SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Final Environmental Assessment:

Proposed Rule 1469.1 – Spraying Operations Using Coatings Containing Chromium

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PREFACE

This document constitutes the Final Environmental Assessment (EA) for Proposed Rule (PR) 1469.1 – Spraying Operations Using Coatings Containing Chromium. The Draft EA was released for a 30-day public review and comment period from January 25, 2005, to February 23, 2005. No comment letters were received from the public relative to the Draft EA. Note that some modifications have been made to PR 1469.1 since the release of the Draft EA based on input from the regulated industry to the rule development staff. To ease in identification, modifications to the document are included as underlined text and text removed from the document is indicated by ~~strikethrough~~. The key modification to PR 1469.1 since the release of the Draft EA is the extension of the effective compliance date from the date of adoption to July 1, 2005 for housekeeping and recordkeeping requirements to allow operators of affected facilities time to train their employees. Other minor modifications have been made to PR 1469.1 for clarity and continuity.

Staff has evaluated the proposed modifications to PR 1469.1 since the release of the Draft EA, and has determined that the net result from the proposed changes is within the scope of the project-specific analysis. Aside from air quality and solid/hazardous waste, no other environmental areas were affected by the proposed modifications to PR1469.1. Further, none of the modifications alter any conclusions reached in the Draft EA, nor provide new information of substantial importance relative to the draft document. Based on the fact that the proposed modifications to PR 1469.1 do not create any new significant adverse impacts nor do they result in a substantial increase in the severity of any impacts relative to the project-specific analysis, the proposed modifications do not constitute significant new information that would require recirculation of the Draft EA pursuant to CEQA Guidelines §15073.5. Therefore, this document is now a Final EA.

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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 (collectively known 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 1997 AQMP concluded that major reductions in criteria pollutant emissions of volatile organic compounds (VOCs) and oxides of nitrogen (NOx) are necessary to attain the air quality standards for ozone and particulate matter (PM10).

In addition to the extensive control program to reduce criteria pollutants, the SCAQMD also regulates toxic air contaminants (TAC). A substance is considered toxic if it has the potential to cause adverse health effects. 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.

In March 2000, the SCAQMD adopted the Air Toxics Control Plan (ATCP), which was created in response to extensive air monitoring conducted under the SCAQMD's Multiple Air Toxics Exposure Study (MATES II) and to fill the need for a more systematic approach to reducing air toxics emissions in the district. The ATCP is a planning document designed to examine the overall direction of SCAQMD's air toxics control program and to reduce air toxic exposures in a manner that will promote clean, healthful air for district residents and businesses. As such, the ATCP seeks to identify measures that are technically feasible or are expected to be technically feasible and cost-effective over a period of ten years after adoption of the ATCP. Implementation of the strategies identified in the ATCP will occur through the adoption of new or amended rules and regulations with environmental and economic analyses included. In April 2004, an addendum to the ATCP was adopted to reflect the progress made from implementing the various mobile and stationary source control strategies and to revise the emission estimates to coincide with the latest inventory methodology and adopted rules in the 2003 AQMP.

During the development of the May 2003 amendments to Rule 1469 – Hexavalent Chromium Emissions From Chrome Plating and Chromic Acid Anodizing Operations, ambient monitoring was conducted near several chrome plating facilities. The monitoring results showed elevated hexavalent chromium concentrations that could not be solely attributed to plating operations, and were presumed to also come from chrome spraying operations. To further reduce the cancer risks to neighboring residents and businesses from exposure to hexavalent chromium emissions, SCAQMD staff focused their effort on developing an additional rule to specifically address

[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).

chrome spraying operations at facilities that are currently under-controlled. As a result, proposed Rule (PR) 1469.1 – Spraying Operations Using Coatings Containing Chromium, is a new rule that has been created specifically for reducing hexavalent chromium from spraying operations.

In addition, on December 9, 2004, the California Air Resources Board (CARB) held a public hearing to begin the promulgation process for a proposed Air Toxics Control Measure (ATCM) to specifically address emissions from thermal spraying operations[4]. Because the ATCM has not yet been promulgated through the office of administrative law, thermal spraying is not included in PR 1469.1. However, once the ATCM is adopted, the SCAQMD will address thermal spraying either in a future rule making effort, or enforce the ATCM directly, as required by state law to implement the ATCM.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

PR 1469.1 applies to spraying operations using spray primers or other coatings that contain chromium at metal finishing facilities and, therefore, is a "project" as defined by the California Environmental Quality Act (CEQA). SCAQMD is the lead agency for the 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. No comments were received with respect to the Draft EA. Prior to making a decision on the proposed rule adoption, 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 rule.

SCAQMD's review of the proposed project shows that the project would not have a significant adverse effect on the environment. Therefore, pursuant to CEQA Guidelines §15252, no alternatives or mitigation measures are included in this ~~draft~~ Final EA. An analysis of a least toxics alternative pursuant to SCAQMD Governing Board direction is also not required. The analysis in Chapter 2 supports the conclusion of no significant adverse environmental impacts.

[4] Airborne Toxic Control Measure to Reduce Emissions of Hexavalent Chromium and Nickel from Thermal Spraying; California Code of Regulations, Title 17 §93102.5.

PROJECT LOCATION

PR 1469.1 would apply to facilities located within 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). 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).

