anodizing | 3 |
| **Total** | **137** |

**Overview of Current Regulatory Requirements**

There are three levels of regulatory requirements that apply to TAC emissions from the metal plating industry, including the requirements proposed in PAR 1469: 1) federal requirements (i.e., Environmental Protection Agency or EPA); 2) state (i.e., California legislature); and, 3) local (i.e., SCAQMD). The SCAQMD's local efforts to specifically regulate sources of TACs from this industry have been based partly on implementing measures already adopted by EPA and the California Air Resources Board (CARB). The following is an overview of the federal and state air toxic legislation and TAC programs and the SCAQMD TAC rules that have been adopted to implement federal, state, or SCAQMD TAC reduction programs.

Federal Requirements

The federal Clean Air Act (CAA) establishes requirements to regulate emissions of air pollutants to protect human health and the environment. In addition to regulating criteria pollutants, the CAA requires the EPA to regulate TACs that have been found to adversely affect human health. Federal regulations in the CAA include the New Source Performance Standards (NSPS) under §111 and the National Emissions Standards for Hazardous Air Pollutants (NESHAPs) under §112. The EPA periodically promulgates NSPS standards in the Code of Federal Regulations (CFR), Chapter 40, Part 60 (40 CFR Part 60) and NESHAPs in 40 CFR Parts 61 and 63. The SCAQMD has been delegated authority by EPA to implement and enforce both NSPS and NESHAP requirements. The requirements in 40 CFR Parts 60 and 61 were adopted by reference in SCAQMD Regulations IX and X respectively. These regulations are periodically updated to maintain consistency with changes to the federal requirements.

For the metal finishing industry, there is currently no applicable NSPS standard. However, there is an applicable NESHAP for chrome plating (National Emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks), promulgated in 40 CFR Part 63, Subpart N. The chrome NESHAP establishes emission limits for hard chromium electroplating operations and for facilities with a cumulative rectifier capacity greater than 60 million ampere-hours per year and imposes increasingly more stringent requirements as facility mass emissions increase. For decorative chromium plating and chromic acid anodizing operations, the chrome NESHAP requires the affected facilities to meet an exhaust standard or maintain the surface tension of their plating baths at 45 dynes per centimeter or less. In addition, the NESHAP specifies numerous monitoring, recordkeeping and reporting requirements.

The TACs used in the metal finishing industry are also addressed in other federal legislation including but not limited to:

- Occupational Safety and Health Act (OSHA);
- Toxic Substances Control Act (TSCA);
- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA);
- Title III of the Superfund Amendments and Reauthorization Act (SARA); and,
- Resource Conservation and Recovery Act (RCRA).

State Requirements

There are two requirements that are applicable to the metal finishing industry at the state level. The first, the Air Toxics "Hot Spots" Information and Assessment Act, was enacted in September 1987 by the California State Assembly as Assembly Bill 2588 (hereafter referred to as the AB2588 program). Under this act, certain stationary sources are required to report the types and quantities of specified toxic substances, including all of the TACs listed in Table 1-2, they release into the air. Emissions of interest are those that result from the routine operation of a facility or that are predictable, including but not limited to continuous and intermittent releases and process upsets or leaks. The goals of the AB2588 program are to collect emission data, to identify facilities having localized impacts, to ascertain health risks, to notify nearby residents of significant risks, and to reduce risk for facilities over specific emission levels.

In addition to the AB2588 program, CARB promulgated an ATCM for chrome plating to reduce emissions by establishing control requirements for new and existing hard and decorative chromium plating operations and chromic acid anodizing facilities. Overall, the requirements in

the ATCM for the metal finishing industry are consistent with the requirements in the chrome plating NESHAP.

**Table 1-2**
**TACs Used in the Metal Finishing Industry**

| TAC | Carcinogen? | Chronic Hazard Index? | Acute Hazard Index? | TAC Reporting Threshold in Rule 1402 (pounds/year) |
|---|---|---|---|---|
| Hexavalent Chromium | Yes | Yes | No | 0.005 |
| Cadmium | Yes | Yes | No | 0.2 |
| Lead | Yes | Yes | No | -- |
| Nickel | Yes | Yes | Yes | 3.3 |
| Copper | No | Yes | Yes | 500 |
| Sodium Hydroxide | No | Yes | Yes | -- |
| Sulfuric Acid | No | Yes | Yes | -- |
| Nitric Acid | No | Yes | Yes | -- |
| Hydrochloric Acid | No | Yes | Yes | -- |

SCAQMD Requirements

Some equipment/facilities that would be affected by PAR 1469 may also be regulated by other SCAQMD rules that focus on toxics such as Rule 1401 - New Source Review of Toxic Air Contaminants and Rule 1402 – Control of Toxic Air Contaminants From Existing Sources. Rule 1401 establishes permitting requirements for new, relocated and modified sources that emit TACs. The risk-based limits are a maximum individual cancer risk (MICR) of one in one million ($1 \times 10^{-6}$) if a permit unit is not constructed with best available control technology for toxics (T-BACT) or ten in one million ($10 \times 10^{-6}$) if T-BACT is used. The cancer burden or the increase in excess cancer cases in the population due to the permit unit is limited to 0.5, and the limit for noncancer acute and chronic compounds is a Hazard Index (HI) of 1.0.

The objective of Rule 1402 is to minimize public health risk from facility-wide emissions of TACs at existing facilities within SCAQMD's jurisdiction by imposing risk reduction requirements for facilities that exceed a specified action risk level. Rule 1402 establishes requirements for applicability, significant risk levels, risk assessment, risk reduction plans, implementation of risk reduction plans and progress reports. Operators of facilities subject to Rule 1402 may be required to prepare detailed inventories and, depending on their health risks, may need to prepare facility-wide health risk assessments and implement risk reduction plans. Rule 1402 establishes a significant cancer risk level at 100 in a million and an action risk level at 25 in a million. There are also non-cancer risk levels.

For existing facilities, Rule 1402 establishes reporting thresholds for hexavalent chromium, cadmium, nickel and copper. Any facility that exceeds these emission thresholds are required to submit an emissions inventory within 60 days after notification from the Executive Officer, unless a source-specific rule specifically exempts the industry from the inventory requirements. Table 1-2 summarizes the TACs used in the metal finishing industry and lists the applicable reporting thresholds pursuant to Rule 1402.

**PAR 1469 PROJECT DESCRIPTION**

The current version of Rule 1469 applies to hard chromium electroplating, decorative chromium plating, and chromic acid anodizing and requires facilities to meet hard chromium electroplating emission limits and to meet either an exhaust standard or plating bath surface tension limit for decorative chromium plating and chromic acid anodizing. The main purpose of amending Rule 1469 is to reduce the quantity of hexavalent chromium emissions and the associated cancer risk from the metal finishing industry by incorporating the latest amendments to the ATCM which establishes more stringent levels of control requirements for hard and decorative chromium plating and chromic acid anodizing. More stringent requirements are proposed for facilities located 25 meters or less from a sensitive receptor or residence or 100 meters or less from an existing school (kindergarten through grade 12).

Not all subdivisions in PAR 1469 contain proposed changes and for those that do, some are relatively minor changes proposed for clarity and consistency throughout the rule and with the ATCM. For simplicity, the following paragraphs summarize the major changes proposed in PAR 1469. A copy of PAR 1469 is included in Appendix A.

Applicability

This subdivision of PAR 1469 has been modified so that sellers, suppliers, users and manufacturers of kits for chromium electroplating and chromic acid anodizing will also be subject to the requirements in PAR1469.

Definitions

This subdivision of PAR 1469 has been modified to include the following new definitions applicable to chromium electroplating and chromic acid anodizing operations: "annual permitted ampere-hours," "dragout," "existing facility," "modified facility," "new facility," "school," "school under construction," and "substantial use." Also, the following definitions are proposed to be amended for clarity and consistency with the ATCM as well as other proposed changes throughout PAR 1469: "air pollution control device," "air pollution control technique," "ampere-hours," "base material," "bath component," "breakdown," "chromic acid anodizing," "composite mesh-pad system," "decorative chromium electroplating," "fiber-bed mist eliminator," "hard chromium electroplating," "modification," "packed bed scrubber," and "sensitive receptor." Also, the definitions of "area source," "large, hard chromium electroplating facility," and "medium, hard chromium electroplating facility," and "small, hard chromium electroplating facility" have been deleted for consistency with the other new requirements proposed in PAR 1469.

Requirements

Due to its large size and for improved continuity throughout the rule, subdivision (c) – Requirements of PAR 1469 has been reorganized and renumbered. For instance, ~~the emission standards for existing, modified, and new facilities have been moved to subdivision (d) – Alternative Compliance Options and Methods. Similarly,~~ interim emission standards for existing facilities are proposed to be moved to subdivision (e) – Performance Test Requirements and Test Methods. Since Rule 1469 is currently in effect, the requirements of paragraph (c)(1) are obsolete and have been deleted accordingly.

Housekeeping

The housekeeping paragraph (renumbered as paragraph (c)(3)) has been renamed from "Housekeeping Practices" to "Housekeeping Requirements." For consistency with the ATCM, the following changes to housekeeping requirements are proposed:

- Modifications to subparagraph (c)(4)(A) are proposed that would further define closed container storage requirements to also include any substance that may contain hexavalent chromium.
- Modifications to subparagraph (c)(4)(C) are proposed to require the immediate clean up of any spills, not just sludge, that may contain hexavalent chromium.
- Modifications to subparagraph (c)(4)(D) are proposed to require, at least once every seven days, the cleaning of storage areas, open floor area, walkways around electroplating or anodizing tanks, and any surface potentially contaminated with hexavalent chromium or that potentially accumulates dust, with either a High Efficiency Particulate Arrestor (HEPA) vacuum or a damp cloth.
- Modifications to subparagraph (c)(4)(E) are proposed to require the handling of generated chromium or chromium-containing wastes in accordance with standard hazardous waste handling practices and requirements. (Wording has been rearranged for clarity.)
- New subparagraph (c)(4)(F) is proposed to require the installation of a physical barrier, such as but not limited to plastic strip curtains, to separate buffing, grinding, or polishing areas from any electroplating or anodizing operation.
- New subparagraph (c)(4)(G) is proposed to require the separation of air compressed cleaning operations from hexavalent chromium electroplating or anodizing operations.
- New subparagraph (c)(4)(H) is proposed to minimize the dragout or release of fluids containing hexavalent chromium that adheres to parts when they are removed from a tank.

Add-On Control Requirement for Hard Chromium Electroplating Tanks

Modifications to paragraph (c)(5) are proposed that would prevent facility operators from removing, shutting down, or replacing air pollution control devices unless the replacement techniques and/or technology meets a higher control efficiency than previously achieved, or meets an emission rate of 0.0015 mg/amp-hr or less, whichever is more effective.

Modifications to paragraph (c)(6) are proposed that would relieve facility operators with an approved alternative compliance option from the requirement of installing add-on air pollution control equipment.

Training and Certification

For clarity, the training and certification requirements are proposed to be relocated from paragraph (c)(12) to paragraph (c)(7). Further, a new requirement for initial training of personnel at new facilities to be completed within a period not to exceed two years of start-up is proposed for inclusion in subparagraph (c)(7)(A).

Interim Emission Standards for Existing Facilities

Because the new emission standards for existing facilities have future compliance dates as late as 2011, modifications are proposed to subdivisions (c)(8), (c)(9), and (c)(10) that

would allow operators to comply with interim emission standards. Further, the alternative compliance option requirements for current emission standards are proposed to be relabeled throughout PAR 1469 to clearly indicate that they are only for an interim period.

Emission Standards for Existing, Modified and New Facilities

For consistency with the latest changes to the ATCM, new paragraphs (c)(11), (c)(12), (c)(13), and (c)(14) are proposed that would contain new, more stringent emission standards for existing, modified, and new chromium electroplating facilities and chromic acid anodizing facilities. Subparagraph (c)(12)(B) has been added to make it clear that a piece of equipment is in compliance with PAR 1469 if an HRA has been completed that complies with SCAQMD Rules 1401, 1401.1, or 1402 within 60 days prior to startup.

Proposed subparagraph (c)(11)(A) contains emission standards and implementation dates that are identical to those found in the ATCM for existing facilities and are summarized in Table 1-3.

**Table 1-3**
**Hexavalent Chromium Emission Limits for Existing Tanks**

| Distance to Sensitive Receptor (meters) | Annual Permitted Ampere-hours | Emission Rate Limit (mg/ampere-hr) | Effective Date |
|---|---|---|---|
| ≤ 100 | ≤ 20,000 | 0.01[2] | 4/24/2008 |
| ≤ 100 | > 20,000 and ≤ 200,000 | 0.0015[1] | 10/24/2010 |
| ≤ 100 | > 200,000 | 0.0015[1] | 10/24/2009 |
| > 100 | ≤ 50,000 | 0.01[2] | 4/24/2008 |
| > 100 | > 50,000 and ≤ 500,000 | 0.0015 | 10/24/2011 |
| > 100 | > 500,000 | 0.0015[1] | 10/24/2009 |

[1] Measured after add-on air pollution control device(s).
[2] Achieved through use of Certified Chemical Fume Suppressants. Alternatively, a facility operator may install an add-on air pollution control devices(s) that controls emissions to below 0.0015 mg/amp-hr.

Similarly, proposed subparagraph (c)(12)(A) requires that facility operators who modify their tanks to comply with an emission rate of 0.0015 milligram/ampere-hour. Subparagraph (c)(12)(B) has been added to PAR 1469 to require operators of modified facilities to conduct a facility-wide health risk assessment in accordance with the risk assessment procedures in SCAQMD Rules 1401 and 1402 and within 60 days prior to initial start-up if the actual annual hexavalent chromium emissions from the chromium electroplating or chromic acid anodizing operations are expected to exceed 15 grams per year.

For new facilities, proposed subparagraph (c)(13)(C) requires operators of tanks at new facilities to comply with an emission rate of 0.0011 milligram/ampere-hour. In addition, prior to start-up, operators of a new facility will be required to conduct and submit a health risk assessment in accordance with the risk assessment procedures in SCAQMD Rules 1401 and 1402 at least 60 days prior to initial start-up. Also, subparagraph (c)(13)(A) of PAR 1469 contains restrictions regarding the siting of new facilities such that new facilities cannot be located in an area zoned for residential or mixed uses or

within 1,000 feet from the boundary of a sensitive receptor, school, school under construction, or any area zoned for residential or mixed use.

Trivalent Chromium Baths at New Facilities

Proposed subparagraph (c)(14)(B) contains requirements for new facilities that use a trivalent chromium bath to conduct a facility-wide health risk assessment for all toxic air contaminants using the District's "Risk Assessment Procedures of Rules 1401 and 212 or OEHHA Guidelines. The HRA must be submitted when filing permit applications for equipment.~~facility-wide health risk assessment in accordance with the Risk Assessment Procedures of SCAQMD Rules 1401 and 1402 to be submitted to the District within 60 calendar days prior to initial start-up~~.

Permit Application Submittals

For facilities that do not have a permitted annual ampere-hour limit with which to determine an applicable emission rate or facility operators with existing annual ampere-hour limits that are much higher than actual usages who opt to take a reduction in their ampere-hour limit to either continue compliance with the 0.01 mg/amp-hr emission limit, or delay the date of compliance with the 0.0015 mg/amp-hr emission limit, subparagraph (c)(15)(A) has been added to require these operators to submit permit applications and pay an application fee in accordance with SCAQMD Rule 301 – Permit Fees, for an administrative change in operating conditions. In addition, for existing facility operators installing new or modifying existing equipment necessary to comply with the new emission rates in paragraph (c)(11), subparagraph (c)(15)(B) will further require that operators submit all related permit applications to the District no later than eight months prior to the facility's applicable effective compliance date.

Alternative Compliance Options and Methods

Subdivision (d) of PAR 1469 provides operators of affected facilities alternative interim compliance options than can be utilized in lieu of complying with the emission standards contained in subdivision (c). Paragraphs (d)(1) through (d)(5) have been clarified to say that the alternative compliance options are interim and will remain in effect only until such time as the compliance dates for the new emission standards in paragraph (c)(11) become effective. In addition, new paragraph (d)(6) has been added to provide facility operators with a mechanism that would allow them to utilize an alternative compliance method to comply with the new emission standards proposed in paragraphs (c)(11) through (c)(13). The alternative compliance options would need to be enforceable as well as be able to achieve equal or greater hexavalent chromium emission and risk reductions than would otherwise be achieved by complying with the emission limits proposed in paragraphs (c)(11) through (c)(13). If approved, the alternative methods would need to be implemented within the time periods specified in paragraph (c)(11) for existing facilities and upon start-up for new and modified facilities.

Performance Test Requirements and Test Methods

For existing facility operators conducting performance tests to demonstrate compliance with the new emission standards proposed in paragraph (c)(11), paragraph (e)(1) has been clarified to say that the tests can be conducted either within 180 days after initial start-up or before the applicable compliance dates, whichever is sooner. In addition, to be consistent with the ATCM, paragraph (e)(1) has been modified to require performance tests to be conducted within 60 days after initial start-up for both new and modified facilities.

Use of Existing Performance Test

Paragraph (e)(2) has been modified to be consistent with the ATCM and would allow an existing facility demonstrating compliance with the new emission standards to use an existing performance test conducted after January 1, 2000 provided that it meets the following criteria:

1) Demonstrates compliance with the applicable emission limits of PAR 1469 (c)(11);
2) Represents currently used control methods at the time of proposed rule adoption;
3) Was conducted using one of the approved test methods specified in PAR 1469 (e)(3); and,
4) Is submitted to the District's Compliance Division by February 24, 2009.

Pre-Test Protocol

For any facility operator who conducts a performance test for existing equipment that requires no modifications, paragraph (e)(4) has been modified to require the facility operator to submit a pre-test protocol to the District's Compliance Division no later than eight months prior to the applicable effective date in paragraph (c)(11).

Emission Points Test Requirements

Paragraph (e)(5) has been modified to be consistent with the ATCM requirement that each emission point shall be tested unless a waiver is granted by the EPA. Similarly, paragraph (e)(6) has been modified to require operators of facilities operating under an alternative compliance method to also conduct and submit a performance test.

Capture Efficiency

New paragraph (e)(7) has been added to require emissions to be captured by a District-approved quantitative measurement. An example of an acceptable measurement is demonstrating that the capture system meets the design criteria and ventilation velocities specified in the American Conference of Governmental Hygienists Industrial Ventilation, A Manual of Recommended Practice. In addition, paragraph (e)(7) also contains requirements for facility operators to conduct periodic smoke tests to demonstrate each unit's capture efficiency. The smoke tests would need to be:

- Conducted initially upon start-up for new and modified facilities and within 60 days of the effective date of PAR 1469 for existing facilities;
- Conducted periodically at least once every six months and within six months of a previous test;
- Conducted under conditions representative of typical facility electroplating and/or anodizing operations; and,
- Recorded by photograph or video.

For any smoke test that demonstrates a unit's non-compliance with the capture efficiency requirement, facility operators would, upon discovery, be required to immediately shutdown all electroplating or anodizing lines associated with the affected ventilation systems until a subsequent smoke test demonstrating full compliance is achieved. The smoke test would need to be conducted using the method described in new Appendix 9 of PAR 1469, or via another SCAQMD-approved method.

Certification of Wetting Agent Chemical Fume Suppressants

For consistency with the ATCM, subdivision (f) has been modified to require certified wetting agent chemical fume suppressants to meet an emission limit below 0.01 milligrams/ampere-hour,

and a surface tension limit below 45 dynes/cm if measured by a stalagmometer or below 35 dynes/cm if measured by a tensiometer.

~~Parameter Monitoring: Add-On Air Pollution Control Devices~~
~~The requirement in subparagraph (g)(1)(B) that an operator continuously monitor the inlet velocity pressure of a packed-bed scrubber has been expanded to also apply to other add-on air pollution control devices such as composite mesh pads, fiber-bed mist eliminators, and HEPA filters.~~

Parameter Monitoring: Wetting Agent Chemical Fume Suppressants
For facilities operating under an approved alternative compliance method and that use chemical fume suppressants for partial or complete control of hexavalent chromium emissions, subparagraph (g)(2)(B) has been modified to comply with the ATCM by requiring daily surface tension monitoring and measurements

Inspection and Maintenance Requirements
To comply with the ATCM for custom designed add-on air pollution control devices, subdivision (h) has been modified to require facility operators to develop operation and maintenance requirements and submit these requirements for District review and approval.

Recordkeeping: Monitoring Data Records
Subparagraphs (j)(4)(B) and (j)(4)(C) have been modified to require daily recordkeeping of pressure drop and inlet velocity pressure data.

For consistency with the ATCM, clause (j)(4)(D)(ii) has been modified to require daily recordkeeping of the surface tension of the electroplating or anodizing bath for facilities that operate under an approved alternative compliance method and that use chemical fume suppressants as all or partial control of hexavalent chromium emissions.

Recordkeeping: Records Demonstrating Facility Size
Since there is no relevance or meaning to demonstrating a facility's size relative to the quantity of emissions, paragraph (j)(7) has been deleted.

Recordkeeping: Records of Filter Purchase and Disposal
New subdivision (j)(10) has been added that will require a facility operator to retain purchase orders for filters and waste manifest records for filter disposal as a result of operating add-on air pollution control devices.

Reporting: Initial Compliance Status Report
Subparagraph (k)(2)(A) has been modified so that it will: 1) have identical timelines regarding the submittal of initial compliance status reports (ICSR) for existing facilities; and 2) require new facilities as of October 24, 2007 to submit the ICSR upon start-up.

Reporting: Notification of Compliance Status for Sources Currently Using Trivalent Chromium
Subparagraph (k)(5)(A) has been modified so that it will have identical timelines regarding notification of compliance status (NOCS) submittals for existing facilities as of October 24, 2007. For facilities existing as of October 24, 2007, facility operators will have to submit the NOCS within 30 days after the effective date of PAR 1469.

Chromium Electroplating or Chromic Acid Anodizing Kits Requirements

To be consistent with the ATCM, new subdivision (q) has been added to ban the use, sale, supply, offer for sale, or manufacture for sale of any chromium electroplating or chromic acid anodizing kit in ~~California~~the district.

Appendix 1 – Content of Performance Test Reports

Item number 4 has been clarified to specify that the results of performance test reports pursuant to subdivision (e) should be in units of milligrams/ampere-hour.

Appendix 2 – Content of Initial Compliance Status Reports

- Item number 2 has been clarified to specify that commercial/industrial and sensitive receptor distances can be derived from measurement methods in subparagraph (c)(11)(B).
- New item number 9 has been added to require applicable facilities to submit the test report for the initial smoke test demonstrating the capture efficiency of ventilation systems.
- Item number 10 has been clarified to say that hazardous air pollutants emitted by the source should be quantified in pounds.
- Item number 14 has been deleted since determining a facility's size has no reference or meaning in PAR 1469.
- New item number 15 has been added to require a facility operator to report the actual cumulative ampere-hour usage expended during the preceding calendar year if operations occurred during that year.
- New item number 16 has been added to require a statement that the owner or operator, or personnel designated by the owner or operator, has completed a District-approved training program pursuant to the requirements in paragraph (c)(7).