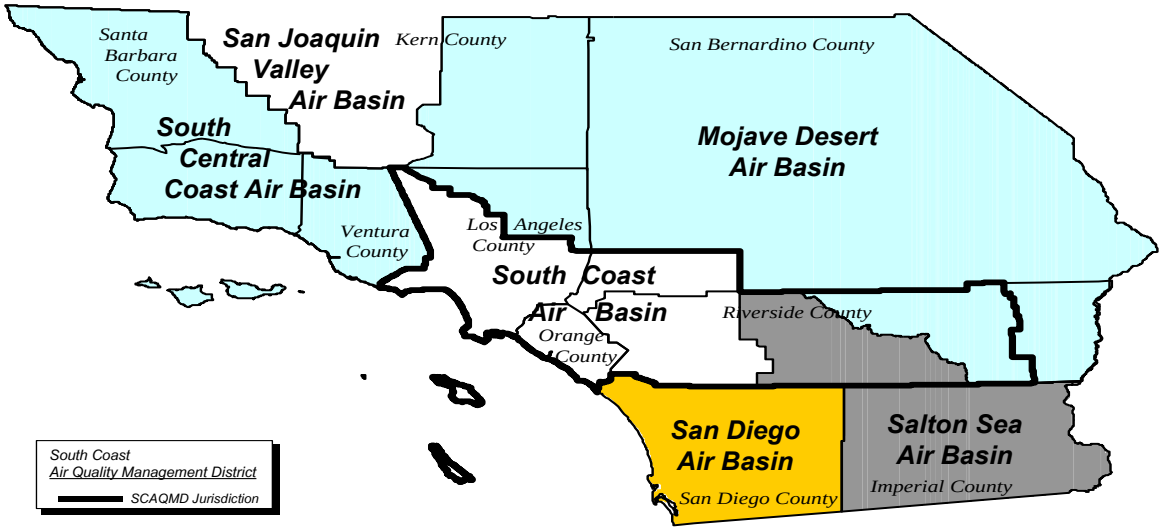

Figure 1-1
Boundaries of the South Coast Air Quality Management District

PROJECT OBJECTIVE

The objective of PR 1469.1 is to reduce the cancer risk associated with hexavalent chromium emissions from spraying operations used in a variety of industries (e.g., sheet metal, electroplating, plating, polishing, anodizing, coloring, coating, engraving, allied services, metal fabrication, aircraft and aircraft parts manufacturing) by establishing new requirements for spraying operations using coatings containing chromium compounds. PR 1469.1 includes requirements for spray transfer efficiencies, enclosure standards, housekeeping provisions, and monitoring, reporting and recordkeeping requirements. In addition, PR 1469.1, allows three

compliance options, that are designed to achieve an overall facility-wide cancer risk of less than 25 in a million (25×10^{-6}).

PROJECT BACKGROUND

PR 1469.1 is designed to reduce hexavalent chromium emissions from spraying operations that use primers or other coatings containing hexavalent chromium. Within the district, there are approximately 70 facilities spanning a variety of industries that spray paints and coatings containing chromium or hexavalent chromium**.** Table 1-1 identifies the number of facilities by industry-type that will be affected by PR 1469.1 relative to chrome spraying activities.

Table 1-1
Summary of Facilities by Industry-type Conducting Chrome Spraying

Industry Type	Number of Facilities
Sheet Metal Work	5
Electroplating, Plating, Polishing, Anodizing and Coloring	20
Coating, Engraving and Allied Services	15
Fabricated Metal Products	2
Electronic Components	5
Aircraft & Aircraft Parts	23
Total	**70**

Spraying operations involving hexavalent chromium can use a variety of spraying methods which are normally conducted inside of a spray booth, and are controlled by a combination of conventional spray booth filters, multi-stage filters or high efficiency particulate arrestor (HEPA) filters. The following discussion explains the various spray coating methods, spray booth designs, and emissions control technologies that are used in practice by the facilities that would be affected by the requirements in PR 1469.1.

Spray Coating Methods

There are four main types of spray coating or spray application techniques: 1) conventional air spray which uses a low volume/high pressure (LVHP) method; 2) high volume/low pressure (HVLP); 3) airless spray; and, 4) electrostatic spray.

Conventional Air Spray

Conventional air spray technology, also known as low-volume/high-pressure (LVHP), uses a specially designed spray gun under high air pressures ranging from 40 to 90 pounds per square inch (psi) to atomize a small quantity of liquid paint into a fine spray. Paint is supplied to the LVHP gun by either a compressor that also supplies pressurized air with the pressure feed system supplies, siphon, or gravity. Because the LVHP spray method uses large amounts of compressed air ranging from seven to 35 cubic feet per minute (cfm) at 100 psi of pressure, a large amount of overspray is generated, resulting in low transfer efficiencies ranging from 30 to 60 percent. Most SCAQMD rules regulating coating operations prohibit the use of LVHP guns due to their low transfer efficiencies.

The essential components of an air atomizing system are gun body, fluid inlet, fluid nozzle, fluid needle assembly, fluid control assembly, air inlet, air nozzle, air valve, fan control and trigger. Other parts of the spray coating system may include a compressed air supply, fluid supply and paint heater. Recirculation booths are often used with these systems. These booths are designed to reduce process exhaust volumes while maintaining minimum ventilation flow rates in order to lower operating costs for both emission control systems and the facility in general (e.g. HVAC). These systems have built-in safety limits that are based on the concentration of hazardous constituents present in the recirculated stream.

High Volume/Low Pressure Air Spray

High Volume/Low Pressure Air Spray (HVLP) is an alternative spray method that uses a high volume of air at low pressures (i.e., 0.1 to 10 psi) to atomize paint. As compared to LVHP guns, the HVLP technology reduces overspray and has higher transfer efficiencies ranging from 65 to 75 percent because the HVLP guns have nozzles with larger diameter openings than LVHP guns for atomizing air. HVLP guns may require similar airflows ranging from 10 to 30 cfm and consist of two types: 1) bleeder (i.e., controls only the fluid flow to the gun); or, 2) non-bleeder (i.e., controls both air flow and fluid flow to the gun by use of a trigger). The air is supplied to the sprayer either by turbine air blowers or conventional shop compressors.

HVLP spray guns are portable and easy to clean; they also have a low risk of blowback to the operator. However, the atomization produced in HVLP guns may not produce a fine enough finish, and production rates may not be as high as with conventional LVHP systems. Generally, low viscosity paints with a fluid delivery rate of up to 10 ounces per minute with work best with HVLP guns.

Three main configurations of HVLP systems are available for use: 1) siphon feed; 2) gravity feed; and, 3) pressure-assist cup. In a siphon-fed system, air pressure to the sprayer pulls paint from a cup located below the gun, producing a fully atomized pattern for even surface coverage. The simple design of siphon-fed spray guns has made it possible to purchase conversion kits for conventional siphon sprayers, making HVLP technology very affordable for small shop owners. Gravity-fed systems are well adapted to high viscosity paints due to the design of the system. The cup, located on top of the gun, allows paint to completely drain, minimizing paint waste. Pressure-assist cup systems use a cup that is mounted beneath the gun with a separately regulated air line to feed paint to the gun. This design increases transfer efficiency and makes it possible for the operator to spray evenly while the gun is inverted.

LVHP systems can be easily converted to HVLP by retrofitting the air gun and installing the appropriate diameter air hoses. However, the air supply system must be able to deliver 10 to 30 cubic feet per minute (cfm) of airflow at 10 psi or lower.

Airless Spray

As the name suggests, airless spray does not use compressed air to propel the paint through the spray nozzle. Instead, paint is pumped at increased fluid pressures (500 to 6500 psi) through a small opening at the spray gun tip to achieve atomization. Pressure is supplied to the gun by an

air-driven reciprocating fluid pump. When the pressurized paint enters the low pressure region in front of the gum, the sudden drop in pressure causes the paint to atomize.

Airless spraying is more efficient than atomized or air spray techniques, because the airless spray is less turbulent, and less paint is lost in the overspray. Paint droplets are generally larger than conventional spray, and produce a heavier paint coat layer in a single pass. Transfer efficiencies typically range from 65 to 70 percent. Airless systems have the ability to spray high viscosity paint without thinning it, and to achieve good penetration into recessed areas of a workpiece. However, the quality of applied coatings is not as good as with conventional spraying, unless a thicker coating is desired for the final product. Airless spraying is usually limited to spraying large areas.

Electrostatic Spray

The electrostatic spray method is when atomized paint droplets are charged with up to 225 microamperes at 30 to 140 kilovolts (kV) at the tip of the spray gun by an electrode. Paint can be atomized by using either a conventional air, airless or rotary system. The electrical force necessary to guide paint particles to the workpiece ranges from 8000 to 10,000 volts per inch of air between the gun and the workpiece. The workpiece is attached to a grounded conveyor making it electrically neutral so that it can attract the electrocharged paint droplets. If the difference in charge is great enough, the paint particles flying past the workpiece will reverse direction so that the edges and back of the workpiece will be coated. This "wraparound" effect increases transfer efficiency.

Electrostatic spray saves material costs and labor. Labor savings are obtained through automated coating lines, or through reduced cleanup in manual coating lines. Electrostatic spray also has the ability to completely cover an object with a uniform thickness of paint, including areas that would otherwise be inaccessible by other spray methods.

Though LVHP air spray systems can be converted to electrostatic systems, other systems such as airless, air-assisted airless, or rotary atomization are preferred because the converted LVHP achieves a lower transfer efficiency. For example, an electrostatic conversion of an LVHP system can achieve a transfer efficiency ranging from 60 to 70 percent, the transfer efficiencies for airless spray and rotary atomization range from 70 to 95 percent and 80 to 90 percent, respectively. High transfer efficiencies with electrostatic spray allow reduced air velocities in spray booths. This results in a reduction in make-up air costs and emissions.

Spray Booths and Air Pollution Control

Spray coating operations are usually conducted inside of a spray booth, and the particulate emissions may be controlled by conventional spray booth filters, multi-stage filters, bag-type filters or HEPA filters. A spray booth is an enclosure that directs overspray from coating or painting operations away from the worker and toward an entrainment device or filter. Spray booths are designed to capture particulate matter that is released into the air during coating operations. A spray booth's primary function is to protect the worker and other employees from exposure to potentially toxic vapors and particulates.

Regardless of the size or design of a spray booth, there are three basic designs for directing air flow: 1) cross-draft; 2) down-draft; and, 3) semidown-draft. In a cross-draft booth, air moves from behind the worker toward the dry filter or water wash curtain which is parallel to the floor. Cross-draft air flow is ideal for systems where the movement of workpieces or parts are automated through the facility via a rack or conveyor system, and the worker sprays the coating from only one direction. These systems can also be used if the paint is applied in more than one direction.

Down-draft booths move air from the ceiling of the booth vertically downward toward an exhaust plenum or pit in the floor. This type of booth is preferred when the worker needs access all the way around the workpiece. The air flow in a semidown-draft booth is a compromise between the cross-draft and down-draft configuration in that it moves down and then to an exhaust located on the side.

Discharge from paint booths consist of particulate matter and organic solvent vapors. Particulate emissions occur from overspray which is when the solids contained in the paint or coating are not transferred onto the workpiece. Increasing the transfer efficiency by reducing the amount of overspray during the coating activities can result in both reduced particulate and solvent emissions.

Although a spray booth is generally thought of as an enclosed painting area, this is not always the case. For example, facilities that paint very large workpieces may have a booth comprised of only one wall which has an exhaust plenum that draws solvent and particulates away from the worker.

There are two basic types of spray booth enclosures that are used to control particulate emissions for most coating or painting applications: water wash booths and dry filter booths. The key difference between the two types is that a water wash booth relies on a "curtain" of water mixed chemical additives to collect overspray while a dry filter booth relies on a filter made of paper, fiberglass or polystyrene to collect the overspray. Water wash booths capture paint overspray by using positive air pressure to force the oversprayed particles into a cascading curtain of water which then accumulate in a wash-water pit. Because the overspray is sticky, as it enters the water curtain, the coating can plug holes, nozzles, pipes and pumps as well as form deposits or a build-up on the water curtain that eventually impedes the flow of water down the face of the curtain. Because water can easily become contaminated with bacteria, the process water must be treated with chemicals that are capable of "de-tacking" the overspray particles and reducing the frequency of water disposal. Though the water wash booth eliminates the need to dispose of dry filter media while allowing the overspray waste to be reduced in weight and volume, the waste process water needs to be treated or separated from the coating through settling, drying or using a centrifuge or cyclone. The primary disadvantage of this technology is the generation of large quantities of wastewater which requires additional treatment either on-site or off-site prior to disposal and the paint sludge is either recycled or disposed of as hazardous waste. Water wash booths are more expensive to install and operate than dry filter booths.

There are several types of dry filter booths; however, all operate on the same principle whereby particulate-laden air is forced to change directions rapidly. The particulates, having more inertia

than the air, impacts on filter media and is removed from the air stream. Dry filter systems are also versatile such that they can be used in spray booths of all sizes and air flow designs (i.e., small, large, cross-draft, down-draft and semidown-draft). Fiberglass cartridges, multilayer honeycombed paper rolls or pads, accordion-pleated paper sheets; and cloth rolls or pads are the four types of filter media currently used in dry filter spray booths. Further, filter performance for each filter media type is characterized by the media's capacity to absorb particulates, its resistance to air flow, and its particulate removal efficiency. Dry filters are capable of removing as much as 95 to 99 percent of particulates.

To make the distinction between conventional filtration and HEPA filtration systems, HEPA systems are configured with multiple filters. 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. 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 aerodynamic 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.

Overview of Current Regulatory Requirements

There are three levels of air-related regulatory requirements that apply to chromium emissions from industries conducting chrome spraying, including the requirements proposed in PR 1469.1: 1) federal requirements (i.e., Environmental Protection Agency or EPA); 2) state (i.e., the California legislature and the CARB); and, 3) local (i.e., SCAQMD). The SCAQMD's local efforts to specifically regulate sources of TACs from these affected industries have been based partly on implementing measures already adopted by EPA and 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 industries that conduct chrome spraying activities, there is currently no applicable NSPS standard. However, chrome spraying activities at some aerospace facilities are currently regulated by the NESHAP for Aerospace Manufacturing and Rework Facilities (aerospace NESHAP), promulgated in 40 CFR Part 63, Subpart GG. The aerospace NESHAP applies to facilities that are major sources of hazardous air pollutant (HAP) emissions. Seven of the 70 facilities in the facility universe of PR 1469.1 are currently subject to the requirements in the Aerospace NESHAP. The aerospace NESHAP contains filtration efficiency requirements for inorganic HAP emissions from new and existing sources, based on aerodynamic particle size range of paint overspray. In addition, the NESHAP specifies numerous monitoring, recordkeeping and reporting requirements.

The chromium and chromium compounds used in spraying activities 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 is one requirement that is applicable to the use of products containing chrome and chromium compounds 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 hexavalent chromium, 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 AB2588 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 thresholds. The risk reduction portion of AB2588 is implemented through the SCAQMD's Rule 1402 - Control of Toxic Air Contaminants from Existing Sources.