Appendix 3 – Content of Ongoing Compliance Status Reports

- Item number 8 has been modified to require reporting of hexavalent and trivalent chromium "emissions data" rather than "throughput data." The amount reported is also required to be in "grams" rather than "pounds".
- Item number 9 has been modified to provide sensitive receptor locations rather than distances from the facility. A statement has also been added that would require measurements to be made by using methods specified in subparagraph (c)(11)(B).
- New item number 13 has been added to require compliance and emission reports to contain the results from periodic smoke tests that are conducted during the reporting period to demonstrate the capture efficiency of the ventilation system(s).
- New item number 15 (PAR 1469) has been added to require a statement that the owner or operator, or personnel designated by the owner or operator, has completed a District-approved training program pursuant to the requirements in paragraph (c)(7).

Appendix 8 – Information Demonstrating an Alternative Method(s) of Compliance Pursuant to Paragraph (d)(6)

New Appendix 8 has been added to establish criteria for the owner or operator of a facility applying for approval of an alternative method of compliance.

Appendix 9 – Smoke Test to Demonstrate Capture Efficiency for Ventilation Systems of Add-on Air Pollution Control Devices Pursuant to Paragraph (e)(7)

This appendix has been added to establish smoke test methods for demonstrating capture efficiency for ventilation systems of add-on air pollution devices.

Appendix 10 was added to PAR 1469 and provides a surface tension measurement procedure when using a stalagmometer. The procedure is consistent with the one provided in the ATCM.

**PAR 1469 METHODS OF COMPLIANCE**

To comply with PAR 1469 and subsequently reduce the quantity of chromium emissions from electroplating and anodizing operations, operators of each facility will need to determine the appropriate compliance method based on the type of plating operation(s) and equipment configurations and whether or not air pollution control equipment is currently in place or required. There are five main ways for a facility to comply with PAR 1469: 1) mechanically suppressing mists at the surface of the tank; 2) suppressing fumes via the use of chemical fume suppressants; 3) venting tanks to new or modified air pollution control equipment; and, 4) replacing current operations with pollution prevention techniques (i.e., using alternative processes to hexavalent chrome plating). The following subsections discuss each of the potential methods for complying with PAR 1469.

Mist Suppression at Tank Surface

Applicable to both electroplating and anodizing, mist suppression is a low-cost, zero-energy, first-step method of suppressing heavy metal-bearing aerosols before they become entrained in ventilation air. Mist suppression or the act of minimizing the production of aerosols or wet particulates containing chrome and other heavy metals from escaping the metal plating or anodizing tanks can be accomplished by adding polyethylene balls, commonly referred to as polyballs. Polyballs are usually used in combination with a foam blanket to cover the wet surface of the bath. The layer of floating polyballs acts as a barrier that blocks mist from escaping above the tank surface. Tanks using polyballs remain fully functional with respect to work piece submergence and removal. The control efficiency of polyballs minimizes the generation of wet particulates from 50 to 80 percent.

Chemical Fume Suppressants

Another approach to reducing or suppressing chrome-laden mist or fumes at the surface of plating and anodizing baths is through the use of chemical fume suppressants. There are two basic types of chemical fume suppressants: wetting agents (surfactants) and foam blankets. A wetting agent chemical fume suppressant contains a surfactant, so that when it is added to a tank, the surface tension of the plating bath is lowered and the quantity of mist produced is reduced. The most common surfactant-based fume suppressants are fluorinated or perfluorinated because fluorine adds stability over a wide range of operating parameters and plating bath chemistries. Typically, wetting agent chemical fume suppressants can reduce emissions by 95 to 99 percent or more, depending on the surface tension of the plating bath.

The second type of chemical fume suppressant, foam blanket fume suppressants, control tank emissions differently from wetting agents. Instead of inhibiting the formation of mists, foam blanket fume suppressants create a foam layer that covers the surface of the bath and physically traps any mist that would otherwise be released. Foam blankets are initially generated from the agitation that occurs when the hydrogen and oxygen bubbles are generated during the plating process. In general, the effectiveness of the foam blanket is dependent on maintaining optimal blanket thickness which is typically in the range of 0.5 inch to one inch. If the foam blanket is too thin, the mists will not be adequately contained and if it becomes too thick, hydrogen gas will

get trapped and an extremely dangerous potential explosion hazard will result. On average, foam blanket fume suppressants are expected to reduce emissions by approximately 70 percent.

Table 1-4 contains a list of both wetting agent and foam blanket chemical fume suppressants whose control efficiencies have been approved by EPA.

**Table 1-4**
**Approved Control Efficiencies for Chemical Fume Suppressants**

| **Chemical Fume Suppressant** (Brand Name) | **Type of Chemical Fume Suppressant** | **Type of Metal Plating Activity** | **Control Efficiency** (%) |
|---|---|---|---|
| Fumetrol 101 | Foam Blanket | Hard | 95%* |
| Fumetrol 140 | Wetting Agent | Decorative; Hard; & Anodizing | 99% |
| Foam-Lok L | Foam Blanket | Hard | 95%* |
| Harshaw MSP-ST | Wetting Agent | Anodizing | 95% |
| Dis-Mist NP | Wetting Agent | Decorative | 99% |
| Zero-Mist Liquid | Wetting Agent | Decorative | 99% |

* This control efficiency is achieved with the combined use of chemical fume suppressant with polyballs.

Air Pollution Control Equipment

There are four types of air pollution control equipment available and currently in use for reducing emissions from metal plating and anodizing operations. They are HEPA filters, mist eliminators (mesh pad and chevron types), wet packed bed scrubbers, and totally enclosed tanks. The following discussion summarizes each type of control technology.

HEPA Filters

If one or more plating or anodizing tanks are connected to a ventilation system consisting of ductwork and blowers, the air can be routed to a series of filters to capture the dry toxic particulate emissions produced during metal finishing activities. The first filter or prefilter is designed to collect the larger particles entrained in the air stream and to prevent clogging of the filter system overall and to increase the longevity of the HEPA filter. After the prefilter, the air stream is routed through one or more HEPA filters, which are capable of trapping the smaller toxic particles associated with metal plating and anodizing activities. A HEPA filter is capable of collecting fine particles as small as 0.3 µm in diameter at an efficiency of 99.97 percent or greater.

The HEPA filter design consists of a pleated construction, which is similar to other filter designs available, but it is unique because the filter media is denser to capture smaller particles. HEPA filters are generally limited to handle airflow with an ambient temperature up to approximately 100 degrees Fahrenheit ($^{o}$F), though special applications for higher temperatures are available. However, since the temperatures of most plating and anodizing baths are well within the ambient temperature limit, most HEPA filters should be suitable for this type of application. In addition, with respect to maintenance, unlike other less efficient filter systems, HEPA filters are not automatically cleaned. When one HEPA filter element becomes loaded with particulate matter, it needs to be manually changed and disposed of as hazardous waste.

Mist Eliminators

There are two kinds of mist eliminators used to collect wet toxic particulates entrained in the air collected by tank ventilation systems, mesh pad and chevron type. A mesh pad resembles a screen that is made up of multiple layers of a fine woven plastic filament. As the exhaust air flows through the ventilation system towards the mesh pad, the wet droplets impact the mesh pad and fall out of the exhaust stream. The ability of a mesh pad to remove the wet particulates from the exhaust stream is dependent upon the particle size, air velocity as it travels through the ventilation system, the filament diameter of the mesh pad, the orientation and depth of the mesh pad(s) relative to the direction of the air flow. Mesh pads are capable of collecting fine particles as small as 5.0 µm in diameter.

In a typical arrangement, a mesh pad mist eliminator serves a single plating tank and is installed inside the ventilation system. The cross sectional area of the exhaust duct is increased by the unit, which reduces the velocity of the exhaust stream and allows the wet particulates to adhere to the mesh pad. Removal efficiency is increased by adding multiple stages of mesh pads. The pads are periodically washed down and the collected plating solution is returned to the plating bath.

Because of their design, mesh pads are ideal for chemical recovery purposes and for preventing corrosion of the ventilation system, especially for tanks that contain a caustic bath solution. Mesh pads are also used for controlling air pollutant emissions when used in combination with a wet packed bed scrubber system to remove wet particulates entrained in the tank exhaust air stream. However, a mesh pad cannot be used for both purposes when there are multiple exhaust streams (i.e., several tanks using multiple tank chemistries) directed to one or more mist eliminators. In this case, the wet particulates will be captured, but the chemicals cannot be recovered for reuse for future metal finishing activities.

A chevron mist eliminator contains several baffles that are arranged in a chevron or 'zigzag' pattern. As the mist-laden air travels through the device, it impacts the baffles and is forced to make several abrupt changes in direction between the entry and exit points of the mist eliminator. Since the wet particulates or mist droplets are much heavier than air molecules, they have too much linear momentum to make sharp turns without impacting a baffle. Each change in direction of the air flow forces the wet particulates to impact the baffles and drop out of the exhaust stream. Eventually a liquid film builds up on the baffles, large droplets coalesce and return to the metal finishing tank for reuse, thus, making the placement of a chevron mist eliminator at the exhaust point of a tank vent ideal for conserving process tank solutions. In addition, like mesh pad units, a chevron mist eliminator may also be used in combination with a wet packed bed scrubber to prevent excessive emissions of wet particulates.

Wet Packed Bed Scrubber

A wet packed bed scrubber is a device that forces air laden with wet particulates through a vertical column or bed filled with non-corrosive plastic packing media. Exhaust air from a plating or anodizing tank line enters at the bottom of the scrubber and exits at the top. As the air passes through the column, the wet particulates are impinged onto the packing media which is regularly sprayed with a scrubbing solution. Subsequently, the wet particulates are dissolved into the scrubbing liquor. Typically, the scrubbing solution is pumped from a reservoir at the base of the scrubber and sprayed down into the packing

from the top, in a counter-current flow. Plugging of the nozzles or too high of an acid concentration of the scrubbing solution can adversely affect the efficiency of the scrubber. To prevent these effects, some portion of the scrubbing solution is regularly purged and replaced with clean water. The purged solution is either sent to a pretreatment system for recovery or disposed of as hazardous waste. In addition, to increase removal efficiency, any wet particulates remaining in the exhaust air stream flow through a dewatering or demisting stage after the packed bed. Wet packed bed scrubbers can achieve high pollutant removal efficiencies, ranging from 90 to 98 percent depending on flow, residence (contact) time, and solution freshness.

Totally Enclosed Tanks

This technology, which is applicable only to hard chromium plating and chromic acid anodizing, uses a hinged tank cover to form a completely sealed system that contains chromic acid emissions within the enclosed tank area. Hydrogen gas and oxygen resulting from the plating process is vented through membranes in the cover. The membranes are sized to prevent passage of chromic acid mist or water vapor. While the cover is closed and after plating is completed, any chromic acid vapors lingering in the headspace between the cover and the tank surface will dissipate back into the tank after several minutes or the vapors can be evacuated through a small cartridge filter. Though the control efficiency is reported to be 100 percent, the applicability of this technology is limited to plating or anodizing activities that do not require an operator to closely monitor or interrupt the process to check on the product prior to completion of the metal finishing task.

In summary, to comply with PAR 1469, the appropriate type of air pollution control device depends on the desired product finish as it corresponds to the applicable plating or anodizing process, the chemistry of the metal finishing, and the operational needs of an affected facility. Table 1-5 summarizes the air pollution control devices with respect to their approximate control efficiencies.

**Table 1-5**
**Summary of Air Pollution Control Devices Used for Metal Plating**

| **Control Technology** | **Substance Type Controlled** | **Control Efficiency** (%) |
|---|---|---|
| HEPA filter (with prefilter) | Dry particulates | 99.9 - 99.99 % |
| Mist suppression via Polyballs | Aerosols (wet particulates) | 50 - 80* % |
| High-efficiency mist eliminator | Aerosols (wet particulates) | 99 - 99.9 % |
| Wet packed bed scrubber | Aerosols (wet particulates) | 90 - 98 % |

*This is a first stage control that is meant to be used in conjunction with another control device such as a wet packed bed scrubber or a mist eliminator.

Pollution Prevention

Emission reductions of hexavalent chromium and other metal finishing compounds can be achieved by implementing pollution prevention techniques such as using alternative plating processes or implementing process changes. Whenever feasible, replacing hexavalent chromium or other metals in plating activities with less toxic or non-toxic alternatives will have a net effect of reducing emissions from this industry. There are several processes that are potential alternatives to certain plating activities. However, the alternatives are not necessarily a universal solution for the entire plating industry because of the extensive specifications for each product

being fabricated. For example, the features of each alternative vary by parameters such as quality of finish, durability, hardness, abrasion and corrosion resistance, heat sensitivity, wear, size and shape of the product, and cost. The following discussion contains brief overviews highlighting some of the advantages and disadvantages of the various alternatives to hexavalent chrome plating and chromic acid anodizing. These alternatives pertain to compliance with PAR 1469 and pollution prevention that could voluntarily be implemented for other metal plating.

*Trivalent Chrome Plating*

The use of trivalent chromium in decorative applications has been proven to be a limited, but successful alternative for hexavalent chrome plating when finish thicknesses are required to be no greater than 0.1 millimeter (mm). Thicker finishes tend to cause problems with cracking and palling, so trivalent chromium is not considered a suitable replacement for hard chromium plating finishes, which are typically at least 20 mm thick. The following summarizes the advantages of trivalent plating over hexavalent chrome:

- Lower Concentrations of Metal – Metal concentrations of trivalent plating baths are typically lower than hexavalent chrome baths, which results in less quantities of hazardous waste to be treated, hauled away and disposed of as sludge, resulting in lower waste treatment costs overall.
- No Reduction Step – Because wastes containing hexavalent chrome must first be reduced or converted to trivalent chromium before disposal, large quantities of chemicals such as sulfur dioxide, metabisulfite or sodium borohydride are used for the conversion process. For example, three pounds of sodium metabisulfite are required for each pound of chromic acid converted to trivalent chrome. Therefore, with trivalent chrome plating eliminating the reduction step, the need for the additional chemicals plus the equipment and labor costs associated can also be eliminated.
- Higher Rack Densities – Rack density refers to the number of items that can be attached to the rack for submersion into a plating bath at any one time while maintaining a high quality finish. Trivalent chromium plating allows 15 percent more items than hexavalent chrome.
- Lower Current Density – For lower current flow, the trivalent chrome process can utilize less expensive racks with inexpensive drawn copper wire hooks in lieu of the more expensive custom parts racks used for hexavalent chrome plating.
- Fewer Rejects – The 'throwing power' or the ability of trivalent chrome to plate evenly and consistently is higher than for hexavalent plating, which reduces the number of rejected or improperly plated parts.
- Reduced Dragout – Because a trivalent bath solution is less viscous than hexavalent bath solutions, less plating solution clings to the parts when they are removed from the bath, resulting in lower costs for waste treatment and makeup chemicals.
- No Fumes – Unlike hexavalent plating, trivalent plating does not produce chromic acid fumes which are highly corrosive and present a potential health hazard to personnel and the surrounding environment.

Despite the many benefits to using the trivalent chrome process in place of hexavalent chrome, the main barrier for converting is customer acceptance because the color tones of the trivalent deposit are darker overall and the resulting finish is not as shiny. However, recent developments in new bath additives for the trivalent chrome processes have improved the finish so that it more closely resembles the look of hexavalent chrome. Also, the trivalent chromium process has a slightly higher cost and requires more careful control of plating conditions.

Electroless Nickel Phosphorous

The process of electroless nickel plating from conventional hypophosphite solutions has been considered as an alternative to using hexavalent chrome. However, its usefulness is limited due to the slightly poorer physical properties of the finish such as reduced hardness and abrasion resistance. The corrosion-resistance and wear properties are dependent upon the phosphorous content of the bath, which ranges from one to 12 percent.

As an alternative to hypophosphite solutions, electroless nickel deposits from borohydride solutions have shown better wear, lower friction, and improved hardness, though heat treatment is required to achieve full hardness. The electroless nickel process bath is more sensitive to impurities than the chrome plating bath. As a result, it must be monitored closely to maintain the proper concentrations and balance of the metal ions and reducing agents. In addition, the bath life is finite and requires frequent disposal and replenishment, especially for applying thick deposits. Deposition rates and coating properties are affected by temperature, pH, and metal ion-reducing agent concentrations.

As compared to hexavalent chromium, an advantage of electroless nickel plating is that it produces an even, albeit brittle, deposit over the contours of the substrate without producing excess buildup at the edges and corners. Thus, the need to overplate would be eliminated. However, if grinding is necessary to even out the nickel deposit, the brittle quality of the nickel layer may make it difficult to grind if the deposit layer is thick. Based on this and previously mention drawbacks, deposits of electroless nickel have limited industrial applications (e.g., for ground-based hydraulic component use), but it cannot be plated as cost effectively as hexavalent chrome.

Nickel-Tungsten Electroplating

There are two relatively new nickel tungsten-based electroplating processes available as potential alternatives to chrome plating: 1) nickel-tungsten boron (Ni-W-B); and, 2) nickel-tungsten silicon carbide composite (Ni-W-SiC). Both processes are electrolytic and deposit a coating of nickel and tungsten. The presence of small amounts of either boron or silicon carbide enhances the properties of the deposited coating.

A plating solution of nickel-tungsten-boron is mildly alkaline and far less toxic than chromium. It is reflective with an appearance similar to chromium, bright silver, or bright nickel. In addition, the coating has favorable chemical and abrasion resistance, high ductility, a low coefficient of friction, and a uniform finish. Unlike most metals that exhibit a crystalline structure at ambient temperatures, the alloy is structureless so that the plate replicates the appearance of the substrate. For instance, if the substrate has a bright appearance, so will the finish, but if the substrate is etched or patterned, the plated work piece will appear etched.

The nickel-tungsten silicon carbide composite technology has been patented by Takada Incorporated to replace hard chromium coatings. Nickel-tungsten silicon carbide is similar to nickel-tungsten-boron, except that it uses silicon carbide particles interspersed in the matrix to relieve internal stress and improve coating hardness. Nickel and tungsten ions become absorbed on the suspended silicon carbide particles in the plating solution.

The attached ions are then adsorbed on the cathode surface and discharged. The silicon carbide particle becomes entrapped in the growing metallic matrix.

The nickel-tungsten silicon carbide process has several advantages over hard chromium plating including higher plating rates, higher cathode current efficiencies, better throwing power, and better wear resistance. The main disadvantage of this process is its susceptibility to metallic and biological contamination. Much is still unknown about this process including its susceptibility to hydrogen embrittlement, fatigue, and corrosion as well as its maximum finish thickness, lubricity, grinding characteristics, and facility requirements.

Both alternatives use less energy to operate the rectifiers and heaters, resulting in reduced energy costs when compared to hexavalent chrome plating. Like electroless nickel plating, the deposits are more uniform than chrome which in turn increases plating line throughput and reduces the rate of rejection. The nickel-tungsten electroplating process produces many of the same desirable physical properties as chrome plating, but it isn't commonly used because additional performance testing is needed. The major disadvantages of nickel-tungsten electroplating are the reliance on nickel and the potential increase in chemical costs.

Tin-Cobalt Alloy

Tin-cobalt alloys provide a finish that is similar in appearance to chromium. The tin-cobalt appearance ranges in color from a bright, chromium appearance to a warm, silvery gray color. Color is controlled by varying the percent of tin in the alloy. To achieve the appearance of a chromium plate, the optimal tin-cobalt ratio in solution is 50:50. This ratio results in a plate that consists of 80 percent tin and 20 percent cobalt. Reducing the cobalt content of the plate below 17 percent results in a matte gray appearance. Additional operating parameters include a pH of approximately 8.5 and an operating temperature ranging between 38 and 43 degrees Celsius. The tin-cobalt finish provides hardness and wear-resistance that is sufficient for most indoor, decorative applications. The process, either in rack or barrel operations, uses an alkaline sulfate system with optional wetter/amine-based liquid brighteners. Current applications of this plating alternative for chromium include automotive interior parts, computer components, bicycle spokes, flexible shower hoses, and screws.

Tin-Nickel Alloy

Tin-nickel alloy plating results in a faint rose pink color and can be used as a replacement for decorative chromium plating for both indoor and outdoor applications. This alloy is resistant to corrosion and tarnish and has good contact and wear resistance. The hardness of a tin-nickel deposit ranges between chromium and nickel. Other advantages of this coating include excellent frictional resistance and ability to retain an oil film on its surface. Tin-nickel alloy plating solutions have a high throwing power, which enables the solution to function where plating chromium in deep recesses is a problem.

Aluminum Ion Vapor Deposition

Ion vapor deposition (IVD) produces a multi-purpose coating that has excellent corrosion protection and no embrittlement problems. This technology has been used as an alternative to chromium coating in several applications. Extensive testing has shown that IVD aluminum protects substrates better than electroplated or vacuum-deposited

chromium in acetic salt fog and outdoor environments. IVD also provides greater resistance to cracking.

Type II Sulfuric Acid Anodizing

The results of a National Aeronautics and Space Administration (NASA) study indicate that in applications where anodizing is used to impart corrosion protection on aluminum, Type II sulfuric acid anodizing is superior to Type I chromic acid anodizing.

Chemical suppliers claim that converting from chromic acid anodizing to sulfuric acid anodizing is not a simple chemical substitution. Instead, the process requires a complete change of the anodizing equipment with partial modifications to downstream waste treatment facilities. Due to the differences in the acidity levels of sulfuric acid and chromic acid, replacement of the anodizing tank is typically required. Further, sulfuric acid anodizing processes also have different voltage and amperage requirements, necessitating replacement of the rectifier. The operating temperature of the electrolytic bath is different for the two processes such that the chromic process is steam heated and maintained at an operating temperature ranging between 90 and 100 $^{o}$F, whereas the sulfuric acid process is chilled with cooling water to an operating temperature ranging between 45 and 70 $^{o}$F.

Operation and maintenance costs tend to be much lower for sulfuric acid anodizing than for chromic acid because of lower energy requirements. Wastewater treatment costs are also lower because the sulfuric acid process only requires the removal of copper, whereas chromic acid requires more complex chrome reduction techniques. The change in materials also means that the cost of sludge disposal is greatly reduced.

Table 1-6 summarizes the several alternative processes to hexavalent chromium electroplating. Each of the alternatives may have limited application, but are potential strategies available to facilities to reduce hexavalent chromium emissions from the metal finishing industry.

**Table 1-6**
**Summary of Alternative Processes ***

| Alternative Process | Advantages | Disadvantages |
|---|---|---|
| Trivalent Chromium (Cr+3) | • Nontoxic<br>• Lower concentrations needed<br>• Less chemicals used – less waste<br>• No fumes<br>• Higher throughput of final product | • Less durable finish than Cr+6<br>• Color difference<br>• Limited to decorative applications |
| Electroless Nickel Phosphorus | • Less toxic<br>• More uniform finish than Cr+6<br>• No need to overplate<br>• Appropriate for use in ground-based hydraulic components | • Lower hardness & abrasion resistance<br>• May require heat treatment for hardness<br>• Process bath sensitive to impurities |
| Nickel-Tungsten Electroplating | • Less toxic<br>• More uniform finish than Cr+6<br>• Lower energy costs than Cr+6 | • Potentially higher chemical costs |
| Tin-Cobalt Alloy | • Less toxic<br>• Similar finish to Cr+6<br>• Appropriate for indoor decorative applications | • Lower hardness & wear resistance |
| Tin-Nickel Alloy | • Less toxic<br>• Hardness between chromium & nickel<br>• Good corrosion & tarnish resistance<br>• Good wear resistance<br>• Appropriate for indoor & outdoor use | • Limited to decorative applications |
| Aluminum Ion Vapor Deposition (IVD) | • Less toxic<br>• Excellent corrosion resistance<br>• Appropriate for outdoor use<br>• Good resistance to cracking | • Extremely expensive<br>• Likely for highly specialized military or commercial aerospace applications |

*The alternative processes identified in this table may be considered pollution prevention techniques for chrome and Hexavalent Chromium Emissions From Chromium Electroplating and Chromic Acid Anodizing Operations other metals.

# CHAPTER 2 - ENVIRONMENTAL CHECKLIST

**Introduction**

**General Information**

**Environmental Factors Potentially Affected**

**Determination**

**Environmental Checklist and Discussion**

# INTRODUCTION

The environmental checklist provides a standard evaluation tool to identify a project's potential adverse environmental impacts. This checklist identifies and evaluates potential adverse environmental impacts that may be created by the proposed project.

# GENERAL INFORMATION

| | |
|---|---|
| **Project Title:** | Proposed Amended Rule 1469 – Hexavalent Chromium Emissions From Chromium Electroplating and Chromic Acid Anodizing Operations |
| **Lead Agency Name:** | South Coast Air Quality Management District |
| **Lead Agency Address:** | 21865 Copley Drive, Diamond Bar, CA 91765 |
| **CEQA Contact Person:** | Ms. Barbara Radlein (909) 396-2716 |
| **Rule 1469 Contact Person** | Ms. Cheryl Marshall (909) 396-2567 |
| **Project Sponsor's Name:** | South Coast Air Quality Management District |
| **Project Sponsor's Address:** | 21865 Copley Drive, Diamond Bar, CA 91765 |
| **General Plan Designation:** | Not applicable |
| **Zoning:** | Not applicable |
| **Description of Project:** | The objective of PAR 1469 is to further reduce the quantity of hexavalent chromium emissions and the associated cancer risk from the metal finishing industry by incorporating the latest amendments to the Airborne Toxic Control Measure (ATCM) for Chromium Plating and Chromic Acid Anodizing Operations, as adopted by the California Air Resources Board (CARB) on October 24, 2007. For example, facility operators will be required to comply with a hexavalent chromium emission rate of 0.0015 milligram per ampere-hour (mg/amp-hr) for modified facilities and 0.0011 mg/amp-hr for new facilities. In addition, PAR 1469 would prohibit siting and constructing new facilities within 1,000 feet of sensitive receptors, schools (proposed and existing), and areas zoned for residences and mixed uses. Other changes are proposed that include: 1) a broader definition of sensitive receptor; 2) more stringent surface tension requirements for certifying fume suppressants; 3) more stringent housekeeping practices; and, 4) a prohibition of sale, supply, or manufacture of chromium electroplating or chromic acid anodizing kits to unpermitted facilities. Other minor changes are proposed for clarity and consistency throughout the rule. PAR 1469 is estimated to reduce hexavalent chromium emissions by 40 percent, resulting in a reduction of cancer risk for most chrome plating facilities to less than 25 in a million. The environmental analysis in the ~~Draft~~ Final EA concluded that PAR 1469 would not generate any significant adverse environmental impacts. |
| **Surrounding Land Uses and Setting:** | Not applicable |
| **Other Public Agencies Whose Approval is Required:** | Not applicable |

# ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The following environmental impact areas have been assessed to determine their potential to be affected by the proposed project. As indicated by the checklist on the following pages, environmental topics marked with a "✓" may be adversely affected by the proposed project. An explanation relative to the determination of impacts can be found following the checklist for each area.

| | | |
|---|---|---|
| ☐ Aesthetics | ☐ Agriculture Resources | ☑ Air Quality |
| ☐ Biological Resources | ☐ Cultural Resources | ☑ Energy |
| ☐ Geology/Soils | ☑ Hazards & Hazardous Materials | ☑ Hydrology/ Water Quality |
| ☐ Land Use/Planning | ☐ Mineral Resources | ☐ Noise |
| ☐ Population/Housing | ☐ Public Services | ☐ Recreation |
| ☑ Solid/Hazardous Waste | ☑ Transportation/ Traffic | ☑ Mandatory Findings of Significance |

## DETERMINATION

On the basis of this initial evaluation:

☑ I find the proposed project, in accordance with those findings made pursuant to CEQA Guideline §15252, COULD NOT have a significant effect on the environment, and that an ENVIRONMENTAL ASSESSMENT with no significant impacts will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will NOT be significant effects in this case because revisions in the project have been made by or agreed to by the project proponent. An ENVIRONMENTAL ASSESSMENT with no significant impacts will be prepared.

☐ I find that the proposed project MAY have a significant effect(s) on the environment, and an ENVIRONMENTAL ASSESSMENT will be prepared.

☐ I find that the proposed project MAY have a "potentially significant impact" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL ASSESSMENT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL ASSESSMENT pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL ASSESSMENT, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

**Date:** October 8, 2008 **Signature:** Steve Smith

Steve Smith, Ph.D.
Program Supervisor

**ENVIRONMENTAL CHECKLIST AND DISCUSSION**

Because the objective of PAR 1469 is to further reduce the cancer risk associated with hexavalent chromium emissions from the metal finishing industry by establishing additional, more stringent requirements for chrome plating and chromic acid anodizing processes, PAR 1469 is expected to reduce the cancer risk for most chrome plating facilities to less than 25 in one million ($25 \times 10^{-6}$). Specifically, PAR 1469 would supplement the current emission limit requirements for chrome plating pursuant to the NESHAP promulgated in 40 CFR Part 63, Subpart N, National Emission Standards for Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks, by reducing the cancer risk at most of the affected facilities to below 25 in one million ($25 \times 10^{-6}$). The responses to the following checklist items focus on the assumption that mechanical and chemical fume suppressants and add-on control equipment (i.e., HEPA filtration systems) would be used to comply with the requirements of PAR 1469, depending on the specific type of metal finishing operation being controlled.

It is important to note that the basis for estimating the number of HEPA filtration systems, the number of HEPA filters needed, and the projected usage of chemical fume suppressants was derived from a combination of facility data with worst-case assumptions, when actual data were not available. Thus, the estimates are conservative to the extent that the actual numbers of add-on controls and fume suppressant usage are expected to be less than the calculated amounts. Further, the availability of alternative compliance options in PAR 1469 is also expected to further reduce the actual number of add-on controls below the calculated values analyzed in this document. It is important to note that there are 82 facilities that already comply with the requirements in PAR 1469 and therefore, will not need to install add-on pollution control equipment. Thus, these facilities are excluded from the analysis of indirect impacts resulting from the installation of air pollution control equipment.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **I.** | **AESTHETICS.** Would the project: | | | |
| a) | Have a substantial adverse effect on a scenic vista? | ☐ | ☐ | ☑ |
| b) | Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | ☐ | ☐ | ☑ |
| c) | Substantially degrade the existing visual character or quality of the site and its surroundings? | ☐ | ☐ | ☑ |
| d) | Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | ☐ | ☐ | ☑ |

**Significance Criteria**

The proposed project impacts on aesthetics will be considered significant if:

- The project will block views from a scenic highway or corridor.
- The project will adversely affect the visual continuity of the surrounding area.
- The impacts on light and glare will be considered significant if the project adds lighting which would add glare to residential areas or sensitive receptors.

**Discussion**

**I.a), b), c) & d)** The proposed project would regulate chromium emissions from approximately 65 chromium electroplating and chromic acid anodizing facilities throughout the District. For affected facilities that do not currently meet the more stringent rule requirements, the expected options for compliance are the use of mechanical and chemical fume suppressants and add-on control equipment (i.e., HEPA filtration systems).

The proposed project would not result in any new construction of buildings or other structures that would obstruct scenic resources or degrade the existing visual character of a site, including but not limited to, trees, rock outcroppings, or historic buildings. Similarly, additional light or glare would not be created which would adversely affect day or nighttime views in the area since no light generating equipment would be required to comply with PAR 1469. Further, any installation of HEPA filtration systems at the existing facilities, either inside or outside the existing building(s), would not appreciably change the visual profile of the affected building(s).

Based upon these considerations, significant adverse aesthetics impacts are not anticipated and will not be further analyzed in this ~~Draft~~ Final EA. Since no significant aesthetics impacts were identified, no mitigation measures are necessary or required.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **II.** | **AGRICULTURE RESOURCES.** Would the project: | | | |
| a) | Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | ☐ | ☐ | ☑ |
| b) | Conflict with existing zoning for agricultural use, or a Williamson Act contract? | ☐ | ☐ | ☑ |
| c) | Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | ☐ | ☐ | ☑ |

**Significance Criteria**

Project-related impacts on agricultural resources will be considered significant if any of the following conditions are met:

- The proposed project conflicts with existing zoning or agricultural use or Williamson Act contracts.
- The proposed project will convert prime farmland, unique farmland or farmland of statewide importance as shown on the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, to non-agricultural use.
- The proposed project would involve changes in the existing environment, which due to their location or nature, could result in conversion of farmland to non-agricultural uses.

**Discussion**

**II.a), b), & c)** The proposed project would regulate chromium emissions from approximately 65 chromium electroplating and chromic acid anodizing operations throughout the District. For affected facilities that do not currently meet the more stringent rule requirements, the expected options for compliance are the use of mechanical and chemical fume suppressants, and add-on control equipment (i.e., HEPA filtration systems).

The proposed project would not result in any new construction of buildings or other structures that would convert farmland to non-agricultural use or conflict with zoning for agricultural use or a Williamson Act contract. Further, any installation of HEPA filtration systems at the existing facilities, either inside or outside the existing building(s), would not require converting farmland to non-agricultural uses because equipment would be installed completely within the confines of an affected industrial facility's boundaries.

Based upon these considerations, significant agricultural resource impacts are not anticipated and will not be further analyzed in this ~~Draft~~ Final EA. Since no significant agriculture resources impacts were identified, no mitigation measures are necessary or required.

| | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|
| **III. AIR QUALITY.** Would the project: | | | |
| a) Conflict with or obstruct implementation of the applicable air quality plan? | ☐ | ☐ | ☑ |
| b) Violate any air quality standard or contribute to an existing or projected air quality violation? | ☐ | ☑ | ☐ |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)? | ☐ | ☑ | ☐ |
| d) Expose sensitive receptors to substantial pollutant concentrations? | ☐ | ☑ | ☐ |

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| e) | Create objectionable odors affecting a substantial number of people? | ☐ | ☑ | ☐ |
| f) | Diminish an existing air quality rule or future compliance requirement resulting in a significant increase in air pollutant(s)? | ☐ | ☐ | ☑ |

**III.a)** PAR 1469 is being implemented to incorporate the latest amendments to the ATCM and to further reduce chromium emissions and the cancer risk from chromium electroplating and chromic acid anodizing operations. Although the proposed project does not implement control measures in the SCAQMD's AQMP, PAR 1469 does, however, implement CARB's ATCM for chromium electroplating and chromic acid anodizing operations. In addition, the proposed project is consistent with the air quality improvement goals of the AQMP because it is expected to contribute to the overall improvement of localized air quality by reducing TAC emissions and the cancer risk from affected facilities. Some TAC emissions at affected facilities are also considered to be comprised of particulate matter (PM) emissions and, as such, PAR 1469 would also contribute to reducing PM emissions. Therefore, implementing PAR 1469 is a beneficial effect such that it will not be further analyzed in this ~~Draft~~ Final EA.

**III.b) & c)** The objective of the proposed project is to reduce hexavalent chromium emissions and exposure to hexavalent chromium from chromium electroplating and chromic acid anodizing operations. However, the implementation of PAR 1469, with respect to the use of chemical fume suppressants and add-on controls could create both direct and indirect air quality impacts. These impacts are discussed separately as follows.

**Air Quality Significance Criteria**

To determine whether or not air quality impacts from adopting and implementing the proposed amendments are significant, impacts will be evaluated and compared to the criteria in Table 2-1. The project will be considered to have significant adverse air quality impacts if any one of the thresholds in Table 2-1 are equaled or exceeded.

**Direct Air Quality Impacts**

PAR 1469 is estimated to reduce the cancer risk at most of affected facilities to below 25 in one million ($25 \times 10^{-6}$). Based on an evaluation of inventories of facilities that would be subject to PAR 1469, the universe is comprised of about 137 facilities with a total of 271 tanks distributed as follows: 1) 34 facilities with 130 hard chromium tanks; 2) 68 facilities with 84 decorative chromium tanks; 3) 32 facilities with 38 chromic acid anodizing tanks; and, 4) three facilities that conduct multiple plating operations with 12 hard chromium tanks, three decorative chromium tanks, and four chromic acid anodizing tanks. Further, approximately 68 facilities with 102 tanks will be required to meet a minimum emission limit of 0.0015 mg/amp-hr, distributed as follows: 1) 9 facilities have 29 hard chromium tanks; 2) 38 facilities have 45 decorative chromium tanks; 3) 20 facilities have 24 chromic acid anodizing tanks; and 4) one facility conducts multiple chromium electroplating processes with three decorative chromium electroplating tanks and one chromic acid anodizing tank. There are 12 facilities with 23 tanks vented to 13 existing air pollution control devices that may need to be redesigned or upgraded to

**Table 2-1**

**Air Quality Significance Thresholds**[6]

| **Mass Daily Thresholds** | | |
|---|---|---|
| **Pollutant** | **Construction** | **Operation** |
| NOx | 100 lbs/day | 55 lbs/day |
| VOC | 75 lbs/day | 55 lbs/day |
| PM10 | 150 lbs/day | 150 lbs/day |
| PM2.5 | 55 lbs/day | 55 lbs/day |
| SOx | 150 lbs/day | 150 lbs/day |
| CO | 550 lbs/day | 550 lbs/day |
| Lead | 3 lbs/day | 3 lbs/day |
| **Toxic Air Contaminants and Odor Thresholds** | | |
| Toxic Air Contaminants (TACs)<br>Accidental Release of Acutely Hazardous Materials (AHMs) | MICR $\geq$ 10 in 1 million ; HI $\geq$ 1.0 (project increment)<br>CAA §112(r) threshold quantities | |
| Odor | Project creates an odor nuisance pursuant to SCAQMD Rule 402 | |
| **Ambient Air Quality for Criteria Pollutants** **(a)** | | |
| NO2<br><br>1-hour average<br>annual average | SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards:<br>0.25 ppm (state)<br>0.053 ppm (federal) | |
| PM10<br>24-hour average<br><br>annual geometric average<br>annual arithmetic mean | 10.4 $\mu g/m^3$ (construction) **(b)** & 2.5 $\mu g/m^3$ (operation)<br><br>1.0 $\mu g/m^3$<br>20 $\mu g/m^3$ | |
| PM2.5<br>24-hour average | 10.4 $\mu g/m^3$ (construction) **(b)** & 2.5 $\mu g/m^3$ (operation) | |
| Sulfate<br>24-hour average | 1 $ug/m^3$ | |
| CO<br><br>1-hour average<br>8-hour average | SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards:<br>20 ppm (state)<br>9.0 ppm (state/federal) | |

**(a)** Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.

**(b)** Ambient air quality threshold based on SCAQMD Rule 403.

KEY: MICR = maximum individual cancer risk; HI = Hazard Index; $ug/m^3$ = microgram per cubic meter; ppm = parts per million; AHM = acutely hazardous material; TAC = toxic air contaminant

meet the more stringent emissions limits in PAR 1469. In addition, there is one facility with 13 enclosed hard chromium tanks that may need redesigned or upgraded controls in order to meet the 0.0015 mg/amp-hr limit. The remaining 55 facilities with 66 tanks currently only have in-tank controls and may need to install approximately 56 air pollution control systems in order to

[6] CEQA Air Quality Handbook, SCAQMD, November 1993.

meet the 0.0015 mg/amp-hr limit. Consequently, reducing the cancer risk at the majority of these facilities will provide an air quality benefit and public health benefit.

Direct air quality impacts of amending PAR 1469 would result from the reduction of the risk levels. Lowering toxic risk at affected facilities will provide air quality and human health benefits to the public, such as reducing cancer and non-cancer risks.

**Indirect Air Quality Impacts**

The installation and operation of add-on air pollution control equipment and the use of chemical fume suppressants can potentially create secondary or indirect air quality impacts (e.g., emissions), which can adversely affect local and regional air quality. A project generates emissions both during the period of its construction and through ongoing daily operations. During installation of new add-on air pollution control devices, emissions may be generated by onsite construction equipment and by offsite vehicles used for worker commuting. After construction activities are completed, emissions may be generated by the operation of the add-on air pollution control devices, emissions generated from the use of chemical fume suppressants, or a combination of the two.

Assumptions Based on Incremental Number of Add-on Pollution Control Equipment

An affected facility operator may opt to install add-on air pollution control equipment in order to achieve the applicable emission limit or to meet the applicable cancer risk relative to the residential or sensitive receptor distance as required by PAR 1469. Though there are several types of add-on controls commercially available, for the purpose of calculating a "worst-case" impact versus the achievable control efficiencies, this document assumes that all of the air pollution control devices to be installed as a result of PAR 1469 will be HEPA filtration systems. The total estimated number of air pollution control systems to be installed was determined by the number of existing tanks at each of the 137 affected facilities. Of the 68 facilities required to meet an emission rate of 0.0015 mg/amp-hr, operators of 65 facilities are expected to either install new air pollution control devices or retrofit their existing air pollution control devices.

To estimate the "worst-case" construction- and operational-related emissions associated with the implementation of PAR 1469, the following assumptions were made. Refer to Appendix B for the assumptions used to estimate indirect construction- and operational-related air quality impacts.

Of the 137 affected facilities with 271 tanks, there are 55 facilities with 66 tanks that currently only have in-tank controls. For this reason, these facility operators are expected to install approximately 56 new HEPA systems and dismantle or replace/retrofit 11 existing air pollution control systems in order to meet the 0.0015 mg/amp-hr emission rate. Of the 56 new HEPA systems, only 54 HEPA systems would be required by PAR 1469 to be constructed in compliance year 2009. Based upon available information, the remaining 82 affected facilities already comply with the PAR 1469 requirements and will not need to install add-on pollution control equipment. Therefore, these facilities are excluded from the analysis of indirect impacts resulting from installation of pollution control equipment.

The estimated the number of add-on pollution control equipment that is expected to be installed pursuant to PAR 1469 is based on the assumption that the 55 facilities will install a total of 56 new air pollution control systems and r replace/retrofit 11 existing air pollution control systems.

Based on the type of plating that occurs at the affected facilities, Table 2-2 summarizes the size of the HEPA filtration systems relative to the ventilation rate or air flow throughput. Refer to Appendix B for the assumptions and methodology for determining the designed ventilation rate for the HEPA filtration systems.

**Table 2-2**
**Estimated Number of HEPA Systems Needed Per Designed Ventilation Rate**

| Type of Plating Tank | No. of HEPA Systems Needed per Designed Ventilation Rate | | |
|---|---|---|---|
| | 5,000 cfm | 10,000 cfm | 20,000 cfm |
| Hard | 5 new<br>1 retrofit | N/A | 1 new<br>1 retrofit |
| Decorative | 31 new<br>2 retrofit | 2 new<br>1 retrofit | 2 new<br>N/A retrofit |
| Anodizing | 13 new<br>4 retrofit | 2 new<br>N/A retrofit | N/A |
| Combination* | N/A new<br>1 retrofit | N/A | N/A new<br>1 retrofit |
| **Total** | **57** | **5** | **5** |

* Multiple Plating Processes with any combination of hard, decorative and anodizing operations.
cfm = cubic feet per minute
N/A means that there are no equipment in this category.

Construction Assumptions

Construction-related emissions can be distinguished as either onsite or offsite. Onsite emissions generated during construction principally consist of exhaust emissions (NOx, oxides of sulfur (SOx), carbon monoxide (CO), VOC, PM10 and PM2.5) from heavy-duty construction equipment operation, PM10 and PM2.5 from fugitive dust resulting from disturbed soil, and VOC emissions from asphaltic paving and painting. Offsite emissions during the construction phase normally consist of exhaust emissions and entrained paved road dust as PM10 and PM 2.5 from worker commute trips, material delivery trips, and haul truck material removal trips to and from the construction site.

With respect to PAR 1469, no construction emissions from grading are anticipated because installation of new air pollution control equipment (i.e., HEPA filtration systems) and the dismantling of existing air pollution control equipment would occur at existing industrial/commercial facilities and, therefore, would not require activities such as digging, earthmoving, grading, slab pouring, or paving. The type of construction-related activities attributable to facilities that would be dismantling existing scrubbers and/or installing new HEPA filtration systems would consist predominantly of cutting, welding, et cetera. Activities during construction that could potentially adversely affect air quality are those activities associated with the installation of new and the dismantling of existing air pollution equipment, including the truck deliveries of equipment and the truck transport trips to remove the dismantled equipment.

PAR 1469 requires compliance with the emission limit for metal plating activities with tanks vented to air pollution control equipment to occur by October 24, 2009, October 24, 2010 or October 24, 2011 depending on the distance to the nearest sensitive receptor and the annual permitted ampere-hours. However, before construction can begin, each facility will be required

to apply for and receive an approved permit to construct. Therefore, from the time each affected facility applies for and receives a permit, it is assumed that each affected facility will have approximately six to nine months for the 2009 compliance date and one year for the 2010 and 2011 compliance dates to construct their HEPA filtration system and dismantle any existing air pollution control equipment, as applicable, in order to comply with PAR 1469.

- For calculating peak daily "worst-case" construction emissions, it is assumed that facility operators will construct 54 HEPA filtration systems within the 10 months following the adoption of PAR 1469 (in year 2009).
- To derive the peak construction-related activities, the 54 add-on controls for the "worst-case" was divided by a two-week construction period to yield a maximum of 27 add-on controls that could be installed during any month and four in any day. This "worst-case" assumption is based on the fact that some facility operators may delay submitting their applications in accordance with the compliance timelines, the total number of permits received at any one time, the SCAQMD's permitting resources, and the availability of contractors to install the add-on controls.
- It is assumed that the combination of installing new equipment and subsequently dismantling existing equipment may take two weeks. The estimated period of two weeks represents a conservative estimate for all facilities that are expected to undergo construction alone or construction and dismantling, as applicable.
- It is assumed that the installation for every add-on control device requires the use of one air compressor and welder that operate four hours per day.
- It is assumed that each add-on control requires a construction crew consisting of four members.