In addition, on December 9, 2004, CARB held a public hearing to begin the promulgation process for a proposed ATCM to specifically address emissions from thermal spraying operations[5]. Because the ATCM has not yet been promulgated through the office of administrative law, thermal spraying is not included in PR 1469.1. However, once the ATCM is adopted, the SCAQMD will address thermal spraying either in a future rule making effort, or

[5] Airborne Toxic Control Measure to Reduce Emissions of Hexavalent Chromium and Nickel from Thermal Spraying; California Code of Regulations, Title 17 §93102.5.

enforce the ATCM directly, as required by state law to implement the ATCM. The overlap between facilities potentially subject to the ATCM, and facilities potentially subject to PR 1469.1 is minimal. So far, only two facilities have been currently identified by the ARB as possibly being subject to both the proposed ATCM and PR 1469.1.

SCAQMD Requirements

Some equipment/facilities that would be affected by PR 1469.1 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. 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 (1×10^{-6}) if a permit unit is not constructed with best available control technology for toxics (T-BACT) or ten in one million (10×10^{-6}) if T-BACT is used. 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 existing emissions of TACs by imposing risk reduction requirements for facilities that exceed a specified action risk level. Rule 1402 applies to existing facilities within SCAQMD's jurisdiction whose facility-wide TAC emissions exceed specific risk levels. Rule 1402 implements the risk reduction portion of the state AB2588 program. Rule 1402 establishes requirements for applicability, significant risk levels, risk assessment, risk reduction plans, implementation of risk reduction plans and progress reports. Facilities subject to Rule 1402 may be required to prepare detailed inventories, and depending on their emissions and health risks, may need to prepare 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.

Hexavalent chromium is commonly used in spray coatings and is identified in Table 1 of Rule 1401 as having varying health effects (i.e., it is identified in Rule 1401 as carcinogenic and having a chronic HI). 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. Further, hexavalent chromium is a potent carcinogen that is identified as a key TAC in the MATES II study.

For existing facilities, Rule 1402 establishes a reporting threshold of 0.005 pounds per year for hexavalent chromium. Any facility that exceeds the emission threshold is required to submit an emissions inventory within 60 days after notification from the Executive Officer.

PROJECT DESCRIPTION

PR 1469.1 is a new rule that focuses on reducing hexavalent chromium emissions from spraying operations. The following summarizes the major requirements of the proposed rule. A copy of PR 1469.1 is included in Appendix A.

Purpose

PR 1469.1 will reduce hexavalent chromium from spraying operations.

Applicability

PR 1469.1 will apply to non-thermal spraying operations which use coatings that contain hexavalent chromium.

Definitions of Terms

Equipment- and process-specific definitions specifically referenced in PR 1469.1 include, but are not limited to "chromate," "coating," "coating application equipment," "electrostatic application," "hand application method," "high efficiency particulate arrestors (HEPA)," "high-volume, low-pressure (HVLP) spray," "open face enclosure," "overspray," "primer," "spraying operation or spraying process," "thermal spraying operations," and "touch-up and repair operation." In addition, more general definitions are included in PR 1469.1 such as "approved health risk assessment," "capture efficiency," "compliance plan approval letter," "control efficiency," "equipment," "existing air pollution controls," "existing school," "existing source or source," "facility," "new source," "receptor," "responsible official," "sensitive receptor," and "transfer efficiency."

Requirements

This subdivision establishes the following requirements for chromium spraying operations using coatings or primers that contain hexavalent chromium at affected facilities:

- Control system capture efficiency to ensure that all overspray, except the overspray from touch-up and repair work, containing hexavalent chromium is captured and vented to air pollution control equipment.
- Spray enclosure standards such as maintaining continuous inward airflow at all air openings, requiring ventilated exhaust streams to maintain continuous inward air flow at an average face velocity of 100 feet per minute for open face enclosures, and operating the exhaust system for a minimum time period to remove contaminated air before turning off exhaust system.
- Minimum transfer efficiency requirements for spraying hexavalent chromium-based primers or coatings in accordance with manufacturer procedures, permit conditions, and by one of the following application methods: flow coater, roll coater, dip coater, hand application, HVLP, electrostatic application, or by an alternative District-approved method.
- Three options to demonstrate compliance with PR 1469.1:
  - Option A: Emission limit for spraying operations
    - Applicable to facilities with chrome spraying operations only;
    - 0.018 lb/year, calculated from July 1 through June 30 of each year, if more than 25 meters from residential or sensitive receptor (distance adjusted); or,
    - 0.007 lb/year, calculated from July 1 through June 30 of each year, if 25 meters or less from residential or sensitive receptor, or if 100 meters or less from existing school.
  - Option B: HEPA controls
    - All spray booths equipped with HEPA controls or better.
  - Option C: Facility-wide risk level
    - 25-in-a-million, if more than 25 meters from residential or sensitive receptor; or,
    - 10-in-a-million, if 25 meters or less from residential or sensitive receptor, or 100 meters or less from existing school

- Criteria for preparing, submitting, and approval letter posting of a compliance plan as part of the facility-wide emissions demonstration.
- Permit application submittal requirements for any facility that chooses to physically alter their current operations by modifying existing or installing new air pollution control equipment or by changing conditions to limit throughput of other operational parameters.
- Submittal requirements for a compliance plan to document specific emissions data and air pollution controls.
- Housekeeping requirements effective July 1, 2005 for spray booth enclosures during specific cleanup and maintenance operations.

Submittal of Emissions Inventory and Health Risk Assessment

This subdivision specifies the criteria by which facility owners or operators may submit an emissions inventory and health risk assessment pursuant to Rule 1402 in order to demonstrate facility-wide emissions of all toxic air contaminants and that the cancer risk is below the specified levels for the applicable receptor distance.

Addition of New Sources and Modification to Existing Sources

This subdivision specifies the requirements for demonstrating compliance with the requirements of PR 1469.1 depending on when a facility owner or operator applies for a permit for either a new source or a modification to an existing source.

Source Test Results

This subdivision specifies the criteria and procedures for using results from source tests that were performed to demonstrate compliance with an emission limit or to calculate emissions from spraying operations.

Exemptions

A limited exemption from complying with the enclosure standards and transfer efficiency is allowed when coatings containing chromium are sprayed outside of a spray enclosure, but not outside of a building, to repair or touch-up parts or assemblies.

Compliance Test Methods

This subdivision specifies the EPA- and SCAQMD-approved test methods that would be allowed for determining capture and transfer efficiencies.

Recordkeeping Requirements

In accordance with the data collection and compliance and monitoring reporting requirements, PR 1469.1 includes requirements to maintain records of compliance and monitoring data for at least three years effective July 1, 2005. The records shall include the following data: 1) purchase and daily usage records; 2) material safety data sheets (MSDS) or Technical Data Sheets; 3) application methods used; and 4) calculation methods used for demonstrating annual mass emissions.