Construction Emissions

The total amount of construction emissions are generated from combustion emissions from construction equipment operating onsite and the workers' offsite vehicle trips. The assumptions used to derive estimates for offsite or mobile source emission increases are based on worker/power resources and hours required to deliver and install a typical HEPA filtration system and to dismantle and haul away an existing system. Assuming a five-day week at four hours per day, the construction project would require four workers per day. Using a 1.0 vehicle occupancy, the labor force would generate approximately four one-way vehicle trips per day for a total of eight round-trip vehicle trips for every facility undergoing construction activities. Assuming an estimated 40-mile round trip each day per vehicle and 80-mile round trip per day for delivery/haul away truck trips, the total daily offsite worker's commute travel emissions that would be attributed to construction-related activities for installing four HEPA filtration systems in any one day are approximately 22 pounds of NOx, six pounds of VOC, 21 pounds of CO, 0.01 pound of SOx, two pounds of PM10 and one pound of PM2.5. To exceed the peak daily significance thresholds for construction emissions, almost 20 facilities would have to undergo construction activities simultaneously. However, based on the aforementioned assumptions, it is highly unlikely that this many facility would undergo construction simultaneously. Refer to Appendix B for the calculations used to estimate offsite mobile source emissions.

Table 2-3 presents the results of the SCAQMD's construction air quality analysis. It lists the total peak daily construction emissions from construction worker trips and use of equipment during the installation of new and the dismantling of existing control devices. The calculations demonstrate that the total daily construction emissions would not generate emissions that exceed the SCAQMD's CEQA air quality thresholds for construction emission significance of 100 pounds per day of NOx, 75 pounds per day of VOC, and 550 pounds per day of CO and 150

pounds of PM10 as discussed in the SCAQMD's CEQA Air Quality Handbook (November 1993). Therefore, air quality impacts from construction emissions are considered to be not significant. Appendix B contains the spreadsheets with the results and assumptions used by the SCAQMD for this analysis.

**Table 2-3**
**Peak Daily Construction Emissions**
(in pounds per day)

| Peak Construction Activity | CO (lb/day) | VOC (lb/day) | NOx (lb/day) | SOx (lb/day) | PM10 (lb/day) | PM2.5 (lb/day) |
|---|---|---|---|---|---|---|
| Onsite Emissions* | 9.52 | 4.00 | 8.28 | 0 | 0.92 | 0.84 |
| Offsite Emissions** | 11.84 | 1.84 | 14.20 | 0.04 | 0.72 | 0.60 |
| Total Offsite and Onsite | **21** | **6** | **22** | **0** | **2** | **1** |
| **SIGNIFICANCE THRESHOLD** | 550 | 75 | 100 | 150 | 150 | 55 |
| **SIGNIFICANT?** | **NO** | **NO** | **NO** | **NO** | **NO** | **NO** |

* Construction Activities
** Worker Commute

Operational Assumptions for HEPA Filtration Systems

Day to day operation of new HEPA filtration systems does not rely on natural gas for power and thus does not have the potential to generate significant adverse secondary air quality impacts due to combustion. However, because trucks are used to transport the spent HEPA filters for disposal as hazardous waste, emissions from truck exhaust may contribute to adverse secondary air quality operation impacts. It is important to keep in mind that the toxic and hazardous nature of the products used by the metal finishing industry contain toxic and hazardous materials, meaning that facilities affected by PAR 1469 currently follow procedures for the process, storage, transport, and disposal of hazardous waste via truck trips. Based on facility data combined with conservative estimates when data were not available, of the 56 new add-on control devices to be installed and the 11 existing air pollution control systems to be retrofitted, a total of 492 HEPA filters are estimated to be needed on an annual basis. Manufacturer recommendations suggest the replacement of HEPA filters should occur anywhere from once a year to once every two years, depending on the loading or throughput. For a "worst-case" analysis, it is assumed that each HEPA filtration system will require replacement of its HEPA filters once per year, which means that each facility will have a maximum disposal rate of six HEPA filters per year for a 5,000 cfm system, 12 HEPA filters per year for a 10,000 cfm system, and 18 filters per year for a 20,000 cfm system. With a typical dimension of one HEPA filter at approximately two feet wide by two feet long by four inches deep or 1.3 cubic feet, disposal size of HEPA filters per year equates to approximately 7.8 cubic feet of hazardous waste per 5,000 cfm system, 15.6 cubic feet per 10,000 cfm system, and 23.4 cubic feet per 20,000 cfm system. For all 67 HEPA systems expected to be installed or retrofitted, the total annual disposal of HEPA filters is estimated to be 640 cubic feet.

Therefore, because the replacement and disposal frequency of the HEPA filters is calculated to be relatively low (e.g. between six and 18 per system per year), it is not practical or likely that each facility will arrange for a separate transport trip uniquely for the purpose of disposing the spent HEPA filters. Instead, the spent HEPA filters are expected to be included as part of the

same number of truck trips that each facility currently has scheduled to dispose of the other hazardous wastes generated on-site from the plating and anodizing process chemistries. With no change to the current setting as it pertains to the delivery schedule for trucks to pick up and dispose the collected additional hazardous waste (as HEPA filters) expected, no increase in operational emissions due to the disposal of spent HEPA filters is anticipated as a result of implementing PAR 1469. However, for every spent HEPA filter, a new replacement would be required. Therefore, 492 fresh HEPA filters would need to be delivered to 65 facilities in a given year. Given the number of work days in a year and the fact that only 65 facilities would require replacement HEPA filters, it is unlikely that more than one delivery trip per day will occur. However, to be consistent with the construction analysis for a conservative worst-case day, four delivery trips per day were assumed to occur. Therefore, to account for the additional deliveries, a maximum of one truck delivery trip per day at 80 miles round trip is assumed for this analysis. Based on this scenario of a maximum of four heavy-duty truck trips per day, the total daily offsite travel emissions that would be attributed to HEPA filter deliveries are approximately: 13.4 pounds of NOx, one pound of VOC, four pounds of CO, 0.04 pound of SOx, one pound of PM10 and one pound of PM2.5. Refer to Appendix B of this document for the assumptions and calculations.

Operation Emissions from Chemical Fume Suppressants

Based on facility data combined with conservative estimates when data were not available for the universe of sources, one tank at one facility is estimated to begin using a certified fume suppressant to comply with PAR 1469. (Most of the facilities subject to PAR 1469 already use certified fume suppressants.) PAR 1469 does not specify the use of any particular chemical fume suppressant. Based on the product material safety and data sheets (MSDS), the majority of the chemical fume suppressants that are expected to be used by the metal plating industry to comply with PAR 1469 consist mostly of water and surfactants, but may also contain a small quantity VOCs (i.e., no more 50 grams of VOC per liter of material). Further, the MSDS sheets indicate that none of the chemical fume suppressants currently available on the market contain any ozone depleting compounds or global warming compounds. Thus, use of these products would not be subject to additional permitting or regulatory requirements other than the certification requirements proposed in PAR 1469. For the one facility that is expected to start using chemical fume suppressants, an increase of approximately 0.004 pound per day of VOCs is expected. Refer to Appendix B of this document for the assumptions and calculations.

Total Operation Emissions

Table 2-4 presents the results of the SCAQMD's operation air quality analysis. It lists the total daily operation emissions from four deliveries of fresh HEPA filters to four facilities in one day and the use of chemical fume suppressants at one facility. Again, the calculations demonstrate that the total daily operation emissions would not generate emissions that exceed the SCAQMD's CEQA air quality thresholds for construction emission significance of 55 pounds per day of NOx, 55 pounds per day of VOC, 550 pounds per day of CO, 150 pounds of PM10 and 55 pounds per day of PM2.5 as discussed in the SCAQMD's CEQA Air Quality Handbook (November 1993). Therefore, air quality impacts from operation emissions are considered to be not significant. Appendix B contains the spreadsheet with the results and assumptions used by the SCAQMD for this analysis.

**Table 2-4**
**Operation Emissions**
(in pounds per day)

| Peak Construction Activity | CO (lb/day) | VOC (lb/day) | NOx (lb/day) | SOx (lb/day) | PM10 (lb/day) | PM2.5 (lb/day) |
|---|---|---|---|---|---|---|
| Onsite Emissions* | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite Emissions** | 4 | 1 | 13 | 0 | 1 | 1 |
| Total Offsite and Onsite | **4** | **1** | **13** | **0** | **1** | **1** |
| **SIGNIFICANCE THRESHOLD** | 550 | 55 | 55 | 150 | 150 | 55 |
| **SIGNIFICANT?** | **NO** | **NO** | **NO** | **NO** | **NO** | **NO** |

* Use of Chemical Fume Suppressants
** Truck trips for delivering fresh HEPA filters

**Summary of Global Warming Impacts**
Combustion activities such as operation of construction equipment as well as offsite worker trips and truck deliveries generate greenhouse gas (GHG) emissions in addition to criteria pollutants. The following analysis focuses on directly emitted CO2 and methane (CH4), a gas with 21 times the global warming potential of CO2, because these are the primary GHG pollutants emitted during the combustion process and they are the GHG pollutants for which emission factors are most readily available. CO2 and CH4 emissions were estimated using emission factors from CARB's EMFAC2007 and Offroad2007 models and EPA's AP-42.

The analysis of GHGs is a much different analysis than the analysis of criteria pollutants for the following reasons. For criteria pollutants, the significance thresholds are based on daily emissions because attainment or non-attainment is based on daily exceedances of applicable ambient air quality standards. Further, several ambient air quality standards are based on relatively short-term exposure effects on human health, e.g., one-hour and eight-hour standards. Since the half-life of CO2 is approximately 100 years, for example, the effects of GHGs occur over a longer term which means they affect the global climate over a relatively long time frame. As a result, the SCAQMD's current position is to evaluate the effects of GHGs over a longer timeframe than a single day. Although GHG emissions are typically considered to be cumulative impacts because they contribute to global climate effects, this ~~Draft~~ Final EA analyzes the GHG emissions from the use of welders and air compressors as well as from construction worker trips and heavy duty truck delivery trips.

For the purposes of addressing the GHG impacts of PAR 1469, the overall impacts of CO2 and CH4 emissions from the proposed project were estimated and evaluated from initial implementation of the proposed project beginning in 2009 for the majority of affected units (the initial full compliance date is the date of adoption of PAR 1469, but actual implementation is expected to occur after applications for permits are submitted and permits to construct are issued) until October 24, 2011, the final compliance date. Tables 2-5 and 2-6 summarize the CO2 & CH4 impacts from both construction and operation activities, respectively. Refer to Appendix B for the GHG estimates

**Table 2-5**
**Overall GHG (CO2 plus CO2 eq as CH4) Increases Due to Construction Activities (metric tons/year)** [1]

| | Compliance Year | | |
|---|---|---|---|
| **Annual GHG Emission Increases** | ***2009*** | ***2010*** | ***2011*** |
| Installing 54 HEPA systems in 2009 | 18 | 0 | 0 |
| Retrofitting 7 HEPA systems in 2010 | 0 | 2 | 0 |
| Retrofitting 6 HEPA systems in 2011 | 0 | 0 | 1 |
| **GHG Increases** (metric tons/year) | **18** | **2** | **1** |

[1] 1 metric ton = 2,205 pounds

**Table 2-6**
**Overall GHG (CO2 plus CO2 eq as CH4) Increases Due to Operation Activities (metric tons/year)** [1]

| | Compliance Year | | |
|---|---|---|---|
| **Annual GHG Emission Increases** | ***2009*** | ***2010*** | ***2011*** |
| Operating 54 HEPA systems in 2009 | 8 | 8 | 8 |
| Operating 7 HEPA systems in 2010 | 0 | 1 | 1 |
| Operating 6 HEPA systems in 2011 | 0 | 0 | 1 |
| **GHG Increases** (metric tons/year) | **8** | **9** | **10** |

[1] 1 metric ton = 2,205 pounds

Neither SCAQMD nor any other air regulatory agency in California has formally established a significance threshold for GHG emissions yet. In the absence of a specific significance threshold, SCAQMD staff has evaluated significance for projects where it is the lead agency on a case-by-case basis. In this analysis, SCAQMD staff has used a variety of benchmarks to evaluate GHG impacts. As additional information is compiled with regard to the level of GHG emissions that constitute a significant cumulative climate change impact, SCAQMD will continue to revisit and possibly revise the level of GHG emissions considered to be significant.

In its *CEQA & Climate Change* document (January, 2008), the California Air Pollution Control Officers Association (CAPCOA) identifies many potential GHG significance threshold options. The CAPCOA document indicates that establishing quantitative thresholds is a balance between setting the level low enough to capture a substantial portion of future residential and non-residential development, while also setting a threshold high enough to exclude small development projects that will contribute a relatively small fraction of the cumulative statewide GHG emissions. For example, CAPCOA identifies one potential significance threshold as 10,000 metric tons per year, which was considered by the Market Advisory Committee for inclusion in a Greenhouse Gas Cap and Trade System in California. Another potential threshold identified by CAPCOA is 25,000 metric tons per year, which is CARB's proposed mandatory reporting threshold under Assembly Bill (AB) 32. As shown in Tables 2-5 and 2-6, GHG emissions increases from implementing PAR 1469 would be substantially lower than both of these reporting thresholds.

Finally, another approach to determining significance is to estimate what percentage of the total inventory of GHG emissions are represented by emissions from a single project. If emissions are a relatively small percentage of the total inventory, it is possible that the project will have little or no effect on global climate change. According to available information, the statewide inventory of CO2 equivalent (CO2eq.) emissions is as follows: 1990 GHG emissions equal 427 million metric tons of CO2eq. and 2020 GHG emissions equal 600 million metric tons of CO2eq. with business as usual.

Interpolating a statewide GHG inventory for the year 2011 (the operational year with the highest amount CO2 emissions from PAR 1469) results in approximately 548 million metric tons of CO2eq. The CO2 emission increase in 2011 from PAR 1469 would be approximately 10 metric tons of CO2eq which represents $1.8 \times 10^{-6}$ percent of the statewide GHG inventory estimated for 2011. This extremely small percentage of GHG emissions from PAR 1469 as compared to the total projected statewide GHG emissions inventory is another basis for the SCAQMD's conclusion that GHG emissions from implementing PAR 1469 are less than significant.

PAR 1469 is part of a comprehensive ongoing regulatory program that includes implementing the ATCM for hexavalent chromium electroplating and chromic acid anodizing operations as well as implementing related SCAQMD 2007 AQMP control measures as amended or new rules to attain and maintain with a margin of safety all state and national ambient air quality standards for all areas within its jurisdiction. The 2007 AQMP estimates a CO2 reduction of 427,849 metric tons per year by 2014, and a CO2 reduction of 1,523,445 metric ton per year by 2020. Therefore, PAR 1469 in connection with other 2007 AQMP control measures is not considered to be cumulatively considerable and, therefore, is not considered to be a significant cumulative GHG impact.

Since GHG emissions are considered cumulative impacts, and the GHG emission increases from PAR 1469 are considerably below the 10,000 metric ton per year Market Advisory Committee threshold, 25,000 metric ton per year CARB proposed mandatory reporting threshold under AB 32, a small percentage of the total statewide GHG inventory in 2011, and, with other control measures in the 2007 AQMP, which is a comprehensive ongoing regulatory program that would reduce overall CO2 emissions; cumulative GHG adverse impacts from PAR 1469 are not considered significant.

**Conclusion**

Based on the aforementioned information, the proposed project would not result in significant adverse air quality impacts. As such, the proposal would not diminish an existing air quality rule or future compliance requirement, nor conflict with or obstruct implementation of the applicable air quality plan. The proposal has no direct provision that would violate any air quality standard or directly contribute to an existing or projected air quality violation. Since project-specific impacts are not expected to exceed air quality significance thresholds established by the SCAQMD and the effect of AQMP control measures is to reduce GHGs, the effects of the proposed project are not considered cumulatively considerable. Therefore the above facts and analyses demonstrating that project-specific air quality impacts from implementing the proposed project are not significant support the conclusion that the proposed project will not result in a cumulatively considerable net increase of any criteria pollutant.

**III.d)** The primary objective of the proposed project is to reduce population exposure to toxic air contaminants. Affected facilities are not expected to expose sensitive receptors to substantial secondary pollutant concentrations from the installation and operation of add-on controls for the following reasons: 1) the affected facilities are existing facilities located in industrial or commercial areas; 2) the purpose of the add-on controls is to reduce toxics generated by the metal finishing industry; 3) emissions to operate the add-on controls and for using chemical fume suppressants do not exceed any SCAQMD thresholds; and, 4) add-on controls and the use of chemical fume suppressants must comply with all applicable SCAQMD rules and regulations to receive a permit to operate. Therefore, this impact issue will not be further analyzed in this ~~Draft~~ Final EA.

**III.e)** Most of the existing affected facilities are located in industrial and commercial areas, but some sensitive receptors are located in the vicinity of some of the facilities. Historically, the SCAQMD has enforced odor nuisance complaints through SCAQMD Rule 402 - Nuisance. The proposed requirements in PAR 1469 are expected to reduce toxic emissions, hexavalent chrome in particular, which, to the extent that hexavalent chrome has any odors associated with it, can potentially reduce odors from affected facilities. This effect would be most noticeable from those affected facilities that have sensitive receptors located nearby. Although PAR 1469 will require some affected facilities to modify their existing operations, the installation and operation of air pollution control equipment and the use of chemical fume suppressants serve to reduce emissions of air toxics and, therefore, are not expected to create objectionable odors affecting a substantial number of people. Therefore, no significant adverse odor impacts are expected to result from implementing the proposed amendments.

**III.f)** The objective of PAR 1469 is to enhance the effectiveness of an existing rule by imposing more stringent requirements compared to existing Rule 1469. Further, affected facilities will be required to comply with all relevant SCAQMD rules and regulations, which may include any or all of the following: source specific rules (Regulation XI); prohibitory rules (Regulation IV); toxic rules (Rules 1401, 1402, etc.); and New Source Review (Regulation XIII). Accordingly, the proposed project is not expected to diminish an existing air quality rule so this impact issue will not be further analyzed in this ~~Draft~~ Final EA.

Based upon all of the aforementioned considerations, the SCAQMD has demonstrated that implementing the proposed project will not create significant adverse air quality impacts, either individually or cumulatively, and this topic will not be further analyzed in the ~~Draft~~ Final EA.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **IV.** | **BIOLOGICAL RESOURCES.** Would the project: | | | |
| a) | Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | ☐ | ☐ | ☑ |
| b) | Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | ☐ | ☐ | ☑ |
| c) | Have a substantial adverse effect on federally protected wetlands as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | ☐ | ☐ | ☑ |
| d) | Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | ☐ | ☐ | ☑ |
| e) | Conflicting with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | ☐ | ☐ | ☑ |
| f) | Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | ☐ | ☐ | ☑ |

**Significance Criteria**

Impacts on biological resources will be considered significant if any of the following criteria apply:

- The project results in a loss of plant communities or animal habitat considered to be rare, threatened or endangered by federal, state or local agencies.
- The project interferes substantially with the movement of any resident or migratory wildlife species.
- The project adversely affects aquatic communities through construction or operation of the project.

**Discussion**

**IV.a), b), c), & d)** PAR 1469 would only affect equipment or processes located at approximately 65 existing facilities in areas that have already been developed, primarily industrial or commercial areas, which have already been greatly disturbed. In general, these areas currently do not support riparian habitat, federally protected wetlands, or migratory corridors. Additionally, special status plants, animals, or natural communities are not expected to be found in close proximity to the affected facilities. In general, most plants, with the possible exception of some types of decorative plants, are typically removed from industrial or commercial facilities to reduce fire hazards. Since the proposed project does not induce growth in the metal finishing sector, plant removal for the purpose of reducing fire hazards will not occur as result of implementing the proposed project.

**IV.e) & f)** PAR 1469 is not envisioned to conflict with local policies or ordinances protecting biological resources nor local, regional, or state conservation plans. Additionally, PAR 1469 will not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or any other relevant habitat conservation plan.

The SCAQMD, as the Lead Agency for the proposed project, has found that, when considering the record as a whole, there is no evidence that the proposed project, as amended, will have potential for any new adverse effects on wildlife resources or the habitat upon which wildlife depends. Accordingly, based upon the preceding information, the SCAQMD has, on the basis of substantial evidence, rebutted the presumption of adverse effect contained in §753.5 (d), Title 14 of the California Code of Regulations.

Based upon these considerations, significant adverse biological resources impacts are not anticipated and will not be further analyzed in this ~~Draft~~ Final EA. Since no significant adverse biological resources impacts were identified, no mitigation measures are necessary or required.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **V.** | **CULTURAL RESOURCES.** Would the project: | | | |
| a) | Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? | ☐ | ☐ | ☑ |
| b) | Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5? | ☐ | ☐ | ☑ |

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| c) | Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | ☐ | ☐ | ☑ |
| d) | Disturb any human remains, including those interred outside a formal cemeteries? | ☐ | ☐ | ☑ |

**Significance Criteria**

Impacts to cultural resources will be considered significant if:

- The project results in the disturbance of a significant prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group.
- Unique paleontological resources are present that could be disturbed by construction of the proposed project.
- The project would disturb human remains.

**Discussion**

**V.a)** Since construction-related activities associated with the implementation of PAR 1469 are expected to be minimal and confined within the footprint of affected facilities (typically inside the affected facility), no substantial changes to historical resources are anticipated as a result of implementing the proposed project.

**V.b), c), & d)** Installing add-on controls and other associated equipment to comply with PAR 1469 will require minimal disturbance at any individual site because affected facilities are typically located in previously disturbed and developed areas. Since construction-related activities are expected to be minimal, PAR 1469 is not expected to require physical changes to the environment, which may disturb paleontological or archaeological resources or disturb human remains that may be interred outside of formal cemeteries. Furthermore, it is envisioned that these areas are already either devoid of significant cultural resources or whose cultural resources have been previously disturbed and would not be further disturbed as a result of implementing the proposed project.

Based upon these considerations, significant adverse cultural resources impacts are not expected from the implementing PAR 1469 and will not be further assessed in this ~~Draft~~ Final EA. Since no significant cultural resources impacts were identified, no mitigation measures are necessary or required.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **VI.** | **ENERGY.** Would the project: | | | |
| a) | Conflict with adopted energy conservation plans? | ☐ | ☐ | ☑ |
| b) | Result in the need for new or substantially altered power or natural gas utility systems? | ☐ | ☑ | ☐ |

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| c) | Create any significant effects on local or regional energy supplies and on requirements for additional energy? | ☐ | ☑ | ☐ |
| d) | Create any significant effects on peak and base period demands for electricity and other forms of energy? | ☐ | ☑ | ☐ |
| e) | Comply with existing energy standards? | ☐ | ☐ | ☑ |

**Significance Criteria**

Impacts to energy and mineral resources will be considered significant if any of the following criteria are met:

- The project conflicts with adopted energy conservation plans or standards.
- The project results in substantial depletion of existing energy resource supplies.
- An increase in demand for utilities impacts the current capacities of the electric and natural gas utilities.
- The project uses non-renewable resources in a wasteful and/or inefficient manner.

**Discussion**

**VI.a) & e)** The proposed project would not conflict with energy conservation plans, use non-renewable resources in a wasteful manner, or result in the need for new or substantially altered power or natural gas systems. Since PAR 1469 would affect existing facilities, it will not conflict with adopted energy conservation plans because existing facilities would be expected to continue implementing or complying with any existing energy conservation plans. Additionally, affected facilities are expected to comply with existing energy conservation plans and standards to minimize operating costs, but still comply with the requirements of PAR 1469. Accordingly these impact issues will not be further analyzed in the ~~Draft~~ Final EA.