Monitoring Requirements

On a weekly basis, facility owners or operators will be required to visually inspect the equipment and filter media for leaks, breaks, tears, or improper installation. In addition, facility owners or

operators will be required to install a magnahelic gauge that will continuously monitor the pressure drop across the filter media of the air pollution control equipment.

Reporting Requirements

For any facility that complies with a facility annual emission limit based on an applicable MICR and receptor distance or with an approved HRA, risk reduction plan, or compliance plan, this subdivision specifies requirements for submitting an annual report that indicates the yearly usage of chromium-containing compounds, chromate content, permit or application numbers of each spray booth, and the distribution of the amounts sprayed in each booth.

Appendix 1

In accordance with the requirements for existing sources to demonstrate facility-wide emissions and to submit a compliance plan, Appendix 1 – Emission Calculation Method, contains the procedures and criteria for identifying all sources of chromium and chromates and for calculating emissions.

Appendix 2

In accordance with the requirements for existing sources to demonstrate facility-wide emissions and to submit a compliance plan, Appendix 2 – Distance-Adjusted Annual Emission Levels for Facilities Located More than 25 Meters from a Residence or Sensitive Receptor, provides procedures for measuring receptor distance and for adjusting the hexavalent chromium emissions to reflect the actual receptor distance.

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 Rule 1469.1 – Spraying Operations Using Coatings Containing Chromium
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 1469.1 Contact Person	Mr. Robert Gottschalk (909) 396-2456
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 PR 1469.1 is to reduce the cancer risk associated with hexavalent chromium emissions from spraying operations by establishing stringent capture, transfer and filter efficiency requirements for new and existing spray booths, especially for facilities located near sensitive receptors such as schools, hospitals or day care facilities. PR 1469.1 is expected to achieve a reduction in cancer risk for affected equipment at chrome spraying facilities to less than 25 in a million. PR 1469.1 also requires good housekeeping, recordkeeping and monitoring practices.
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: January 21, 2005 **Signature:** Steve Smith

Steve Smith, Ph.D.
Program Supervisor

ENVIRONMENTAL CHECKLIST AND DISCUSSION

Because the objective of PR 1469.1 is to reduce the cancer risk associated with hexavalent chromium emissions from the metal finishing industry from hexavalent chromium spraying operations, PR 1469.1 is expected to reduce the cancer risk for affected equipment to less than 25 in a million (25×10^{-6}). Specifically, PR 1469.1 would reduce the cancer risk by establishing capture, transfer, and filter efficiency requirements for chrome spraying operations. The responses to the following checklist items focus on the requirements in PR 1469.1 for add-on control equipment (i.e., HEPA filtration systems) which would be used to comply with the requirements of PR 1469.1. It is important to note that the basis for estimating the number of HEPA filtration systems, the number of HEPA filters needed, and the system flow rate was derived from a combination of facility permit data with worst-case assumptions.

		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 hexavalent chromium emissions from spraying operations. For affected facilities that do not currently meet the proposed rule requirements, the expected option for compliance that would involve physical modifications to the equipment is the installation of 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 PR 1469.1. 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 all of the above 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 hexavalent chromium emissions from spraying operations. For affected facilities that do not currently meet the stringent rule requirements, the expected option for compliance that would involve physical modifications to the equipment is the installation of 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 all of the above considerations, significant adverse agricultural resources 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?	☐	☑	☐
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) PR 1469.1 is being implemented to reduce chromium emissions and the cancer risk from hexavalent chrome spraying operations. Although the proposed project does not implement control measures in the SCAQMD's AQMP, 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 local air quality by reducing hexavalent chromium emissions and the cancer risk from affected facilities. This is because hexavalent chromium is also considered PM10 and reducing particulates as PM10 is consistent with the AQMP goals to further reduce PM10 emissions in the district. Therefore, the reduction in hexavalent chromium as particulates 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 facility-wide cancer risk from hexavalent chrome spraying operations. However, the implementation of PR 1469.1, with respect to the use of add-on controls could create both direct and indirect air quality impacts. These impacts are discussed separately below.

Air Quality Significance Criteria

To determine whether or not air quality impacts from adopting and implementing the proposed requirements in PR 1469.1 are significant, impacts will be evaluated and compared to the following criteria. If impacts exceed any of the following criteria, they will be considered significant. All feasible mitigation measures will be identified and implemented to reduce significant impacts to the maximum extent feasible. 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.

Table 2-1
Air Quality Significance Thresholds

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
SOx	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs) and Odor Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Hazard Index ≥ 1.0 (project increment) Hazard Index ≥ 3.0 (facility-wide)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality for Criteria Pollutants [a]		
NO2 1-hour average annual average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.25 ppm (state) 0.053 ppm (federal)	
PM10 24-hour average annual geometric average annual arithmetic mean	 10.4 μg/m^3 (recommended for construction) [b] 2.5 μg/m^3 (operation) 1.0 μg/m^3 20 μg/m^3	
Sulfate 24-hour average	 1 ug/m^3	
CO 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) 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: lbs/day = pounds per day ppm = parts per million ug/m^3 = microgram per cubic meter ≥ greater than or equal to

Direct Air Quality Impacts

PR 1469.1 is estimated to reduce the cancer risk of affected equipment to below 25 in one million. Based on an evaluation of inventories of facilities that would be subject to PR 1469.1, the universe is comprised of about 70 facilities operating 93 spray booths with operators of 17 facilities anticipated to install HEPA filtration systems for 31 spray booths. Consequently, reducing the cancer risk at the majority of these facilities will provide a localized air quality benefit in the near- and long-term. The remainder of the 70 facilities were identified as already in compliance with PR 1469.1 based upon a review of permit data, cancer risk calculations, and AB2588 emissions inventory data, whenever available.

Direct air quality impacts of adopting PR 1469.1 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 risk.

Indirect Air Quality Impacts

The installation and operation of add-on air pollution control equipment 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.

An operator of an affected facility 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 PR 1469.1. 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 PR 1469.1 will be HEPA filtration systems. The total estimated number of air pollution control systems to be installed was determined from the total number of existing spray booths (93) at each of the 70 affected facilities conducting chromium spraying operations.

From the permits evaluated, 53 out of 70 facilities are not expected to require adding controls in response to PR 1469.1 because operators of each of these facilities have: 1) submitted a health risk assessment under AB 2588 demonstrating low facility risk; 2) installed HEPA controls and already comply with the equipment standard in PR 1469.1; or, 3) submitted an Emissions Inventory under AB 2588 and received a low priority score indicating that their facility-wide risk is well below 25 in a million. The remaining 17 facilities do not currently have HEPA controls installed or have not demonstrated low facility risk through a health risk assessment. Thus, these 17 facilities are expected to upgrade 31 spray booths with HEPA filtration systems.