**VI.b), c), & d)** The use of chemical fume suppressants is not expected to change the energy demand at affected facilities for operating these devices. The use of add-on control equipment may, however, require additional electricity for operation. The SCAQMD has determined that the equipment and vehicles needed for construction- and operational-related activities associated with the implementation of PAR 1469 are necessary. Potential adverse energy impacts from implementing the proposed project are analyzed in the following paragraphs.

The proposed project would require the installation of add-on control equipment, specifically HEPA filtration systems at 65 facilities and the new use of chemical fume suppressants at one facility. Though the use of chemical fume suppressants is not expected to change the energy demand for operating these devices, the use of add-on control equipment may, however, require additional electricity. In addition, for any facilities that may dismantle their existing air pollution control equipment and replace it with new air pollution control equipment, as a practical matter, a slight reduction in the electricity demand could occur. However, due to lack of actual facility data with respect to energy use for the existing devices, this reduction has not been calculated and thus, this document does not contain a quantified offset to the projected increase in electrical

demand necessary for operating the new add-on controls. Natural gas is not used for either the construction or operation of HEPA filtration systems.

Specifically, HEPA filtration control techniques are characterized by high removal efficiency and moderate to high energy requirements in most applications. In order to achieve high removal efficiencies, the filters are made of extremely low porosity materials which impose a high resistance to the flow of gas, which results in an exhaust flow pressure drop through the filter media. The higher the pressure drop across a control device, the higher the electrical energy requirement to operate larger fan motors needed to overcome the flow resistance.

Additional energy information and the energy consumption calculations as they relate to the operational activities of the proposed HEPA filtration systems were derived from the estimated ventilation rates as shown in Appendix B of this document. In addition, an increase in the use of gasoline and diesel fuel is anticipated as a result of both construction and operation activities due to worker commute trips and truck delivery trips, respectively, is expected and the calculations are shown in Appendix B.

**Construction Impacts**

During the construction phase of PAR 1469, diesel and gasoline fuel will be consumed in portable construction equipment (e.g., compressors and welders) used to weld, cut, and grind metal structures and by construction workers' vehicles commuting to and from construction sites. To estimate the "worst-case" energy impacts associated with the construction phase of PAR 1469 (e.g., the installation of add-on controls), the SCAQMD assumed that portable equipment used to weld, cut, and grind metal structures would be operated up to four hours per day. As previously noted the analysis of construction air quality impacts, site preparation using heavy-duty off-road construction equipment such as graders, dozers, scrapers, etc., will not be required for construction because construction consists primarily of installing HEPA filtration systems at existing facilities. The reader is referred to Appendix B for the assumptions and calculations used by the SCAQMD to estimate fuel usage associated with the implementation of PAR 1469.

To estimate construction workers' fuel usage per commute round trip, the SCAQMD assumed workers' vehicles would get 20 miles to the gallon and would travel 50 miles round trip to and from the construction site in one day. Table 2-7 lists the projected construction energy fuel use impacts associated with PAR 1469. Therefore, the equipment and vehicles needed for construction-related activities associated with the implementation of PAR 1469 are necessary, will not use energy in a wasteful manner, and will not exceed SCAQMD significance thresholds. There will be no substantial depletion of energy resources nor will significant amounts of fuel be needed when compared to existing supplies. Further, the results confirm the energy impacts from the proposed project during construction will not be significant.

**Table 2-7**
**Total Projected Fuel Usage for Construction Activities**

| Construction Activity | Total Fuel Usage per Activity (gallons/yr) | |
|---|---|---|
| | **Diesel** | **Gasoline** |
| Onsite Equipment | 881 | -- |
| Offsite Equipment | 883 | 2,700 |
| Fuel Supply[a] | 1,086,000,000 | 6,469,000,000 |
| % of Fuel Supply | 0.0002% | 0.00004% |
| Significant (Yes/No)[b] | No | No |

[a] Year 2000 California Energy Commission (CEC) projections. Construction activities in future years would yield similar results.
[b] SCAQMD's Energy Threshold for both Diesel and Gasoline is 1% of Supply.

**Operational Impacts**

To derive the "worst-case" potential electricity demand impacts associated with implementing PAR 1469, the SCAQMD assumed that all of the add-on controls will create electrical energy impacts associated with the operation of ancillary equipment (e.g., fans, motors, et cetera). As shown in Appendix B of this document, it is estimated that 56 new HEPA filtration systems will be installed and 11 existing HEPA filtration systems will be retrofitted. The HEPA filtration systems operate at varying electrical horsepower (hp) ratings (15, 20, and 50 hp), depending on the estimated ventilation rates (5,000, 10,000, and 20,000 cfm) for 12 hours per day, five days per week, and 52 weeks per year (see also section "III. Air Quality" for additional assumptions regarding operation). Based on these assumptions, the annual energy demand, in megawatt-hours per year (MW-hr/yr) and the daily instantaneous electricity demand in megawatts (MW) were calculated per installed system per ventilation rate. For all 67 HEPA systems, the total projected electrical demand was calculated to be 2,804 MW-hr/yr and the instantaneous demand was calculated to be 0.90 MW or 0.0119 percent of the available electricity supply in the District.

Table 2-8 summarizes the projected energy impacts associated with the operational phase of PAR 1469. The complete methodology and assumptions that the SCAQMD used to estimate the operational impacts from add-on controls are contained in Appendix B.

Similarly, to calculate how much fuel (e.g., natural gas) may be required by in-district or out-of-district power plants to generate the incremental electricity needed by affected facilities to comply with PAR 1469, fuel use is assumed to be directly proportional to the amount of electrical demand. This means that if the projected electrical demand is 2,804 MW-hr/yr, then the amount of natural gas that would be needed to produce any additional electricity necessary for operating the electric fans or motors for the HEPA systems could be converted to 8.79 million cubic feet of natural gas per year or 0.11 percent of the available natural gas supply.

For the additional fuel that may be needed to meet affected facilities' electrical demands, the consumption of fuel would be for the purpose of aiding facilities in complying with PAR 1469. Further, the consumption of fuel to comply with air quality regulations is not considered a wasteful use of energy. Therefore, fuel consumed by power plants to generate additional

electricity for electric fans or motors used in conjunction with add-on controls is not considered to be a significant adverse energy impact. Furthermore, based on the calculations, the small amount of additional fuel that may be used to generate electricity would be negligible compared to existing supplies and, thus, would not substantially deplete existing energy resources.

**Table 2-8**
**Total Projected Energy Impacts for Operation Activities**

| Operation Activity | Total Energy Usage per Activity | |
|---|---|---|
| | **Natural Gas** | **Electricity** |
| HEPA Filtration Systems | 8.79 MMCF | 2,804 MW-hr/yr |
| Total | 8.79 MMCF | 0.90 MW (instantaneous) |
| Fuel Supply[a] | 7,734 MMCF | 27,725 MW (instantaneous) |
| % of Fuel Supply | 0.11 % | 0.003% |
| Significant (Yes/No)[b] | No | No |

[a] Year 2008 CEC projections from California Energy Demand 2008-2018 Staff Revised Forecast, California Energy Commission, November 2007 (CEC-200-2007-015-SF2). Construction activities in future years are expected to yield similar results.

[b] SCAQMD's Energy Threshold for both Natural Gas Diesel and Electricity is 1% of Supply.

KEY: MMCF = million cubic feet MW = Megawatt

Based upon the aforementioned considerations, the proposed project is not expected to use energy in a wasteful manner, and will not exceed SCAQMD significance thresholds. There will be no substantial depletion of energy resources nor will significant amounts of fuel be needed when compared to existing supplies. Furthermore, if additional fuel is needed to generate electricity for electric fans or motors used in conjunction with HEPA filtrations systems at affected facilities, it would not be a wasteful use of energy nor substantially deplete existing energy resources. Further, PAR 1469 would not create any significant effects on peak and base period demands for electricity and other forms of energy and it is expected to comply with existing energy standards. Therefore, implementing the proposed project is not anticipated to generate significant adverse energy resources impacts as demonstrated by the preceding analysis and will not be discussed further in this ~~Draft~~ Final EA. Since no significant energy impacts were identified, no mitigation measures are necessary or required.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **VII.** | **GEOLOGY AND SOILS.** Would the project: | | | |
| a) | Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | ☐ | ☐ | ☑ |
| | • Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? | ☐ | ☐ | ☑ |
| | • Strong seismic ground shaking? | ☐ | ☐ | ☑ |
| | • Seismic–related ground failure, including liquefaction? | ☐ | ☐ | ☑ |
| | • Landslides? | ☐ | ☐ | ☑ |
| b) | Result in substantial soil erosion or the loss of topsoil? | ☐ | ☐ | ☑ |
| c) | Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction or collapse? | ☐ | ☐ | ☑ |
| d) | Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | ☐ | ☐ | ☑ |
| e) | Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | ☐ | ☐ | ☑ |

**Significance Criteria**

Impacts on the geological environment will be considered significant if any of the following criteria apply:

- Topographic alterations would result in significant changes, disruptions, displacement, excavation, compaction or over covering of large amounts of soil.
- Unique geological resources (paleontological resources or unique outcrops) are present that could be disturbed by the construction of the proposed project.
- Exposure of people or structures to major geologic hazards such as earthquake surface rupture, ground shaking, liquefaction or landslides.
- Secondary seismic effects could occur which could damage facility structures, e.g., liquefaction.
- Other geological hazards exist which could adversely affect the facility, e.g., landslides, mudslides.

**Discussion**

**VII.a)** Southern California is an area of known seismic activity. Accordingly, the installation of add-on controls at existing affected facilities to comply with PAR 1469 is expected to conform to the Uniform Building Code and all other applicable state codes. New structures must be designed to comply with the Uniform Building Code Zone 4 requirements since the district is located in a seismically active area. The local cities or counties are responsible for assuring that projects comply with the Uniform Building Code as part of the issuance of the building permits and can conduct inspections to ensure compliance. The Uniform Building Code is considered to be a standard safeguard against major structural failures and loss of life. The goal of the Code is to provide structures that will: (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage but with some non-structural damage; and (3) resist major earthquakes without collapse but with some structural and non-structural damage.

The Uniform Building Code bases seismic design on minimum lateral seismic forces ("ground shaking"). The Uniform Building Code requirements operate on the principle that providing appropriate foundations, among other aspects, helps to protect buildings from failure during earthquakes. The basic formulas used for the Uniform Building Code seismic design require determination of the seismic zone and site coefficient, which represents the foundation conditions at the site.

Any potentially affected existing facilities that are located in areas where there has been historic occurrence of liquefaction, e.g., coastal zones, or existing conditions indicate a potential for liquefaction, including expansive or unconsolidated granular soils and a high water table, would already be subject to the potential for liquefaction-induced impacts at the project sites. The Uniform Building Code requirements consider liquefaction potential and establish more stringent requirements for building foundations in areas potentially subject to liquefaction. Therefore, compliance with the Uniform Building Code requirements is expected to minimize the potential impacts associated with liquefaction. The issuance of building permits from the local cities or counties will assure compliance with the Uniform Building Code requirements. Therefore, no significant impacts from liquefaction, are expected and this potential impact will not be considered further.

Because facilities affected by the proposed project are typically located in developed areas, primarily industrial or commercial areas, which are not typically located near known geological hazards (e.g., landslide, mudflow, seiche, tsunami or volcanic hazards), no significant adverse geological impacts are expected. Tsunamis at the ports, i.e., Port of Los Angeles and Port of Long Beach, are not expected because the ports of Long Beach and Los Angeles are surrounded by breakwaters that protect the area from wave action. As a result, these topics will not be further evaluated in this document.

**VII.b)** As already noted in the analysis of construction air quality impacts, implementing the proposed project is not expected to require substantial site preparation such grading, scraping, et cetera, because construction activities will consist primarily of installing add-on air pollution control equipment at existing industrial facilities. Since add-on controls will be installed with minimal construction activities at existing industrial or commercial facilities, there will be little or no soil disruption from excavation, grading, or filling activities; changes in topography or surface relief features; erosion of beach sand; or changes in existing siltation rates associated with the installation of add-on control equipment.

**VII.c) & d)** PAR 1469 will not induce construction of new industrial facilities that might be susceptible to liquefaction or expansive soils as defined in Table 18-1-B of the Uniform Building Code. Since PAR 1469 will affect existing facilities, it is expected that the soil types present at the affected facilities will not be further susceptible to expansion or liquefaction. Furthermore, subsidence is not anticipated to be a problem since little excavation, grading, or filling activities will occur at affected facilities. Additionally, the affected areas are not envisioned to be prone to landslides or have unique geologic features since the affected facilities are located in developed areas, typically industrial or commercial areas, which are not near unique geologic features prone to landslides. Even if affected existing facilities are located in areas subject to subsidence, landslides, et cetera, these would be considered baseline conditions. As indicated here, the proposed project would not exacerbate this existing condition.

**VII.e)** PAR 1469 will not induce construction of new facilities using septic tanks or alternative wastewater disposal systems. As a result, no significant adverse impacts involving soils incapable of supporting septic tanks or alternative wastewater disposal systems will be generated by implementing PAR 1469.

Based upon these considerations, significant geology and soils impacts are not expected from the implementation of PAR 1469 and will not be further analyzed in this ~~Draft~~ Final EA. Since no significant geology and soils impacts were identified, no mitigation measures are necessary or required.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **VIII.** | **HAZARDS AND HAZARDOUS MATERIALS.** Would the project: | | | |
| a) | Create a significant hazard to the public or the environment through the routine transport, use, disposal of hazardous materials? | ☐ | ☐ | ☑ |
| b) | Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | ☐ | ☐ | ☑ |
| c) | Emit hazardous emissions, or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | ☐ | ☐ | ☑ |
| d) | Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would create a significant hazard to the public or the environment? | ☐ | ☐ | ☑ |

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| e) | For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | ☐ | ☐ | ☑ |
| f) | For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | ☐ | ☐ | ☑ |
| g) | Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☑ |
| h) | Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | ☐ | ☐ | ☑ |
| i) | Significantly increased fire hazard in areas with flammable materials? | ☐ | ☐ | ☑ |

**Significance Criteria**

Impacts associated with hazards will be considered significant if any of the following occur:

- Non-compliance with any applicable design code or regulation.
- Non-conformance to National Fire Protection Association standards.
- Non-conformance to regulations or generally accepted industry practices related to operating policy and procedures concerning the design, construction, security, leak detection, spill containment or fire protection.
- Exposure to hazardous chemicals in concentrations equal to or greater than the Emergency Response Planning Guideline (ERPG) 2 levels.

**Discussion**

**VIII.a) & b)** To comply with PAR 1469, affected facilities are expected to use HEPA filtration systems. The analysis of operational air quality impacts in the "Air Quality" section of this document estimated that disposal of the spent HEPA filters would occur relatively infrequently (i.e., less than one filter per year per system) as compared to the current setting for hazardous waste disposal of all the hazardous materials generated at the affected facilities. Based on the infrequent disposal of spent HEPA filters, a substantial increase in the number of truck trips needed to transport the spent HEPA filters as hazardous wastes is not expected. Because of the extensive state and federal requirements for tracking and accounting for hazardous wastes, disposal of spent HEPA filters is not expected to create new hazardous wasted transport trips, but

the waste filters are expected to be included as part of the hazardous waste transport trips that already occur periodically. As a result, implementing PAR 1469 is not expected to create new hazards through the transport and disposal of hazardous wastes.

It is also expected that one facility may begin using chemical fume suppressants to comply with PAR 1469. The use of chemical fume suppressants in metal finishing operations is designed to alter the physical properties of bath chemistries used in these operations. This analysis evaluates potential hazard impacts of using chemical fume suppressants. Because most of the facilities subject to PAR 1469 already use chemical fume suppressants, which are typically supplied by the same companies that distribute the main chemicals needed for metal plating and anodizing operations, this analysis assumes that there will be no increase in potential truck trips for delivery of fume suppressants to those facilities not currently using them. Further, because the chemical fume suppressants are primarily comprised of water and surfactants that do not contain toxic or hazardous materials, this analysis assumes that there will not be an increase in any hazardous material or waste transport trips in response to PAR 1469. In summary, implementation of PAR 1469 is not expected to alter any existing hazards involving the routine transport, use, or disposal of hazardous wastes (i.e., spent HEPA filters) or the routine transport and use of chemical fume suppressants used in metal plating and anodizing operations, especially since fume suppressants are typically not comprised of hazardous materials. Similarly, implementing PAR 1469 is not expected to increase the probability of reasonably foreseeable accidents involving the release of hazardous materials into the environment.

**VIII.c),** In general, PAR 1469 is expected to reduce emissions of hexavalent chrome, which is classified by EPA and OEHHA as a human carcinogen. In particular, PAR 1469 would establish more stringent emission limits for hexavalent chromium emissions. As a result, PAR 1469 will serve to reduce cancer risks from exposure to hexavalent chromium emissions in general and will provide more protections for sensitive receptors, schools, schools under construction, and areas zoned for residences and mixed uses. Consequently, this topic will not be evaluated further.

**VIII.d)** Even if some affected facilities are designated pursuant to Government Code §65962.5 as a large quantity generator of hazardous waste, it is anticipated that these facilities will continue to manage their hazardous wastes in accordance with all applicable federal, state, and local rules and regulations. Complying with the requirements of PAR 1469 is not expected to interfere with existing hazardous waste management programs. Accordingly, this impact issue is not further evaluated in this ~~Draft~~ Final EA.

**VIII.e) & f)** Modifications at affected facilities are not expected to create hazardous emissions that could adversely affect public or private airports located in close proximity to the affected facilities. Specifically, the main objective of implementing PAR 1469 is to reduce cancer risks in the district through further reductions in hexavalent chromium emissions. As already noted, emissions from fume suppressants are expected to be minimal (refer to the analysis of operational air quality impacts in the "Air Quality" section). Installing filtration systems at affected facilities will further reduce air toxic emissions at affected facilities, thus, providing emission reduction benefits to any public or private airports that may be located within two miles of affected facilities. As previously mentioned in the Air Quality discussion in section III.d) of this document, affected facilities are not expected to expose sensitive receptors to substantial secondary pollutant concentrations from the installation and operation of add-on controls for the following reasons: 1) the affected facilities are existing facilities located in industrial or commercial areas; 2) the purpose of the add-on controls is to reduce toxics generated by the

metal finishing industry; 3) emissions to operate the add-on controls and for using chemical fume suppressants do not exceed any SCAQMD thresholds; and, 4) add-on controls and the use of chemical fume suppressants must comply with all applicable SCAQMD rules and regulations to receive a permit to operate. Further, the SCAQMD will not issue permits for facility modifications unless they comply with all relevant SCAQMD rules and regulations, including Rule 1401. Accordingly, these impact issues are not further evaluated in this ~~Draft~~ Final EA

**VIII.g)** PAR 1469 has no provisions that would impair or physically interfere with any adopted emergency response plans Existing facilities that handle, store, or transport hazardous materials would already be expected to have an existing business emergency response plan. Health and Safety Code §25506 specifically requires all businesses handling hazardous materials to submit a business emergency response plan to assist local administering agencies in the emergency release or threatened release of a hazardous material. Business emergency response plans generally require the following:

- Identification of individuals who are responsible for various actions, including reporting, assisting emergency response personnel and establishing an emergency response team;
- Procedures to notify the administering agency, the appropriate local emergency rescue personnel, and the California Office of Emergency Services;
- Procedures to mitigate a release or threatened release to minimize any potential harm or damage to persons, property or the environment;
- Procedures to notify the necessary persons who can respond to an emergency within the facility;
- Details of evacuation plans and procedures;
- Descriptions of the emergency equipment available in the facility;
- Identification of local emergency medical assistance; and
- Training (initial and refresher) programs for employees in:
    1. The safe handling of hazardous materials used by the business;
    2. Methods of working with the local public emergency response agencies;
    3. The use of emergency response resources under control of the handler; and,
    4. Other procedures and resources that will increase public safety and prevent or mitigate a release of hazardous materials.

In general, every county or city and all facilities using a minimum amount of hazardous materials are required to formulate detailed contingency plans to eliminate, or at least minimize, the possibility and effect of fires, explosion, or spills. In conjunction with the California Office of Emergency Services, local jurisdictions have enacted ordinances that set standards for area and business emergency response plans. These requirements include immediate notification, mitigation of an actual or threatened release of a hazardous material, and evacuation of the emergency area. Complying with the requirements of PAR 1469 is not expected to interfere with adopted emergency response plans; however, depending on the method of compliance some facilities may need to modify existing emergency response plans. Modifications to an existing emergency plan are not considered to be a significant impact that would interfere with its implementation.

**VIII.h)** Since the facility modifications will occur at existing industrial or commercial sites in urban areas where wildlands are not prevalent, risk of loss or injury associated with wildland fires is not expected. Accordingly, this impact issue is not further evaluated in this ~~Draft~~ Final EA.

**VIII.i)** Because fume suppressants are not flammable or hazardous, PAR 1469 will not affect current operations nor cause an increase in the storage or use of flammable and otherwise hazardous materials, cause an increase in the probability of an accidental release into the environment or cause an increase in existing fire hazards at affected facilities. In general, existing emergency planning is anticipated to adequately minimize the risk associated with the use of chemical fume suppressants. Local fire departments ensure that adequate permit conditions are in place to protect against potential risk of upset hazards. Implementation of PAR 1469 is not expected to affect these permit conditions.

The Uniform Fire Code and Uniform Building Code sets standards intended to minimize risks from flammable or otherwise hazardous materials. Local jurisdictions are required to adopt the uniform codes or comparable regulations. Local fire agencies require permits for the use or storage of hazardous materials and permit modifications for proposed increases in their use. Permit conditions depend on the type and quantity of the hazardous materials at the facility. Permit conditions may include, but are not limited to, specifications for sprinkler systems, electrical systems, ventilation, and containment. The fire departments make annual business inspections to ensure compliance with permit conditions and other appropriate regulations.

Further, all hazardous materials are expected to be used in compliance with established OSHA or Cal/OSHA regulations and procedures, including providing adequate ventilation, using recommended personal protective equipment and clothing, posting appropriate signs and warnings, and providing adequate worker health and safety training. When taken together, the above regulations provide comprehensive measures to reduce hazards, if any, of explosive or otherwise hazardous materials. Compliance with these and other federal, state and local regulations and proper operation and maintenance of equipment should ensure that the potential for explosions or accidental releases of hazardous materials will remain less than significant.