To estimate the "worst-case" construction- and operational-related emissions associated with the implementation of PR 1469.1, the following assumptions were made. Refer to Appendices C and D for the assumptions used to estimate indirect construction- and operational-related air quality impacts.

<u>Assumptions Based on Incremental Number of Add-on Pollution Control Equipment</u>

The following facilities will need to install air pollution control equipment in response to PR 1469.1:

- 17 facilities have 31 chrome spray booths; and,
- All 31 spray booths are rated to operate at or less than 20 hp making the maximum air flow to be 10,000 cubic feet per minute (cfm).

Based upon available information and the previous discussion, the remaining 53 affected facilities already comply with the PR 1469.1 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 PR 1469.1 is based on the assumption that the 17 facilities will install a total of 31 air pollution control systems (HEPA).

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, and PM10) from heavy-duty construction equipment operation, PM10 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 from worker commute trips, material delivery trips, and haul truck material removal trips to and from the construction site.

With respect to PR 1469.1, 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 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.

Facilities must demonstrate compliance with PR 1469.1 via one of three compliance options by: 1) meeting the applicable emission limit; 2) installing HEPA filtration systems on all spray booths; or 3) demonstrating that the facility-wide risk level is below the specified risk levels on or before July 1, 2007. However, for operators of any facility that choose to install air pollution control equipment, before construction can begin, operators of each facility will be required to apply for and receive an approved permit to construct. Therefore, as a practical matter, from the time operators of each affected facility apply for and receive a permit, it is assumed that each affected facility will have one year to construct their HEPA filtration system and dismantle any existing air pollution control equipment, as applicable, in order to comply with PR 1469.1.

- For "worst-case" construction emissions, it is assumed that all 31 HEPA filtration systems will be constructed, within the year following the adoption of PR 1469.1.
- The installation for every add-on control device requires the use of one air compressor and welder that operate four hours per day.
- Each add-on control requires a construction crew consisting of six members.

Construction Emissions

The total amount of construction emissions are generated from construction activities, including combustion 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 six workers per day. Using a 1.0 vehicle ridership, the labor force would generate approximately 12 one-way vehicle trips per day for a total of six 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 travel emissions that would be attributed to construction-related activities for installing 31 HEPA filtration systems in any year are approximately 26 pounds of NOx, 13 pounds of VOC, 115 pounds of CO, and one pound of PM10. Refer to Appendix B for the calculations used to estimate offsite mobile source emissions.

Table 2-2 presents the results of the SCAQMD's construction air quality analysis. It lists the total 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 spreadsheet with the results and assumptions used by the SCAQMD for this analysis.

Table 2-2
Construction Emissions
(in pounds per day)

Peak Construction Activity	CO (lb/day)	VOC (lb/day)	NOx (lb/day)	SOx (lb/day)	PM10 (lb/day)
Onsite Emissions*	20.1	3.7	32.9	3.7	1.8
Offsite Emissions**	114.8	12.5	25.5	0.2	0.8
Total Offsite and Onsite	**135**	**16**	**58**	**4**	**3**
SIGNIFICANCE THRESHOLD	550	75	100	150	150
SIGNIFICANT?	**NO**	**NO**	**NO**	**NO**	**NO**

* Construction Activities
** Worker commute and haul truck trips.

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 spray coatings used by the metal finishing industry contain toxic and hazardous materials, meaning that facilities affected by PR 1469.1 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 was not available, of the 31 new add-on control

devices to be installed at 17 facilities, a total of 62 HEPA filters for 31 spray booths are estimated to be needed for 10,000 cfm air flow with 20 hp blowers. 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 filter once per year, which means that each facility will have a maximum disposal rate of approximately four HEPA filters per year. With a typical dimension of one HEPA filter at approximately two feet wide by two feet long by twelve inches deep or four cubic feet, disposal of four HEPA filters per year equates to approximately 16 cubic feet of hazardous waste per facility.

Therefore, because the replacement and disposal frequency of the HEPA filters is calculated to be relatively low (i.e., less than one filter per year per system), 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. 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 PR 1469.1. However, for every spent HEPA filter, a new replacement would be required. Therefore, 62 fresh HEPA filters would need to be delivered to 17 facilities in a given year. Given the number of work days in a year and the fact that only 17 facilities would require replacement HEPA filters, it is unlikely that more than one delivery trip per day will 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 one heavy-duty truck trip per day, the total daily offsite travel emissions that would be attributed to HEPA filter deliveries are approximately: 2.25 pound of NOx, 0.24 pound of VOC, 1.68 pound of CO, 0.02 pound of SOx and 0.04 pound of PM10. Refer to Appendix C of this document for the assumptions and calculations.

Table 2-3 presents the results of the SCAQMD's operation air quality analysis and lists the total daily operation emissions from transport trips to deliver fresh HEPA filters. The calculations demonstrate that the total daily operation emissions would not generate emissions that exceed the SCAQMD's CEQA air quality thresholds for operation emission significance of 55 pounds per day of NOx, 55 pounds per day of VOC, 550 pounds per day of CO, 150 pounds per day of SOx, and 150 pounds of PM10 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. Even if facilities were to require a separate truck trip to dispose of spent HEPA filters, such that operational emissions would be double those shown in Table 2-3, the emissions would remain below the significance thresholds. Appendices C and D contain the spreadsheets with the results and assumptions used by the SCAQMD for this analysis.

Conclusion

Based on the information provided above, 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, 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.

Table 2-3
Operation Emissions
(in pounds per day)

Peak Operation Activity	CO (lb/day)	VOC (lb/day)	NOx (lb/day)	SOx (lb/day)	PM10 (lb/day)
Onsite Emissions	0	0	0	0	0
Offsite Emissions*	1.68	0.24	2.25	0.02	0.04
Total Offsite and Onsite	**2**	**0**	**2**	**0**	**0**
SIGNIFICANCE THRESHOLD	550	55	55	150	150
SIGNIFICANT?	**NO**	**NO**	**NO**	**NO**	**NO**

* Truck trips for delivering fresh HEPA filters

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) operational emissions from the add-on controls and heavy-duty haul truck trips do not exceed any SCAQMD thresholds; and, 4) add-on controls 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 and residential areas 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 PR 1469.1 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 or residences located nearby. Although PR 1469.1 will require some affected facilities to modify their existing operations, the installation and operation of air pollution control equipment serve to reduce emissions of air toxics and, therefore, are not expected to create objectionable odors affecting a substantial number of people.

The proposed project may require one additional haul truck trip per day per affected facility during both construction and operations. Although diesel emissions have odors associated with them, one additional haul truck trip per day per facility is not likely to cause odors to nearby

receptors because total emissions are so low (see Table 2-3). Therefore, no significant adverse odor impacts are expected to result from implementing the proposed project.

III.f) The objective of PR 1469.1 is to reduce the quantity of and cancer risk associated with hexavalent chromium emissions from the metal finishing industry from hexavalent chromium spraying operations. 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 above 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 this ~~Draft~~ Final EA. Since no significant air quality impacts were identified, no mitigation measures are necessary or required.

		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?

		Potentially Significant Impact	Less Than Significant Impact	No Impact
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) PR 1469.1 would only affect equipment or processes located at 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) PR 1469.1 is not envisioned to conflict with local policies or ordinances protecting biological resources nor local, regional, or state conservation plans. Additionally, PR 1469.1 will not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or any other relevant habitat conservation plan. Further, the project is not expected to have any biological effects outside the boundaries of the affected facilities.

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 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 the above 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?	☐	☐	☑
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 PR 1469.1 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 PR 1469.1 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, PR 1469.1 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.

Based upon the above considerations, significant adverse cultural resources impacts are not expected from the implementing PR 1469.1 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?	☐	☑	☐
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 PR 1469.1 would affect existing facilities, it will not conflict with adopted energy conservation plans because existing facilities would be expected to continue implementing 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 PR 1469.1. Accordingly these impact issues will not be further analyzed in the ~~Draft~~ Final EA.

VI.b), c), & d) The use of add-on control equipment may 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 PR 1469.1 is 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. The use of add-on control equipment may require additional electricity. In addition, for the operators of facilities that may dismantle their existing air pollution control equipment to replace it with a more efficient system, 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 in energy demand due to increase efficiency has not been calculated and thus, this document does not apply a quantified emission reduction credit 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 D 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 Appendices B and C.

Construction Impacts

During the construction phase of PR 1469.1, 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 PR 1469.1 (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 PR 1469.1.

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 40 miles round trip to and from the construction site in one day. Table 2-4 lists the projected construction energy fuel use impacts associated with PR 1469.1. Therefore, the equipment and vehicles needed for construction-related activities associated with the implementation of PR 1469.1 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 2-4
Total Projected Fuel Usage for Construction Activities

Construction Activity	Total Fuel Usage per Activity (gallons/yr)	
	Diesel	**Gasoline**
Onsite Equipment	7,233	--
Offsite Equipment	818	22,320
Threshold Fuel Supply[a]	1,086,000,000	6,469,000,000
% of Fuel Supply	0.0007%	0.0003%
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 PR 1469.1, 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 D of this document, it is estimated that 17 facilities will install 31 HEPA filtration systems. Based on permit data, the existing spray booths operate at varying electrical horsepower (hp) ratings, though none of the systems operate at higher than 20 hp. Since a maximum of 20 hp electrical rating directly corresponds to an estimated ventilation rate of 10,000 cubic feet per minute (cfm), all 31 HEPA systems are calculated as if they had an air flow rate of 10,000 cfm and that operate 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) was calculated per installed system per ventilation rate. For all 31 HEPA systems, the total projected electrical demand was calculated to be 1,442 MW-hr/yr and the instantaneous demand was calculated to be 0.46 MW.

Table 2-5 summarizes the projected electrical impacts associated with the operational phase of PR 1469.1. The complete methodology and assumptions that the SCAQMD used to estimate the operational impacts from add-on controls are contained in Appendix D.

It should be noted that any incremental fuel (e.g., natural gas) that may be required by in-district power plants to generate the incremental electricity needed by affected facilities to comply with PR 1469.1 is not included in this analysis for the following reasons. Almost 75 percent of the electricity used in the district is imported from out-of-state power plants. Any additional electricity needed to power electric fans or motors would most likely be provided by out-of-state power plants. Therefore, the SCAQMD does not anticipate that additional fuel beyond what is currently necessary to supply demand will be required by in-district power plants to provide electricity to affected facilities. In the event that additional fuel is needed to meet affected facilities' electrical demands, the consumption of fuel would be for the purpose of aiding facilities in complying with PR 1469.1. Further, fuel use at electricity generating facilities is limited to a certain extent because fuel combustion emissions from electricity generating equipment are capped either through Regulation XX – RECLAIM, or Rule 1135 – Emissions of Oxides of Nitrogen from Electric Power Generating Systems. As a result, any increase in electricity generation up to each facility's cap would be considered part of the baseline. The consumption of fuel to comply with air quality regulations is not considered a wasteful use of energy. Therefore, fuel consumed by in-district 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, as shown in Table 2-5, 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 2-5
Total Projected Energy Impacts for Operation Activities

Operation Activity	Total Energy Usage per Activity	
	Natural Gas	**Electricity**
HEPA Filtration Systems	0	1,442 MW-hr/yr
Total	0 TCF	0.46 MW (instantaneous)
Threshold Fuel Supply[a]	0.7200 TCF	8,115 MW (instantaneous)
% of Fuel Supply	0 %	0.006%
Significant (Yes/No)[b]	No	No

[a] Year 2000 CEC projections. 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
TCF = trillion cubic feet
MW = Megawatt

To estimate operational fuel usage per delivery truck of fresh HEPA filters, the SCAQMD assumed the delivery trucks would get 4.89 miles to the gallon and would travel 80 miles round

trip to and from the facility site per trip. Table 2-6 lists the projected operation energy fuel use impacts associated with PR 1469.1. Therefore, the vehicles needed for operation-related activities associated with the implementation of PR 1469.1 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.

Table 2-6
Total Projected Fuel Usage for Operation Activities

Operation Activity	Total Fuel Usage per Activity (gallons/yr)	
	Diesel	**Gasoline**
Onsite Equipment	--	--
Offsite Equipment	556	--
Threshold Fuel Supply[a]	1,086,000,000	6,469,000,000
% of Fuel Supply	0.00005%	0%
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.

Based upon the above 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. 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 PR 1469.1 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 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, may have 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 the existing 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) PR 1469.1 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 PR 1469.1 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.

VII.e) PR 1469.1 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 PR 1469.1.

Based upon the above considerations, significant geology and soils impacts are not expected from the implementation of PR 1469.1 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?	☐	☐	☑

		Potentially Significant Impact	Less Than Significant Impact	No Impact
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?	☐	☐	☑
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 PR 1469.1, 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 PR 1469.1 is not expected to create new hazards through the transport and disposal of hazardous wastes.

In summary, implementation of PR 1469.1 is not expected to alter any existing hazards involving the routine transport, use, or disposal of hazardous wastes (i.e., spent HEPA filters) used in chrome spraying operations. Similarly, implementing PR 1469.1 is not expected to increase the probability of reasonably foreseeable accidents involving the release of hazardous materials into the environment.