Based upon these considerations, significant hazards and hazardous materials impacts are not expected from the implementation of PAR 1469 and will not be further analyzed in this ~~Draft~~ Final EA. Since no significant hazards and hazardous materials impacts were identified, no mitigation measures are necessary or required.

| | **Potentially Significant Impact** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|
| **IX. HYDROLOGY AND WATER QUALITY.** Would the project: | | | |
| a) Violate any water quality standards or waste discharge requirements? | ☐ | ☑ | ☐ |

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| b) | Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | ☐ | ☑ | ☐ |
| c) | Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or offsite? | ☐ | ☐ | ☑ |
| d) | Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite? | ☐ | ☐ | ☑ |
| e) | Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | ☐ | ☐ | ☑ |
| f) | Otherwise substantially degrade water quality? | ☐ | ☑ | ☐ |
| g) | Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | ☐ | ☐ | ☑ |
| h) | Place within a 100-year flood hazard area structures which would impede or redirect flood flaws? | ☐ | ☐ | ☑ |
| i) | Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | ☐ | ☐ | ☑ |
| j) | Inundation by seiche, tsunami, or mudflow? | ☐ | ☐ | ☑ |

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| k) | Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | ☐ | ☑ | ☐ |
| l) | Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | ☐ | ☐ | ☑ |
| m) | Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | ☐ | ☐ | ☑ |
| n) | Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | ☐ | ☐ | ☑ |
| o) | Require in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | ☐ | ☑ | ☐ |

**Significance Criteria**
Potential impacts on water resources will be considered significant if any of the following criteria apply:

**Water Quality:**
- The project will cause degradation or depletion of ground water resources substantially affecting current or future uses.
- The project will cause the degradation of surface water substantially affecting current or future uses.
- The project will result in a violation of National Pollutant Discharge Elimination System (NPDES) permit requirements.
- The capacities of existing or proposed wastewater treatment facilities and the sanitary sewer system are not sufficient to meet the needs of the project.
- The project results in substantial increases in the area of impervious surfaces, such that interference with groundwater recharge efforts occurs.
- The project results in alterations to the course or flow of floodwaters.

**Water Demand:**
- The existing water supply does not have the capacity to meet the increased demands of the project, or the project would use a substantial amount of potable water.
- The project increases demand for water by more than five million gallons per day.

**Discussion**
**IX.a), f), k), l), & o)** It is not expected that potential changes in wastewater volume composition from affected facilities would violate any water quality standard or wastewater discharge requirements since the volume of chemical fume suppressant use associated with implementing PAR 1469 will be small and the amount of water required to operate the mist eliminator will be recycled for reuse. Water quality impacts are evaluated more fully in the following paragraphs.

There are provisions in PAR 1469 that could require a slight increase in the amount chemical fume suppressants used in metal plating and anodizing tanks. However, the chemical composition of the fume suppressants is comprised mostly of water and non-hazardous, non-toxic surfactants. The contents of each metal finishing tank are currently subject to strict wastewater pre-treatment requirements to recapture, contain and dispose of or recycle various components of each tank bath. Thus, the use of chemical fume suppressants will not change this requirement. Further, the total quantity of chemical fume suppressants expected to be used by one facility is so minimal (e.g., approximately three gallons per year or 0.01 gallon per day). Consequently, as a result of using chemical fume suppressants, there is minimal change anticipated in the composition or volume of existing wastewater streams from the affected facilities that would require additional wastewater disposal capacity, violate any water quality standard or wastewater discharge requirements, or otherwise substantially degrade water quality.

PAR 1469 is also expected to result in the installation and/or retrofit of 67 HEPA filtration systems. As part of the pre-filtration function of the HEPA filtration system, each system is also designed to function with a mist eliminator that uses water to wash down the mesh pads or chevron baffles. The projected water usage for each mist eliminator is a function of the HEPA filter ventilation rate. As calculated in Appendix B, the total increase of water needed for operating the HEPA filtration systems with new mist eliminators would be approximately 672 gallons per day for 56 new HEPA filter systems and 11 retrofitted/replaced HEPA filter systems[7]. However, this water is typically treated and recycled for reuse through the system. Because the contents of each metal finishing tank are currently subject to strict wastewater pre-treatment requirements to recapture, contain and dispose of or recycle various components of each tank bath, the wash down water will be subject to the same standards. Thus, the use of mist eliminators will not change this requirement. Further, the total increase of chemical fume suppressants expected to be used is minimal (e.g., approximately three gallons per year or 0.01 gallon per day). Consequently, as a result of using mist eliminators, there is no change anticipated in the composition or volume of existing wastewater streams from the affected facilities that would require additional wastewater disposal capacity, violate any water quality standard or wastewater discharge requirements, or otherwise substantially degrade water quality.

Because the water will be treated and recycled back into the mist eliminator, the composition of each facility's wastewater streams are not expected to be altered because of the add-on controls. Therefore, it is not expected that potential changes in wastewater composition from affected

[7] The 11 existing HEPA filter systems are not currently equipped with mist eliminators, so when they get retrofitted or replaced, a new mist eliminator will be installed and an increase in water use will be expected.

facilities would violate any water quality standard or wastewater discharge requirements since wastewater volumes associated with PAR 1469 will be at a maximum, equivalent to the water demand necessary to operate the mist eliminators.

**IX.b) & n)** The use of HEPA filtration systems equipped with mist eliminators has the potential to increase water demand in the district. During the operation of the mist eliminator, the wet particulates collect on the mesh pad or chevron baffle, as applicable to the type of unit installed, the collected material is washed down with water, the collected plating solution is returned to the plating bath, and the water is treated and re-circulated into the unit again. Over time, some water may evaporate and thus additional fresh water may need to be added to make up for the evaporative loss. Staff expects that 56 new HEPA filtration systems and 11 existing HEPA filtration systems will be equipped with new mist eliminators to comply with the proposed amendments. For the purposes of this analysis, the maximum water flowrate per facility that can be used to estimate potential water demand generated by PAR 1469 is based on the design ventilation rate or cfm air flowrate of the HEPA filtration systems. The assumptions of water flowrate are based on manufacturer specifications and the water demand calculation can be found in Appendix B of this document. If the owners or operators of all 25 facilities are assumed to install HEPA filtration systems equipped with mist eliminators, approximately 672 gallons per day would be needed for all affected facilities. This incremental daily increase in water demand anticipated for PAR 1469 is negligible compared to the total district supply of 4.22 million acre-feet (MAF) for 1995. Further, this incremental increase in water demand does not exceed the SCAQMD's significance threshold of 5,000,000 gallons per day and, therefore, is not considered to be significant.

Water demand impacts associated with the use of HEPA filtration systems equipped with mist eliminators are not expected to exceed the SCAQMD's significance threshold of 5,000,000 gallons per day. It is within the capacity of the local water purveyors to supply the relatively small incremental increase in water demand for all affected facilities that would be subject to PAR 1469. Based on the preceding analysis, PAR 1469 has no provision that would require the construction of additional water resource facilities, the need for new or expanded water entitlements.

It should also be noted that water providers throughout the state are currently exploring various strategies for increasing water supplies and maximizing the use of existing supplies. Options include increasing storage capacity, acquiring additional supplies of water from existing sources such as unused water allocations to other states or agricultural agencies, and advance delivery of water to irrigation districts. These continuing and future water management programs help to assure that the area's full-service water demands will be met at all times. Therefore, no significant water demand impacts are expected as the result of implementing the proposed amendments.

**IX.c), d), & e)** PAR 1469-related modifications would occur at existing facilities, that are typically located in developed areas, primarily industrial or commercial areas Typically, developed areas are already paved and the drainage patterns and infrastructures are already in place. Since PAR 1469 involves minor construction involving installation of air pollution control equipment within the boundaries of existing industrial facilities, no significant changes to storm water runoff, drainage patterns, groundwater characteristics, or flow are expected. Therefore, implementing PAR 1469 is not expected generate water runoff impacts or alter drainage patterns in any way.

**IX.g), h), i), & j)** PAR 1469 does not induce construction of new housing or contribute to the construction of new building structures that could be adversely affected by 100-year flood hazards. Facility modifications and changes would occur at existing industrial facilities. If these facilities are subject to 100-year flood hazards, this is an existing condition and not an effect of implementing PAR 1469. Therefore, PAR 1469 is not expected to expose the public to any flood hazards or generate any flood hazards in 100-year flood areas as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood delineation map. As a result, PAR 1469 is not expected to expose people or structures to significant flooding risks. Finally, affected facilities are not typically located near the ocean or large inland bodies of water, inundation by seiche, tsunami or mudflow is not anticipated. Tsunamis at the ports, i.e., Port of Los Angeles and Port of Long Beach, are not expected because the ports of Long Beach and Los Angeles are surrounded by breakwaters that protect the area from wave action. As a result, these topics will not be further evaluated in this document.

**IX.m)** PAR 1469 will not increase storm water discharge, since minimal paving of unpaved areas is contemplated at affected facilities. Therefore, no new storm water discharge treatment facilities or modifications to existing facilities will be required due to the implementation of PAR 1469. Accordingly, PAR 1469 is not expected to generate significant adverse impacts relative to construction of new storm water drainage facilities.

Based upon these considerations, significant hydrology and water quality impacts are not expected from the implementation of PAR 1469 and will not be further analyzed in this ~~Draft~~ Final EA. Since no significant hydrology and water quality impacts were identified, no mitigation measures are necessary or required.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **X.** | **LAND USE AND PLANNING.** Would the project: | | | |
| a) | Physically divide an established community? | ☐ | ☐ | ☑ |
| b) | Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | ☐ | ☐ | ☑ |
| c) | Conflict with any applicable habitat conservation or natural community conservation plan? | ☐ | ☐ | ☑ |

**Significance Criteria**

Land use and planning impacts will be considered significant if the project conflicts with the land use and zoning designations established by local jurisdictions.

**Discussion**

**X.a)** The proposed project would regulate metal finishing operations at existing industrial facilities. The expected options for compliance are add-on control equipment and the use of chemical fume suppressants. Since PAR 1469 affects existing facilities, it does not include any components that would require physically dividing an established community.

**X.b)** One provision that could potentially conflict with land use plans, policies, or regulations is the requirement in PAR 1469 that would prohibit the siting and construction of new facilities within 1,000 feet of sensitive receptors, schools (proposed and existing), and areas zoned for residences and mixed uses. However, while land use and other planning considerations are typically determined by local governments, Government Code §65850.2 requires cities and counties that receive applications of development projects to comply with the requirements for a permit to construct or modification from the air quality management district exercising jurisdiction in their area. This means that even if the city or county currently has zoning requirements that would allow the siting and construction of new facilities within 1,000 feet of sensitive receptors, schools (proposed and existing), and areas zoned for residences and mixed uses, the city or county would be required to defer to the SCAQMD to decide whether, and under what conditions, to allow construction at the site. Since Government Code §65850.2 already contains requirements that may limit construction of new facilities and requires the city or county to consider siting recommendations of the SCAQMD first, the provisions in PAR 1469 that affect land uses do not impose new requirements that are not already codified in state law. Based on the aforementioned discussion, no land use or planning requirements will be altered by regulating chromium emissions from metal finishing operations.

**X.c)** Since PAR 1469 would regulate hexavalent chromium emissions, PAR 1469 would not affect in any way habitat conservation or natural community conservation plans, agricultural resources or operations, and would not create divisions in any existing communities.

Based upon these considerations, significant land use and planning impacts are not expected from the implementation of PAR 1469 and will not be further analyzed in this ~~Draft~~ Final EA. Since no significant land use and planning impacts were identified, no mitigation measures are necessary or required.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **XI.** | **MINERAL RESOURCES.** Would the project: | | | |
| a) | Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | ☐ | ☐ | ☑ |
| b) | Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | ☐ | ☐ | ☑ |

**Significance Criteria**
Project-related impacts on mineral resources will be considered significant if any of the following conditions are met:
- The project would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
- The proposed project results in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

**Discussion**
**XI.a) & b)** There are no provisions in PAR 1469 that would result in the loss of availability of a known mineral resource, such as aggregate, shale, coal, etc., of value to the region and the residents of the state, or of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Based upon these aforementioned considerations, significant mineral resources impacts are not expected from the implementation of PAR 1469 and will not be further analyzed in this ~~Draft~~ Final EA. Since no significant mineral resources impacts were identified, no mitigation measures are necessary or required.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **XII.** | **NOISE.** Would the project result in: | | | |
| a) | Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | ☐ | ☐ | ☑ |
| b) | Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | ☐ | ☐ | ☑ |
| c) | A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | ☐ | ☐ | ☑ |
| d) | A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | ☐ | ☐ | ☑ |
| e) | For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | ☐ | ☐ | ☑ |

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| f) | For a project within the vicinity of a private airship, would the project expose people residing or working in the project area to excessive noise levels? | ☐ | ☐ | ☑ |

**Significance Criteria**

Impacts on noise will be considered significant if:

- Construction noise levels exceed the local noise ordinances or, if the noise threshold is currently exceeded, project noise sources increase ambient noise levels by more than three decibels (dBA) at the site boundary. Construction noise levels will be considered significant if they exceed federal Occupational Safety and Health Administration (OSHA) noise standards for workers.
- The proposed project operational noise levels exceed any of the local noise ordinances at the site boundary or, if the noise threshold is currently exceeded, project noise sources increase ambient noise levels by more than three dBA at the site boundary.

**Discussion**

**XII.a)** Construction activities associated with the installation of HEPA filtration systems in response to PAR 1469 will take place at facilities that are located in existing industrial or commercial settings. Construction activities are expected to occur primarily within the building of an affected facility. Further, construction equipment expected to be used to install HEPA filtration systems, e.g., air compressors and welders are generally not noise intensive equipment. Operation of HEPA filtration systems in industrial settings is not expected to expose persons to the generation of excessive noise levels above current facility levels because systems are typically within the building and the building's walls would be expected to substantially attenuate noise levels. It is also expected that any facility affected by PAR 1469 will comply with all existing noise control laws or ordinances. Further, Occupational Safety and Health Administration (OSHA) and California-OSHA have established noise standards to protect worker health.

**XII.b)** The proposed project is not anticipated to expose people to or generate excessive groundborne vibration or groundborne noise levels because neither construction equipment nor HEPA filtration systems are considered to be noise intensive equipment or produce intrusive groundborne vibrations. As a result, the construction and operation noise levels at the affected facilities associated with the implementation of PAR 1469 are anticipated to be comparable to existing noise generating activities, within Occupational Safety and Health Administration (OSHA) worker safety standards, and are not expected to exceed existing noise control laws or ordinances.

**XII.c)** Due to the nature of the add-on control equipment (e.g., HEPA filtration systems), a permanent increase in ambient noise levels at the affected facilities above existing levels without the proposed project is unlikely to occur as part of PAR 1469. Noise levels resulting from the operation of the proposed project would be insignificant because HEPA filtration systems are

generally not noise intensive systems and are unlikely to raise ambient noise levels in the project vicinities to above a level of significance.

**XII.d)** A temporary or periodic increase in ambient noise levels in the vicinity of affected facilities above levels existing without the project is not anticipated from construction-related activities (e.g., installation of add-on controls) since these activities are short-term, no more than a few months at each facility; would involve a small amount of construction work, four hours per day; and utilize equipment that is not considered to be noise intensive equipment. Furthermore, it is anticipated that contractors hired to install add-on control equipment at affected facilities will comply with all local noise ordinances. Therefore, it is expected that the incremental noise levels would be less than significant.

**XII.e) & f)** The proposed project consists of improvements within industrial or commercial facilities. Even if an affected facility is located near a public/private airport, the noise expected from the installation of add-on controls would be unlikely to significantly interact with noise generated from a public/private airport. This conclusion is based on the fact that construction equipment expected to be used and HEPA filtration systems are not considered to be noise intensive. Thus, the PAR 1469 is not expected to expose people residing or working in the project vicinities to excessive noise levels.

Based upon these considerations, significant noise impacts are not expected from the implementation of PAR 1469 and are not further evaluated in this ~~Draft~~ Final EA. Since no significant noise impacts were identified, no mitigation measures are necessary or required.

| | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|
| **XIII. POPULATION AND HOUSING.** Would the project: | | | |
| a) Induce substantial growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (e.g. through extension of roads or other infrastructure)? | ☐ | ☐ | ☑ |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | ☐ | ☐ | ☑ |

| | Potentially Significant Impact | Less Than Significant Impact | No Impact |

| | | | |
|---|---|---|---|
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | ☐ | ☐ | ☑ |

**Significance Criteria**

Impacts of the proposed project on population and housing will be considered significant if the following criteria are exceeded:

- The demand for temporary or permanent housing exceeds the existing supply.
- The proposed project produces additional population, housing or employment inconsistent with adopted plans either in terms of overall amount or location.

**Discussion**

**XIII.a)** PAR 1469 is not anticipated to generate any significant effects, either direct or indirect, on the district's population or population distribution as no additional workers are anticipated to be required to comply with the implementation of these rules. Human population within the jurisdiction of the SCAQMD is anticipated to grow regardless of implementing PAR 1469.

Though facility modifications are expected from the implementation of PAR 1469, these activities would occur within existing industrial or commercial facilities located typically in urbanized areas. It is expected that the existing labor pool in this urbanized area would accommodate the labor requirements for the installation and operation of add-on controls in these areas. Additionally, PAR 1469 is not expected to require affected facilities to hire additional personnel to operate and maintain any installed add-on control equipment. In the event that new employees are hired, it is expected that the amount of new employees at any one facility would be small. As such, PAR 1469 will not result in changes in population densities or induce significant growth in population.

**XIII.b) & c)** Independent of the modifications/changes expected to occur at existing industrial and commercial facilities, implementation of PAR 1469 is not anticipated to result in the creation of any industry that would affect population growth, directly or indirectly induce the construction of single- or multiple-family units, or require the displacement of people elsewhere.

Based upon these considerations, significant population and housing impacts are not expected from the implementation of PAR 1469 and are not further evaluated in this ~~Draft~~ Final EA. Since no significant population and housing impacts were identified, no mitigation measures are necessary or required.

| | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|
| **XIV. PUBLIC SERVICES.** Would the proposal result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: | | | |
| a) Fire protection? | ☐ | ☐ | ☑ |
| b) Police protection? | ☐ | ☐ | ☑ |
| c) Schools? | ☐ | ☐ | ☑ |
| d) Parks? | ☐ | ☐ | ☑ |
| e) Other public facilities? | ☐ | ☐ | ☑ |

**Significance Criteria**

Impacts on public services will be considered significant if the project results in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives.

**Discussion**

**XIV.a) & b)** Although facilities subject to PAR 1469 may install air pollution control equipment and use chemical fume suppressants, neither the HEPA filtration technology nor the nature or the amount of usage of chemical fume suppressants at any one facility would likely contribute to an increase in fires or explosions requiring additional responses by local fire departments. Furthermore, additional inspections at affected facilities associated with the air pollution control equipment and the use of chemical fume suppressants by city building departments or local fire departments are not expected. Similarly, since it is not expected that PAR 1469 would increase the likelihood of fires or explosions, additional police services for responding to such incidents would not be required. Finally, PAR 1469 is not expected to have any adverse effects on local police departments because enforcement of the rule will be the responsibility of the SCAQMD.

**XIV.c) & d)** The local labor pool (e.g., workforce) of a particular affected facility areas is expected to be adequate to fill the short-term construction positions associated with implementing PAR 1469. Therefore, there will be no increase in local population and thus no impacts are expected to local schools or parks.

**XIV.e)** Implementation of PAR 1469 will result in the use of add-on control equipment and chemical fume suppressants. Besides permitting the equipment or altering permit conditions, there is no other need for government services. The proposal would not result in the need for

new or physically altered government facilities in order to maintain acceptable service ratios, response times, or other performance objectives. There will be no increase in population and, therefore, no need for physically altered government facilities.

Based upon these considerations, significant public services impacts are not expected from the implementation of PAR 1469 and are not further evaluated in this ~~Draft~~ Final EA. Since no significant public services impacts were identified, no mitigation measures are necessary or required.

| | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|
| **XV. RECREATION.** | | | |
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | ☐ | ☐ | ☑ |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment? | ☐ | ☐ | ☑ |

**Significance Criteria**

Impacts to recreation will be considered significant if:

- The project results in an increased demand for neighborhood or regional parks or other recreational facilities.
- The project adversely affects existing recreational opportunities.

**Discussion**

**XV.a) & b)** Land use and other planning considerations are determined by local governments and no land use or planning requirements will be altered by regulating emissions from metal finishing, chrome plating and chromic acid anodizing operations. Since PAR 1469 will not have any affect on population in the District, it is not expected to increase the demand for or use of existing neighborhood and regional parks or other recreational facilities or require the construction of new or expansion of existing recreational facilities that might have an adverse physical effect on the environment.

Based upon these considerations, significant recreation impacts are not expected from the implementation of PAR 1469 and are not further evaluated in this ~~Draft~~ Final EA. Since no significant recreation impacts were identified, no mitigation measures are necessary or required.

| | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|
| **XVI. SOLID/HAZARDOUS WASTE.** Would the project: | | | |
| a) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid and hazardous waste disposal needs? | ☐ | ☑ | ☐ |
| b) Comply with federal, state, and local statutes and regulations related to solid and hazardous waste? | ☐ | ☑ | ☐ |

**Significance Criteria**

The proposed project impacts on solid/hazardous waste will be considered significant if the following occurs:

- The generation and disposal of hazardous and non-hazardous waste exceeds the capacity of designated landfills.

**Discussion**

**XVI.a) & b)**

**Construction Impacts**

During construction-related activities, there may be a potential for the creation of solid waste. The wastes would most likely consist of concrete, asphalt, wood, and metal debris from minor demolition and construction activities. In addition, if any of the existing HEPA systems are dismantled and disposed of or recycled, additional waste from dismantling activities would be generated during construction. However, it is expected that any construction debris, including the dismantled HEPA systems, would be disposed in an appropriate landfill or recycled. Currently, the estimated Class II (industrial) and Class III (municipal) landfill disposal capacity within the district is approximately 111,198 tons per day. Since any increase in solid waste disposal from PAR 1469 construction/demolition/dismantling activities would be small, it is anticipated that existing landfill capacity in the district can accommodate this temporary increase in solid waste products. Therefore, temporary significant solid waste impacts associated with PAR 1469 construction-related activities are not expected.

**Operational Impacts**

Once the HEPA filtrations systems are installed and process changes implemented (e.g., use of chemical fume suppressants), PAR 1469 could result in incremental increases in solid waste from operational activities. Therefore, the potential adverse impacts to disposal facilities are discussed below.

<u>HEPA Filtration Systems</u>

To comply with PAR 1469, generation of solid/hazardous waste due to the anticipated disposal of 492 spent HEPA filters is assumed to occur every year. As mentioned in the 'Air Quality' section, the typical dimensions of a HEPA filter is approximately two feet wide by two feet long

by four inches deep or 1.3 cubic feet. Therefore, disposal of 492 HEPA filters per year equates to approximately 640 cubic feet of hazardous waste per year. It should be noted that the amounts of solid waste generated from this process substantially overestimates solid waste impacts because HEPA filters can last up to two years or more, depending on the throughput.

There are no hazardous waste disposal sites with the district boundaries. Hazardous waste generated at district facilities is typically disposed of at licensed in-state hazardous waste disposal facilities. Two such facilities are the Chemical Waste Management, Inc. (CWMI) Kettleman Hills facility in Kings County and the Safety-Kleen facility in Buttonwillow in Kern County. Kettleman Hills has an estimated 6.5 million cubic yard capacity and expects to continue receiving wastes for approximately 18 years under its current permit, or for approximately another 24 years with an approved permit modification. Buttonwillow receives approximately 960 tons of hazardous waste per day and has a remaining capacity of approximately 10.3 million tons. The expected life of the Buttonwillow facility is approximately 35 years. Based upon these hazardous waste disposal capacities, the disposal of an addition 101 cubic feet of hazardous waste per year is not considered to be a significant adverse impact to existing hazardous waste disposal facilities.

Use of Chemical Fume Suppressants

Solid or hazardous waste impacts are not expected from the use of chemical fume suppressants in metal plating and anodizing tanks because chemical fume suppressants originate in a liquid rather than a solid form and they do not contain any hazardous materials. Therefore, in a liquid state, any handling, such as pretreating, recycling or disposal into the sanitary sewer system or storm drains, would constitute a water quality impact. Refer to the analysis in the "Hydrology/Water Quality" section.

Based on the above analyses, PAR 1469 is not expected to substantially increase the volume of solid or hazardous wastes from metal finishing operations that cannot be handled by existing municipal or hazardous waste disposal facilities, or require additional waste disposal capacity. Further, implementing PAR 1469 is not expected to interfere with any affected facility's ability to comply with applicable local, state, or federal waste disposal regulations. Since no solid/hazardous waste impacts were identified, no mitigation measures are necessary or required.

| | **Potentially Significant Impact** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|
| **XVII. TRANSPORTATION/TRAFFIC.** Would the project: | | | |
| a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? | ☐ | ☐ | ☑ |

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| b) | Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? | ☐ | ☐ | ☑ |
| c) | Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | ☐ | ☐ | ☑ |
| d) | Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)? | ☐ | ☐ | ☑ |
| e) | Result in inadequate emergency access or? | ☐ | ☐ | ☑ |
| f) | Result in inadequate parking capacity? | ☐ | ☐ | ☑ |
| g) | Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)? | ☐ | ☐ | ☑ |

**Significance Criteria**

Impacts on transportation/traffic will be considered significant if any of the following criteria apply:

- Peak period levels on major arterials are disrupted to a point where level of service (LOS) is reduced to D, E or F for more than one month.
- An intersection's volume to capacity ratio increase by 0.02 (two percent) or more when the LOS is already D, E or F.
- A major roadway is closed to all through traffic, and no alternate route is available.
- There is an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system.
- The demand for parking facilities is substantially increased.
- Water borne, rail car or air traffic is substantially altered.
- Traffic hazards to motor vehicles, bicyclists or pedestrians are substantially increased.
- The need for more than 350 employees
- An increase in heavy-duty transport truck traffic to and/or from the facility by more than 350 truck round trips per day
- Increase customer traffic by more than 700 visits per day.

**Discussion**

**XVII.a) & b)**

**Construction Impacts**
During construction-related activities, PAR 1469 could potentially create a temporary increase in traffic in the immediate vicinity of the affected facilities during peak commute periods. Increased traffic related to construction is related to construction worker commute trips and delivery trucks accessing the affected facilities during peak commute periods.

"Worst-case" construction-related activities associated with the implementation PAR 1469 (e.g., installation of add-on controls) is expected to generate eight additional vehicle trips (four round trips) per facility from construction worker daily commutes and one heavy-duty delivery truck trip. However, these trips are temporary and are dispersed throughout the district. These trips do not exceed the SCAQMD's significance criteria of 350 additional trips per facility. Further, it is not expected that eight additional trips would increase the volume to capacity ratio of any intersections in the vicinity of the affected facility by two percent or more, which is another indicator of traffic impacts from a project.

The minor increase in commute and delivery trips is not anticipated to result in significant adverse changes to existing transit systems or transportation corridors. Existing transit systems in the district will not be diminished, eliminated or affected in any way as a result of the implementation of PAR 1469. Therefore, the implementation of PAR 1469 will not result in any significant adverse transportation/traffic impacts.

**Operational Impacts**
Once the construction-related activities cease, incremental transportation/traffic impacts are not expected from operational-related activities. As mentioned earlier, affected facilities are not expected to hire additional personnel to operate and maintain add-on controls. Furthermore, trips associated with the disposal of spent HEPA filters are expected to be incorporated into the current waste disposal schedule and delivery trips associated with acquiring fresh HEPA filters will occur once a year per facility. These trips will be infrequent and dispersed throughout the district. Therefore, additional operational-related trips are not anticipated to be significant.

In summary, PAR 1469 is not expected to significantly adversely affect circulation patterns on local roadways or the level of service at intersections near affected facilities.

**XVII.c)** PAR 1469 will involve the installation of add-on controls at existing facilities. The installed add-on controls are expected to be similar in height and appearance to the existing structures and are therefore not expected to adversely affect air traffic patterns. Accordingly, no increase in air traffic is expected. As a result of the project, this impact issue is not further evaluated in this ~~Draft~~ Final EA.

**XVII.d)** PAR 1469 will involve the installation of add-on controls at existing facilities. No offsite modifications to roadways are anticipated for the proposed project that would result in an additional roadway design hazard or incompatible uses. Consequently, this impact issue is not further evaluated in this ~~Draft~~ Final EA.

**XVII.e)** PAR 1469 will involve the installation of add-on controls at existing facilities with no changes expected to emergency access at or in the vicinity of the affected facilities. Therefore, the project is not expected to adversely impact emergency access and this impact issue is not further evaluated in this ~~Draft~~ Final EA.

**XVII.f)** Additional parking will be required for construction workers during the construction phase of PAR 1469. Since construction crews at the individual facilities will be small, sufficient parking space is expected to be available within the facility boundaries or on adjacent roadways. In addition, no increases in employees during operation at affected facilities are anticipated. Therefore, the project is not expected to result in inadequate offsite parking. This impact issue is not further evaluated in this ~~Draft~~ Final EA.

**XVII.g)** Facility modifications or changes associated with PAR 1469 will take place at existing facilities and will not result in conflicts with alternative transportation, such as bus turnouts, bicycle racks, etc.. Therefore, this impact issue is not further evaluated in this ~~Draft~~ Final EA.

Based upon these considerations, PAR 1469 is not expected to generate significant adverse transportation/traffic impacts and, therefore, this topic will not be considered further. Since no significant transportation/traffic impacts were identified, no mitigation measures are necessary or required.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **XVIII.** | **MANDATORY FINDINGS OF SIGNIFICANCE.** | | | |
| a) | Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | ☐ | ☐ | ☑ |
| b) | Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.) | ☐ | ☐ | ☑ |
| c) | Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly? | ☐ | ☐ | ☑ |

**XVIII.a)** As discussed in the "Biological Resources" section, PAR 1469 is not expected to adversely affect plant or animal species or the habitat on which they rely because the affected equipment or processes are located at existing facilities in industrial or commercial areas which have already been greatly disturbed and that currently do not support such habitats. Additionally, special status plants, animals, or natural communities are not expected to be found within close proximity to the facilities affected by PAR 1469.

**XVIII.b)** Based on the foregoing analyses, since PAR 1469 will not result in project-specific significant environmental impacts, implementation of PAR 1469 is not expected to cause cumulative impacts in conjunction with other projects that may occur concurrently with or subsequent to the proposed project. Related projects to the currently proposed project include existing and proposed rules and regulations, as well as AQMP control measures, and measures identified in the Air Toxics Control Plan (ATCP). The effects of PAR 1469 will not be "cumulatively considerable" because project-specific impacts do not exceed any significance criteria used by the SCAQMD. For example, the environmental topics checked 'No Impact' (e.g., aesthetics, agriculture resources, biological resources, cultural resources, geology and soils, land use and planning, mineral resources, noise, population and housing, public services, recreation, and transportation and traffic) would not be expected to make any contribution to potential cumulative impacts whatsoever. For the environmental topics checked 'Less than Significant Impact' (e.g., air quality, energy, hazards and hazardous materials, hydrology and water quality, and solid/hazardous waste), the analysis indicated that project impacts would not exceed any project-specific significance thresholds. This conclusion is based on the fact that the analyses for each of these environmental areas concluded that the incremental effects of the proposed project would be minor and, therefore, not considered to be cumulatively considerable. Also, in the case of air quality impacts, the net effect of implementing the proposed project with other proposed rules and regulations, AQMP control measures, and ATCP measures is an overall reduction in district-wide emissions leading to the attainment of state and national ambient air quality standards. Therefore, the potential for significant cumulative or cumulatively considerable impacts is not further evaluated in this ~~Draft~~ Final EA.

**XVIII.c)** Based on the foregoing analyses, PAR 1469 is not expected to cause adverse effects on human beings. Significant air quality, energy, hazards and hazardous materials, hydrology and water quality, solid/hazardous waste, and transportation/traffic are not expected from the implementation of PAR 1469. The direct impact from the proposed project, however, is a reduction of cancer risk to less than 25 in one million for most facilities affected by PAR 1469, and thus, there is an overall air quality benefit.

No impacts to aesthetics, agricultural resources, biological resources, cultural resources, geology and soils, land use/planning, mineral resources, noise, population and housing, pubic services, and recreation are expected as a result of the implementation of PAR 1469. Therefore, these environmental issues will not be further analyzed in this ~~Draft~~ Final EA.

As discussed in items I through XVIII above, the proposed project has no potential to cause significant adverse environmental effects.

# APPENDIX A

---

## PROPOSED AMENDED RULE 1469: HEXAVALENT CHROMIUM EMISSIONS FROM CHROMIUM ELECTROPLATING AND CHROMIC ACID ANODIZING OPERATIONS

In order to save space and avoid repetition, please refer to the latest version of Proposed Amended Rule 1469 located elsewhere in the rule amendment package.

The version "PAR1469b October 7, 2008" of the proposed amended rule was circulated with the Draft Environmental Assessment that was released on October 9, 2008 for a 30-day public review and comment period ending November 7, 2008.

Original hard copies of the Draft Environmental Assessment, which include the version "PAR1469b October 7, 2008" of the proposed amended rule, can be obtained through the SCAQMD Public Information Center at the Diamond Bar headquarters or by calling (909) 396-2039.

# APPENDIX B

---

## CONSTRUCTION AND OPERATION

## EMISSIONS CALCULATIONS

# A. Potential Construction Emissions Due to the Implementation of PAR 1469 for Compliance Year 2009

| PAR 1469 Affected Facilities | Maximum No. of HEPA Systems Installed in 2009 | Maximum No. of HEPA Systems Installed in one day |
|---|---|---|
| 53 | 54 | 4 |

**Construction Equipment Hours of Operation**

| Construction Activity | Equipment Type | Pieces of Equipment | Hrs/day | Crew Size | Total Crew Size on site |
|---|---|---|---|---|---|
| Portable Equip. Operation | Air Compressor | 1 | 4 | 1 | 4 |
| (Actual Construction of Control Equipment) | Welder | 1 | 4 | 1 | |

**Construction Equipment Emission Factors**

| Equipment Type* | VOC lb/hr | CO lb/hr | NOx lb/hr | SOx lb/hr | PM10 lb/hr | PM2.5 lb/hr | CO2 lb/hr | CH4 lb/hr |
|---|---|---|---|---|---|---|---|---|
| Air Compressor < 50 HP | 0.122 | 0.2867 | 0.2416 | 0.0003 | 0.0275 | 0.0253 | 22.3 | 0.011 |
| Welder < 50 HP | 0.1292 | 0.3084 | 0.276 | 0.0003 | 0.0299 | 0.027508 | 26 | 0.0117 |

*Source: CARB's Off-Road Mobile Source Emission Factors for Scenario Year 2009*

| Construction Vehicle (Mobile Source) Emission Factors for Year 2009<br>Construction Related Activity | VOC lb/mile | CO lb/mile | NOx lb/mile | SOx lb/mile | PM10 lb/mile | PM2.5 lb/mile | CO2 lb/mile | CH4 lb/mile |
|---|---|---|---|---|---|---|---|---|
| Offsite (Construction Worker - Passenger Vehicle) | 0.00099245 | 0.00968562 | 0.00100518 | 0.00001066 | 0.00008601 | 0.00005384 | 1.09755398 | 0.00008767 |
| Offsite (Heavy Duty Delivery Truck) | 0.00329320 | 0.01282236 | 0.04184591 | 0.00004013 | 0.00199572 | 0.00175227 | 4.21080792 | 0.00015249 |

EMFAC 2007 (v2.3) Emission Factors (On-Road) for Scenario Year 2009

Passenger Vehicles/Light Duty Trucks: http://www.aqmd.gov/ceqa/handbook/onroad/onroadEF07_26.xls

Heavy-Duty Delivery Trucks: http://www.aqmd.gov/ceqa/handbook/onroad/onroadEFHHDT07_26.xls

## A. Potential Construction Emissions Due to the Implementation of PAR 1469 for Compliance Year 2009 (continued)

**Construction Worker Number of Trips and Trip Length**

| Vehicle | No. of One-Way Trips/Day | Trip Length (miles) |
|---|---|---|
| Offsite (Construction Worker - passenger vehicle) | 8 | 25 |
| Offsite (Heavy Duty Delivery Truck) | 2 | 40 |

**Incremental Increase in Onsite Combustion Emissions from Construction Equipment**

**Equation: Emission Factor (lb/hr) x No. of Equipment x Work Day (hr/day) = Onsite Construction Emissions (lbs/day)**

| Equipment Type* | VOC lb/day | CO lb/day | NOx lb/day | SOx lb/day | PM10 lb/day | PM2.5 lb/day | CO2 lb/day | CH4 lb/day |
|---|---|---|---|---|---|---|---|---|
| Air Compressor < 50 HP | 0.49 | 1.15 | 0.97 | 0.00 | 0.11 | 0.10 | 89.20 | 0.04 |
| Welder < 50 HP | 0.52 | 1.23 | 1.10 | 0.00 | 0.12 | 0.11 | 104.00 | 0.05 |
| **TOTAL** | **1.00** | **2.38** | **2.07** | **0.00** | **0.23** | **0.21** | **193.20** | **0.09** |

*Equipment is assumed to be diesel fueled.

**Incremental Increase in Offsite Combustion Emissions from Construction Vehicles**

**Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x No. of Workers x Trip length (mile) = Offsite Construction Emissions (lbs/day)**

| Vehicle | VOC lb/day | CO lb/day | NOx lb/day | SOx lb/day | PM10 lb/day | PM2.5 lb/day | CO2 lb/day | CH4 lb/day |
|---|---|---|---|---|---|---|---|---|
| Offsite (Construction Worker Vehicle) | 0.20 | 1.94 | 0.20 | 0.00 | 0.02 | 0.01 | 219.51 | 0.02 |
| Offsite (Heavy Duty Delivery Truck) | 0.26 | 1.03 | 3.35 | 0.00 | 0.16 | 0.14 | 336.86 | 0.01 |
| **TOTAL** | **0.46** | **2.96** | **3.55** | **0.01** | **0.18** | **0.15** | **556.38** | **0.03** |

**Total Incremental Combustion Emissions from Construction Activities**

| | VOC lb/day | CO lb/day | NOx lb/day | SOx lb/day | PM10 lb/day | PM2.5 lb/day | CO2 lb/day | CH4 lb/day |
|---|---|---|---|---|---|---|---|---|
| **Equipment & Workers' Vehicles (1 facility)** | **1** | **5** | **6** | **0.01** | **0** | **0** | **750** | **0** |
| **Equipment & Workers' Vehicles (4 facilities)** | **6** | **21** | **22** | **0** | **2** | **1** | **2998** | **0** |
| Significant Threshold | 75 | 550 | 100 | 150 | 150 | 55 | n/a | n/a |
| Exceed Significance? | NO | NO | NO | NO | NO | NO | n/a | n/a |

## A. Potential Construction Emissions Due to the Implementation of PAR 1469 for Compliance Year 2009 (concluded)

**Incremental Increase in Fuel Usage From Construction Equipment and Workers' Vehicles**

| Construction Activity | Total Project Hours of Operation* | Equipment Type | Diesel Fuel Usage (gal/hr)** | Diesel Fuel Usage (gal/yr)** | Gasoline Fuel Usage (gal/yr)*** |
|---|---|---|---|---|---|
| Operation of Portable Equipment | 216 | Welding Machines | 1.177 | 254.23 | N/A |
| Operation of Portable Equipment | 216 | Air Compressors | 2.904 | 627.26 | N/A |
| Workers' Vehicles - Commuting | N/A | Passenger Vehicle/Light-Duty Trucks | N/A | N/A | 2700.00 |
| Workers' Vehicles - Offsite Delivery/Haul | N/A | Heavy-duty Delivery Truck**** | N/A | 883.44 | N/A |
| | | | **TOTAL** | **1764.93** | **2700.00** |

*Assume construction will take approximately 1 day (8 hrs/day max) to up to 5 days, but welder will only be needed for ~4 hours per day.

**Based on CARB's Off-Road Model (Version 2.0) for Equipment Year 2009.

***Assume that construction workers' commute vehicle/pick-up truck uses gasoline and get 20 mi/gal and round trip length is 50 miles and assume that heavy-duty delivery truck uses diesel and gets 4.89 mi/gal with round trip length of 80 miles.

## B. Potential Operation Emissions Due to the Implementation of PAR 1469 for Compliance Year 2009

| No. of Facilities Installing HEPA systems in 2009 | Maximum No. of HEPA Systems Installed in 2009 | No. of Filters Needed in 2009 | Maximum No. of Facilities receiving HEPA systems to be delivered in any 1 day |
|---|---|---|---|
| 53 | 54 | 492 | 4 |

| Operation Vehicle (Mobile Source) Emission Factors for Year 2009 | VOC | CO | NOx | SOx | PM10 | PM2.5 | CO2 | CH4 |
|---|---|---|---|---|---|---|---|---|
| **Construction Related Activity** | lb/mile | lb/mile | lb/mile | lb/mile | lb/mile | lb/mile | lb/mile | lb/mile |
| Offsite (Heavy Duty HEPA filter Delivery Trucks) | 0.00329320 | 0.01282236 | 0.04184591 | 0.00004013 | 0.00199572 | 0.00175227 | 4.21080792 | 0.00014201 |

EMFAC 2007 (v2.3) Emission Factors (On-Road) for Scenario Year 2009
Heavy-Duty Delivery Trucks: http://www.aqmd.gov/ceqa/handbook/onroad/onroadEFHHDT07_26.xls

**Construction Worker Number of Trips and Trip Length**

| Vehicle | No. of One-Way Trips/Day |
|---|---|
| Offsite (Heavy Duty Delivery Truck) | 1 |

**Incremental Increase in Offsite Combustion Emissions from Operation/Delivery Vehicles**

**Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x 2 x Trip length (mile) X number of trucks/day = Offsite Operation Emissions (lbs/day)**

| Vehicle | VOC lb/day | CO lb/day | NOx lb/day | SOx lb/day | PM10 lb/day | PM2.5 lb/day | CO2 lb/day | CH4 lb/day |
|---|---|---|---|---|---|---|---|---|
| Offsite (Heavy Duty HEPA filter Delivery Trucks) | 0.26 | 1.03 | 3.35 | 0.00 | 0.16 | 0.14 | 336.86 | 0.01 |
| **TOTAL** | **0.26** | **1.03** | **3.35** | **0.00** | **0.16** | **0.14** | **336.86** | **0.01** |

**Total Incremental Combustion Emissions from Operation Activities**

| | VOC lb/day | CO lb/day | NOx lb/day | SOx lb/day | PM10 lb/day | PM2.5 lb/day | CO2 lb/day | CH4 lb/day |
|---|---|---|---|---|---|---|---|---|
| **Delivery Vehicles (1 truck/day)** | **0** | **1** | **3** | **0** | **0** | **0** | **337** | **0** |
| **Delivery Vehicles (4 trucks/day)** | **1** | **4** | **13** | **0** | **1** | **1** | **1,347** | **0** |
| Significant Threshold | 55 | 550 | 55 | 150 | 150 | 55 | n/a | n/a |
| Exceed Significance? | NO | NO | NO | NO | NO | NO | n/a | n/a |

## B. Potential Operation Emissions Due to the Implementation of PAR 1469 for Compliance Year 2009 (concluded)

**Incremental Increase in Fuel Usage From Delivery Vehicles**

| Operation Activity | Total Project Hours of Operation | Equipment Type | Diesel Fuel Usage (gal/hr) | Diesel Fuel Usage (gal/yr)* | Gasoline Fuel Usage (gal/yr) |
|---|---|---|---|---|---|
| Workers' Vehicles - Delivery of HEPA filters | N/A | Heavy-duty Delivery Truck | N/A | 867.08 | N/A |
| | | **TOTAL** | | **867.08** | **0.00** |

*Assume that heavy-duty delivery truck uses diesel and gets 4.89 mi/gal with round trip length of 80 miles.

## C. Potential GHG Emissions Due to the Implementation (Construction & Operation) of PAR 1469 for Compliance Year 2009

| PAR 1469 Affected Facilities in 2009 | Maximum No. of HEPA Systems Installed in 2009 | Maximum No. of HEPA Systems Installed in one day |
|---|---|---|
| 53 | 54 | 4 |

| | CO2 lb/day | CH4 lb/day | CO2 lb/yr | CH4 lb/yr | CO2eq fromCH4 lb/yr | CO2 + CO2eq lb/yr | CO2 + CO2eq metric tons/yr |
|---|---|---|---|---|---|---|---|
| **Construction: Equipment & Workers' Vehicles** | 750 | 0 | 39,727.50 | 6.39 | 134.15 | 39,861.65 | 18.08 |
| **Operation: Workers' Vehicles** | 337 | 0.01 | 17,853.83 | 0.60 | 12.64 | 17,866.47 | 8.10 |
| **TOTAL** | **1,086** | **0** | **57,581** | **7** | **147** | **57,728** | **26** |

Notes:
1 metric ton = 2,205 pounds
CH4 has a global warming potential at 21 times that of CO2.

## D. Operation–Related Emissions Calculations Related to Implementation of PAR 1469

**Estimated Increase in VOC Emissions Due to Increased Use of Chemical Fume Suppressants**

**Assumptions:**

1. For a worst-case calculation, all facilities are assumed to use the product 'Fumetrol 140' which at has been determined to have the highest VOC content (50 g/l) of any of chemical fume suppressants available on the market.
2. Based on fume suppressant manufacturer data, a fume suppressant usage rate of 0.075 liters per 10,000 ampere-hours is assumed.
3. The total estimated annual rectifier usage is a combination of actual rectifier usage data provided by each affected facility, plus a calculated adjustment to permitted rectifier usage rates for when actual data were not available.
4. The average annual operating hours for all the affected facilities is assumed to be 260 days per year.

**Table B-1**
**Summary of Total Estimated Annual Rectifier Usage per Type of Plating Activity**

| **Type of Plating Activity** | **No. of Tanks to Start Using Chemical Fume Suppressants** | **Total Estimated Annual Rectifier Usage** (Ampere-Hr/year) |
|---|---|---|
| Hard | 1 | 1,400,000 |
| Decorative | 0 | 0 |
| Anodizing | 0 | 0 |
| **Total** | **1** | 1,400,000 |

**Equation:**

Annual Rectifier Usage (ampere-hr/year) x Fume Suppressant Usage Factor (0.075 liters of fume suppressants/10,000 ampere-hr) x Worst-case VOC content of Fume Suppressant (lb VOC/gal of fume suppressant) = Estimated Amount of VOCs to be emitted from new usage of fume suppressants per year (lb VOC/year)

Estimated Amount of VOCs to be emitted from new usage of fume suppressants = (1,400,000 ampere-hr/year) x (0.075 liter /10,000 ampere-hr) x (50 grams VOC/liter) x (1 pound /454 grams) =

1.16 pounds VOC/year x (1 year/ 260 days) = **0.004 pound VOC/day**

## E. Estimated Ventilation Rates for Designing New HEPA Filtrations Systems

**Assumptions:**

1. The surface area of each plating or anodizing tank is estimated to be sized at 36 square feet and the ventilation rate is approximately 150 cubic feet per minute (cfm) per square foot of tank surface area.
2. Based on vendor-supplied data, control systems and the individual filters are typically sized to handle either 5,000, 10,000, or 20,000 cfm. Therefore, the calculated size of the control system is initially based on the tank surface area and then rounded to the nearest standard size relative to the number of tanks. For example, a facility requiring controls for one tank would have a calculated ventilation rate of 5,400 cfm but it would be sized for a 5,000 cfm system to establish a designed ventilation rate. However, if three or more tanks are vented to HEPA, the assumed filter sizes are rounded up. Also, based on the designed ventilation rate, the number of HEPA filters required is typically one filter module for every 1000 cfm and then rounded up to fit into either a 2 x 3, 3 x 4, or 3 x 6 configuration. Table B-2 summarizes these assumptions.

**Table B-2**
**Calculated and Vendor Design Ventilation Rates and Filter Parameters for HEPA Systems**

| No. of Tanks | Calculated Ventilation Rate for Entire System (cfm) | Designed Ventilation Rate for Entire System (cfm) | Estimated Total Number of HEPA Filters Needed |
|---|---|---|---|
| 1 | 5,400 | 5,000 | 6 |
| 2 | 10,800 | 10,000 | 12 |
| 3 | 16,200 | 20,000 | 18 |

3. To comply with PAR 1469, 56 new air pollution control systems venting 66 tanks at 55 facilities are expected to be installed and 11 existing air pollution control systems venting 16 tanks are expected to be retrofitted, as summarized in Table D-2.

**Table B-3**
**Estimated Number of HEPA Systems & Filters Needed**
**Per Designed Ventilation Rate**

| Designed Ventilation Rate (cfm) | No. of HEPA Systems Needed per Designed Ventilation Rate | No. of HEPA Filters Needed per Designed Ventilation Rate |
|---|---|---|
| 5,000 | 57 | 342 |
| 10,000 | 5 | 60 |
| 20,000 | 5 | 90 |
| **Total** | **67** | **492** |

## F. Electricity and Water Consumption From Operation of HEPA Filtration Systems

Total Number of Facilities: 65

Total Number of HEPA Filtration Systems Equipped with Mist Eliminators: 67

Number of Systems per Ventilation Rate:
57 at 5,000 cfm; 4 at 10,000 cfm; and, 6 at 20,000 cfm

**Assumptions:**

1) The horse-power (hp) rating of the blower/exhaust fan depends on the ventilation rate of the HEPA filtration system. Likewise, the mist eliminator wash down rate in gallons per minute (gpm) depends on the ventilation rate. The following blower ratings and wash down rates are assumed for the following ventilation rates:

| Ventilation Rate (cfm) | Blower Rating (hp) | Mist Eliminator Wash Down Rate *(gpm) |
|---|---|---|
| 5,000 | 15 | 6 |
| 10,000 | 20 | 12 |
| 20,000 | 50 | 54 |

* Washdown rate in gallons per minute, only requires one minute's worth of washdown per 12-hour period.

2) Electricity is used to operate the HEPA filtration systems.

3) Water is used for washing down the mist eliminator.

4) Independent of the ventilation rate, the operating schedule of each HEPA system is assumed to be 12 hr/day; 5 days/wk; 52 wk/yr (3,120 hr/yr).

5) Abbreviations Key:

| | | | |
|---|---|---|---|
| hp | = horsepower | W | = watt |
| hr | = hour | M | = mega |
| yr | = year | k | = kilo |
| wk | = week | scf | = standard cubic feet |
| lb | = pound | gpm | = gallons per minute |

**5,000 cfm Systems**

Facilities installing HEPA system rated at 5,000 cfm = 57

Electrical Rating = 15 hp

Wash Down Rate = 6 gpm for one minute in a 12-hour day

Total kilowatt-hours required for one 5,000 cfm system =
(15 hp) x (0.7457 kW-hr/hp-hr) x (3,120 hr/yr) = 34,899 kW-hr/yr

Total water consumption for one 5,000 cfm system =

(6 gpm) x (1 minute/12 hr/day) = 6 gallons/day

**Total kW-hr for 57 facilities each equipped with a 5,000 cfm system = (34,899 kW-hr/yr x 57) = 1,989,243 kW-hr/yr**

**Instantaneous Electricity Used for 57 facilities equipped with a 5,000 cfm system = 1,989,243 kW-hr/yr x 1 work yr/260 days x 1 work day/12 hr x 1 MW/1000 kW = 0.637 MW**

**Water Demand for 57 facilities equipped with a 5,000 cfm system = (6 gallons/day x 57) = 342 gallons/day**

**10,000 cfm Systems**

Facilities installing HEPA system rated at 10,000 cfm = 5

Electrical Rating = 20 hp

Wash Down Rate = 12 gpm for one minute in a 12-hour day

Total kilowatt-hours required for one 10,000 cfm system =
(20 hp) x (0.7457 kW-hr/hp-hr) x (3,120 hr/yr) = 46,532 kW-hr/yr

Total water consumption for one 10,000 cfm system =
(12 gpm) x (1 minute/12 hr-day) = 12 gallons/day

**Total kW-hr for 5 facilities each equipped with a 10,000 cfm system = (46,532 kW-hr/yr x 5) = 232,658 kW-hr/yr**

**Instantaneous Electricity Used for 5 facilities equipped with a 10,000 cfm system = 232,658 kW-hr/yr x 1 work yr/260 days x 1 work day/12 hr x 1 MW/1000 kW = 0.075 MW**

**Water Demand for 5 facilities equipped with a 10,000 cfm system = (12 gallons/day x 5) = 60 gallons/day**

**20,000 cfm Systems**

Facilities installing HEPA system rated at 20,000 cfm = 5

Electrical Rating = 50 hp

Wash Down Rate = 54 gpm for one minute in a 12-hour day

Total kilowatt-hours required for one 20,000 cfm system =
(50 hp) x (0.7457 kW-hr/hp-hr) x (3,120 hr/yr) = 116,329 kW-hr/yr

Total water consumption for one 20,000 cfm system =
(54 gpm) x (1 minute/12 hr-day) = 54 gallons/day

**Total kW-hr for 5 facilities each equipped with a 20,000 cfm system = (116,329 kW-hr/yr x 5) = 581,646 kW-hr/yr**

**Instantaneous Electricity Used for 5 facilities equipped with a 20,000 cfm system = 581,646 kW-hr/yr x 1 work yr/260 days x 1 work day/12 hr x 1 MW/1000 kW = 0.186 MW**

**Water Demand for 5 facilities equipped with a 20,000 cfm system = (54 gallons/day x 5) = 270 gallons/day**

**GRAND TOTALS FOR FACILITY UNIVERSE:**

**Total MW-hrs per year of electricity used =**
**1989 MW-hrs/yr + 233 MW-hrs/yr + 582 MW-hrs/yr = 2,804MW-hrs per year**

**0.637 MW+ 0.075 MW + 0.186 MW = 0.898 MW (instantaneous demand)**

**Total gallons per day of water used =**
**342 + 60 + 270 = 672 gallons/day**

## G. Natural Gas Consumption From Power Plants to Generate Electricity for Operation of HEPA Filtration Systems

From Section F:

**Total MW-hrs per year of electricity needed =**
**1989 MW-hrs/yr + 233 MW-hrs/yr + 582 MW-hrs/yr = 2,804MW-hrs per year**

To convert the electricity demand into natural gas demand at the power plant, the following criteria is applied:

1 MW = 1,000 kW of electricity
1 kW-hr = 3,412 BTU
1 CF = 1,088 BTU

**2,804 MW-HRS/YR X 1000KW/1MW X 3412 BTU/1 KW-HR X 1 CF/1,088 BTU = 8.79 MMCF OF NATURAL GAS DEMAND/YR**

# APPENDIX C

## COMMENT LETTER ON THE DRAFT EA AND RESPONSES TO COMMENTS

# Responses to Comment Letter #1
(Native American Heritage Commission, October 21, 2008)

STATE OF CALIFORNIA — Arnold Schwarzenegger, Governor

**NATIVE AMERICAN HERITAGE COMMISSION**
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
e-mail: ds_nahc@pacbell.net

October 21, 2008

Ms. Barbara Radlein, CEQA Manager
**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**
21865 Copley Drive
Diamond Bar, CA 91765-4182

Re: SCH#2008101043; CEQA/NEPA Notice of Completion; draft Environmental Assessment (EA) for Proposed Amended Rule 1469 – Hexavalent Chromium Emisssions from Chromium Electroplating & Chronic Acid Anodizing Operations; Riverside, Orange and Los Angeles Counties, California

Dear Ms. Radlein:

The Native American Heritage Commission (NAHC) is the state agency designated to protect California's Native American Cultural Resources. This is a document, apparently prepared under the requirements of the National Environmental Policy Act (NEPA), 42 U.S.C. 4321-43351. As such other federal statutes that may apply to this proposed project, that require tribal consultation are as follows: Section 106 of the National Historic Preservation Act of 1966,m as amended, 16 U.S.C. 470(f) *et seq.*; the Archaeological Resources Protection Act of 1977, 16 U.S.C. 470(aa)-11; the Archaeological and Historic Preservation Act, 16 U.S.C. 469-469( c), and if appropriate, the Native American Grave Protection and Repatriation Act (NAGPRA), 25 U.S.C. 3001-3013. State of California statutes and Guidelines may also apply for guidance, as follows: The California Environmental Quality Act (CEQA) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the California Code of Regulations §15064.5(b)(c )(f) CEQA guidelines). Section 15382 of the 2007 CEQA Guidelines defines a significant impact on the environment as "a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ...objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE)', and if so, to mitigate that effect. To adequately assess the project-related impacts on historical resources, the Commission recommends the following action: 1-1

√ Contact the appropriate California Historic Resources Information Center (CHRIS) for possible 'recorded sites' in locations where the development will or might occur.. Contact information for the Information Center nearest you is available from the State Office of Historic Preservation (916/653-7278)/ http://www.ohp.parks.ca.gov. The record search will determine: 1-2

- If a part or the entire APE has been previously surveyed for cultural resources.
- If any known cultural resources have already been recorded in or adjacent to the APE.
- If the probability is low, moderate, or high that cultural resources are located in the APE.
- If a survey is required to determine whether previously unrecorded cultural resources are present.

√ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.

- The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure. 1-3
- The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.

√ The Native American Heritage Commission (NAHC) can conduct a:

* A Sacred Lands File (SLF) search of the project 'areas of potential effect (APE)': if the 'Lead Agency' provides the Commission (NAHC) with the USGS 7.5 Minute Quadrangle Map Names; Township, Range and Section of the project areas. However the NAHC SLF is not exhaustive and local tribal contacts should be consulted from the attached list.

- The NAHC advises the use of Native American Monitors, also, when profession archaeologists or the equivalent are employed by project proponents, in order to ensure proper identification and care given cultural resources that may be discovered. The NAHC recommends that contact be made with Native American Contacts on the attached list to get their input on potential project impact (APE). Such tribal consultation is also required by NEPA and Section 106 of the National Historic Preservation Act, cited above. In some cases, the existence of a Native American cultural resources may be known only to a local tribe(s). 1-4

√ Lack of surface evidence of archeological resources does not preclude their subsurface existence.

- Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5 (f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
- A culturally-affiliated Native American tribe may be the only source of information about a Sacred Site/Native American cultural resource.
- Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.

1-5

√ Lead agencies should include provisions for discovery of Native American human remains or unmarked cemeteries in their mitigation plans.

* CEQA Guidelines, Section 15064.5(d) requires the lead agency to work with the Native Americans identified by this Commission if the initial Study identifies the presence or likely presence of Native American human remains within the APE. CEQA Guidelines provide for agreements with Native American, identified by the NAHC, to assure the appropriate and dignified treatment of Native American human remains and any associated grave liens.

1-6

√ Irregardless of the fact that this project is prepared under federal laws and regulations, State of California law does apply in cases where human remains are inadvertently discovered as result of any ground-breaking activity. Health and Safety Code §7050.5, Public Resources Code §5097.98 and Sec. §15064.5 (d) of the California Code of Regulations (CEQA Guidelines) mandate procedures to be followed, including that construction or excavation be stopped in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery until the county coroner or medical examiner can determine whether the remains are those of a Native American. . Note that §7052 of the Health & Safety Code states that disturbance of Native American cemeteries is a felony.
√ Lead agencies should consider avoidance, as defined in §15370 of the California Code of Regulations (CEQA Guidelines), when significant cultural resources are discovered during the course of project planning and implementation

1-7

Please feel free to contact me at (916) 653-6251 if you have any questions.

Sincerely,

Dave Singleton
Program Analyst

Attachment: List of Native American Contacts

Cc: State Clearinghouse

**Native American Contacts**
Los Angeles, Riverside and Orange Counties
October 21, 2008

Pechanga Band of Mission Indians
Paul Macarro, Cultural Resource Center
P.O. Box 1477 Luiseno
Temecula , CA 92593
(951) 308-9295 Ext 8106
(951) 676-2768
(951) 506-9491 Fax

Ramona Band of Cahuilla Mission Indians
Joseph Hamilton, Chairman
P.O. Box 391670 Cahuilla
Anza , CA 92539
admin@ramonatribe.com
(951) 763-4105
(951) 763-4325 Fax

San Manuel Band of Mission Indians
James Ramos, Chairperson
26569 Community Center Drive Serrano
Highland , CA 92346
(909) 864-8933
(909) 864-3724 - FAX
(909) 864-3370 Fax

Soboba Band of Mission Indians
Robert Salgado, Chairperson
P.O. Box 487 Luiseno
San Jacinto , CA 92581
dhill@soboba-nsn.gov
(951) 654-2765
(951) 654-4198 - Fax

Ti'At Society
Cindi Alvitre
6515 E. Seaside Walk, #C Gabrielino
Long Beach , CA 90803
calvitre@yahoo.com
(714) 504-2468 Cell

Juaneno Band of Mission Indians Acjachemen Nation
David Belardes, Chairperson
31742 Via Belardes Juaneno
San Juan Capistrano , CA 92675
DavidBelardes@hotmail.com
(949) 493-0959
(949) 493-1601 Fax

San Fernando Band of Mission Indians
John Valenzuela, Chairperson
P.O. Box 221838 Fernandeño
Newhall , CA 91322 Tataviam
tsen2u@msn.com Serrano
(661) 753-9833 Office Vanyume
(760) 885-0955 Cell Kitanemuk
(760) 949-1604 Fax

Gabrieleno/Tongva San Gabriel Band of Mission
Anthony Morales, Chairperson
PO Box 693 Gabrielino Tongva
San Gabriel , CA 91778
ChiefRBwife@aol.com
(626) 286-1632
(626) 286-1758 - Home
(626) 286-1262 Fax

**This list is current only as of the date of this document.**

**Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.**

**This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2008101043; NEPA/CEQA Notice of Completion; a federal Environmental Assessment (EA) for the Proposed amended Rule 1469 - Hexavalent Chromium Emissions for Chromium Electroplating & Chronic Acid Anodizing Operations; located in Riverside, Orange and Los Angeles counties.**

**Native American Contacts**
Los Angeles, Riverside and Orange Counties
October 21, 2008

Santa Rosa Band of Mission Indians
John Marcus, Chairman
P.O. Box 609 Cahuilla
Hemet , CA 92546
srtribaloffice@aol.com
(951) 658-5311
(951) 658-6733 Fax

Gabrielino/Tongva Council / Gabrielino Tongva Nation
Sam Dunlap, Tribal Secretary
761 Terminal Street; Bldg 1, 2nd floor Gabrielino Tongva
Los Angeles , CA 90021
office @tongvatribe.net
(213) 489-5001 - Office
(909) 262-9351 - cell
(213) 489-5002 Fax

Juaneno Band of Mission Indians Acjachemen Nation
Anthony Rivera, Chairman
31411-A La Matanza Street Juaneno
San Juan Capistrano , CA 92675-2674
arivera@juaneno.com
949-488-3484
949-488-3294 Fax

Morongo Band of Mission Indians
Michael Contreras, Cultural Heritage Prog. Manager
13000 Fields Road Cahuilla
Banning , CA 92220 Serrano
(951) 755-5025
(951)201-1866 - cell
(951) 922-0105 Fax

San Manuel Band of Mission Indians
Ann Brierty, Environmantal Department
101 Pure Water Lane Serrano
Highland , CA 92346
abrierty@sanmanuel-nsn.gov
(909) 863-5899 EXT-4321

(909) 862-5152 Fax

Juaneno Band of Mission Indians Acjachemen Nation
Joyce Perry , Tribal Manager & Cultural Resources
31742 Via Belardes Juaneno
San Juan Capistrano , CA 92675
kaamalam@cox.net
(949) 493-0959
(949) 293-8522 Cell
(949) 493-1601 Fax

Juaneno Band of Mission Indians
Alfred Cruz, Culural Resources Coordinator
P.O. Box 25628 Juaneno
Santa Ana , CA 92799
alfredgcruz@sbcglobal.net
714-998-0721
slfredgcruz@sbcglobal.net

Juaneno Band of Mission Indians
Adolph "Bud" Sepulveda, Chairperson
P.O. Box 25828 Juaneno
Santa Ana , CA 92799
bssepul@yahoo.net
714-838-3270
714-914-1812 - CELL
bsepul@yahoo.net

**This list is current only as of the date of this document.**

**Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.**

**This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2008101043; NEPA/CEQA Notice of Completion; a federal Environmental Assessment (EA) for the Proposed amended Rule 1469 - Hexavalent Chromium Emissions for Chromium Electroplating & Chronic Acid Anodizing Operations; located in Riverside, Orange and Los Angeles counties.**

**Native American Contacts**
Los Angeles, Riverside and Orange Counties
October 21, 2008

Morongo Band of Mission Indians
Robert Martin, Chairperson
11581 Potrero Road — Cahuilla
Banning , CA 92220 — Serrano
Robert_Martin@morongo.org
(951) 849-8807
(951) 755-5200
(951) 922-8146 Fax

Pechanga Band of Mission Indians
Mark Macarro, Chairperson
P.O. Box 1477 — Luiseno
Temecula , CA 92593
tbrown@pechanga-nsn.gov
(951) 676-2768
(951) 695-1778 Fax

Willie Pink
48310 Pechanga Road — Luiseno
Temecula , CA 92592
wjpink@hotmail.com
(909) 936-1216
Prefers e-mail contact

Serrano Nation of Indians
Goldie Walker
6588 Valaria Drive — Serrano
Highland , CA 92346
(909) 862-9883

Soboba Band of Luiseno Indians
Erica Helms, Cultural Resources Manager
P.O. Box 487 — Luiseno
San Jacinto , CA 92581
dhill@soboba-nsn.gov
(951) 654-2765
FAX: (951) 654-4198

Sonia Johnston, Tribal Vice Chairperson
Juaneño Band of Mission Indians
P.O. Box 25628 — Juaneno
Santa Ana , CA 92799
sonia.johnston@sbcglobal.net
(714) 323-8312

Juaneno Band of Mission Indians
Anita Espinoza
1740 Concerto Drive — Juaneno
Anaheim , CA 92807
(714) 779-8832

Juaneno Band of Mission Indians
Joe Ocampo, Chairperson
1108 E. 4th Street — Juaneno
Santa Ana , CA 92701
joeaocampo@netzero.com
(714) 547-9676
(714) 623-0709-cell

**This list is current only as of the date of this document.**

**Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.**

**This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2008101043; NEPA/CEQA Notice of Completion; a federal Environmental Assessment (EA) for the Proposed amended Rule 1469 - Hexavalent Chromium Emissions for Chromium Electroplating & Chronic Acid Anodizing Operations; located in Riverside, Orange and Los Angeles counties.**

**Responses to Comment Letter #1**
(Native American Heritage Commission, October 21, 2008)

1-1 The SCAQMD, is the Lead Agency and has prepared a Draft EA with no significant impacts for PAR 1469 in accordance with CEQA and its certified regulatory program (SCAQMD Rule 110). Conclusions in the Draft EA that PAR 1469 will not generate significant adverse impacts to any environmental topic area, including cultural resources, is based on substantial evidence. Further, the SCAQMD is aware of the requirements in CEQA Guidelines §15064.5 and has complied with this section as well as all other relevant CEQA requirements relative to the preparation of this Final EA. As stated on page 2-20 of the Final EA, significant adverse cultural resources impacts are not expected from implementing PAR 1469 because construction-related activities associated with the implementation of PAR 1469 are expected to be minimal and confined within the footprint of affected existing facilities (typically inside the affected facility). Furthermore, it is envisioned that the areas where the affected facilities are located are already either devoid of significant cultural resources or whose cultural resources have been previously disturbed and would not be further disturbed as a result of implementing the proposed project. Thus, no significant adverse impacts to historical, archaeological or paleontological resources as defined in CEQA Guidelines §15064.5 are expected as a result of implementing PAR 1469.

1-2 As indicated in response to Comment 1-1, based on substantial evidence the proposed project is not expected to generate significant adverse environmental impacts to any environmental topic areas, including cultural resources. As a result, further surveys are not required as requested by the commentator.

1-3 An archaeological inventory survey is not required to be performed for the proposed project. See response to Comment 1-1 for reasons why a survey is not required.

1-4 As noted in responses to Comments 1-1 and 1-3, additional archaeological investigations are not warranted or required for the proposed project. Further, as a result of a previous request by the commentator, SCAQMD staff established a comprehensive mailing list of Native American contacts that include all of the contacts cited in this comment letter. As a result, Native American contacts have already received notice of the Draft EA for the proposed project.

1-5 PAR 1469 may require minor modifications at existing affected facilities subject to the requirements in PAR 1469. However, any modifications would occur within the existing facility locations, within areas that have already been graded and developed with other equipment and foundations. Further, based on the locations of affected facilities, typically industrial areas, and historical uses of the affected sites as plating and anodizing facilities, the likelihood of encountering cultural resources is extremely low. Therefore, no impacts to cultural resources are expected from the proposed project because the location of the existing equipment that might be modified or replaced is inside an existing industrial facility and no major excavation or construction is required. As a result no further analysis of cultural resources in the Final EA is required.

1-6 With regard to the potential for discovery of Native American remains, refer to responses to Comments 1-1, 1-3, and 1-5. Further, as noted on page 2-20 of the Final EA, the responses to the environmental checklist for cultural resources do not identify the presence or likely presences of Native American human remains since no excavation or grading activities are

expected as part of implementing the proposed project. Therefore, agreements with Native Americans to assure appropriate treatment of Native American human remains are not warranted since no site excavation or grading activities are expected and no opportunities for discovering human remains would otherwise occur as part of implementing the proposed project.

1-7 As noted in responses to Comments 1-1, 1-5 and 1-6, discovery of human remains relative to the proposed project is not anticipated. CEQA Guidelines §15370(a) refers to avoidance in the context of mitigation measures. Specifically, mitigation includes: "Avoiding the impact altogether by not taking a certain action or parts of an action." Since no significant cultural resources impacts were identified, no mitigation measures, including avoidance, are necessary or required. Further, because of the nature of the proposed project, there is no action or part of an action that would require excavation or grading activities such that the presence or likely presence of Native American human remains would be discovered as a result of implementing PAR 1469.