VIII.c) In general, PR 1469.1 is expected to reduce emissions of hexavalent chrome, which is classified by EPA and OEHHA as a human carcinogen. In particular, PR 1469.1 would establish more stringent cancer risk control requirements for affected facilities within 25 meters of a sensitive receptor such as hospitals or day care and affected facilities within 100 meters of an existing school (kindergarten through grade 12). As a result, PR 1469.1 will serve to reduce cancer risks from exposure to hexavalent chromium emissions in general and will provide benefits for existing schools currently located within 100 meters of affected facilities. 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 PR 1469.1 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 PR 1469.1 is to reduce cancer risks in the district through further reductions in hexavalent chromium emissions. Installing filtration systems at existing 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. In permitting add-on controls for facility changes undertaken to comply with PR 1469.1, the SCAQMD will analyze whether the operation of add-on controls will adversely impact sensitive receptors near the affected facilities. The SCAQMD will not issue permits for facility modifications unless they comply with all relevant SCAQMD

rules and regulations, including Rules 1401 and 1402. Accordingly, these impact issues are not further evaluated in this ~~Draft~~ Final EA

VIII.g) PR 1469.1 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 PR 1469.1 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 the nature of a HEPA air pollution control system is not flammable or hazardous, PR 1469.1 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 spent HEPA filters. Local fire departments ensure that adequate permit conditions are in place to protect against potential risk of upset hazards. Implementation of PR 1469.1 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 the above considerations, significant hazards and hazardous materials impacts are not expected from the implementation of PR 1469.1 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?	☐	☐	☑

		Potentially	Less Than	No Impact

		Significant Impact	Significant Impact	
j)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☑
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

The proposed project would regulate hexavalent chromium emissions from spraying operations at existing facilities by establishing criteria for capture, transfer and filter efficiencies plus determining facility-wide cancer risk and quantifying hexavalent chromium emissions. For affected facilities that do not currently meet the stringent rule requirements, the expected option for compliance that could potentially involve physical modifications to the affected equipment is the installation of add-on control equipment (i.e., HEPA filtration systems) which do not utilize water.

Because of the "dry" nature of HEPA technology, the proposed requirements in PR 1469.1 are expected to have little or no effect on existing hydrology or water quality. However, of the 17 facilities that are anticipated to install 31 HEPA filtration systems, two facilities have four existing spray booths that currently utilize a water-wash system to control emissions. It is unknown if these facilities will decide to either replace these water-wash systems with four new HEPA systems or just supplement the water-wash systems with HEPA technology. If the water-wash systems are dismantled, then it is possible that there could potentially be a benefit from reducing the existing water demand as well as from reducing the quantity of waste water that would need to be processed, though the actual current water usage data is unknown. Thus, the requirements in PR 1469.1 is not expected to create additional potential to adversely affect hydrology or water quality. Further, PR 1469.1 will not change existing operations at affected facilities such that additional wastewater would be generated or adverse water quality impacts would be caused.

PR 1469.1 has no provision that would require the construction of additional water resource facilities, the need for new or expanded water entitlements, or an alteration of drainage patterns. The proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. PR 1469.1 would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems at affected facilities or provide substantial additional sources of polluted runoff.

There are no provisions in the proposed rule that would require an increase in the amount of materials used by the affected industries. Consequently, there would be no change in the composition or volume of the existing wastewater streams from those affected facilities with wastewater streams. In addition, since complying with the proposed rule does not increase water demand or generation of wastewater, it is not expected to require additional wastewater disposal capacity, violate any water quality standard or wastewater discharge requirements, or otherwise substantially degrade water quality.

IX.a), f), k), l), & o) Complying with the proposed project will not change existing operations at affected facilities, nor would it result in generation of increased volumes of wastewater. As a result, there are no potential changes in wastewater volume or composition expected from facilities complying with the requirements in PR 1469.1. Further, PR 149.1 is not expected to cause affected facilities to violate any water quality standard or wastewater discharge requirements since wastewater volumes associated with PR 1469.1 will either remain unchanged or will be reduced. PR 1469.1 is not expected to have significant adverse water demand or water quality impacts for the following reasons:

- The proposed project does not increase demand for water by more than 5,000,000 gallons per day.
- The proposed project does not require construction of new water conveyance infrastructure.
- The proposed project does not create a substantial increase in mass inflow of effluents to public wastewater treatment facilities.
- The proposed project does not result in a substantial degradation of surface water or groundwater quality.
- The proposed project does not result in substantial increases in the area of impervious surfaces, such that interference with groundwater recharge efforts occurs.
- The proposed project does not result in alterations to the course or flow of floodwaters.

IX.b) & n) For affected facilities that do not currently meet the stringent rule requirements proposed in PR 1469.1, the expected option for compliance that could potentially involve physical modifications to the affected equipment is the installation of add-on control equipment (i.e., HEPA filtration systems) which do not utilize water. Thus, no additional demand on the existing water supplies is expected. Therefore, the proposed requirements in PR 149.1 would not change the existing water demand, affect groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. In addition, implementation of PR 1469.1 will not increase demand for water from existing entitlements and resources, and will not require new or expanded entitlements. Therefore, no water demand impacts are expected as the result of implementing the proposed project.

IX.c), d), & e) PR 1469.1-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 PR 1469.1 involves minor construction involving installation of air pollution control equipment within the boundaries of existing industrial and commercial facilities, no significant changes to storm water runoff, drainage patterns, groundwater characteristics, or flow are expected. Therefore, implementing PR 1469.1 is not expected generate water runoff impacts or alter drainage patterns in any way.

IX.g), h), i), & j) PR 1469.1 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 and commercial facilities. If

these facilities are subject to 100-year flood hazards, this is an existing condition and not an effect of implementing PR 1469.1. Therefore, PR 1469.1 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, PR 1469.1 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) PR 1469.1 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 PR 1469.1. Accordingly, PR 1469.1 is not expected to generate significant adverse impacts relative to construction of new storm water drainage facilities.

Based upon the above considerations, significant hydrology and water quality impacts are not expected from the implementation of PR 1469.1 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 chrome spraying operations at existing industrial or commercial facilities. The expected options for compliance are add-on control equipment. Since PR 1469.1 affects existing facilities, it does not include any components that would require physically dividing an established community.

X.b) & c) There are no provisions in PR 1469.1 that would conflict with land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no land use or planning requirements will be altered by regulating chromium emissions from spraying operations. Since PR 1469.1 would regulate chromium emissions, PR 1469.1 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 the above considerations, significant land use and planning impacts are not expected from the implementation of PR 1469.1 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 PR 1469.1 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 the above considerations, significant mineral resources impacts are not expected from the implementation of PR 1469.1 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?	☐	☐	☑
f)	For a project within the vicinity of a private airstrip, 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 PR 1469.1 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 PR 1469.1 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 PR 1469.1 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 PR 1469.1. 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 significantly raise ambient noise levels in the project vicinities.

XII.d) A substantial 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 PR 1469.1 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 PR 1469.1 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?	☐	☐	☑
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) PR 1469.1 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 PR 1469.1.

Though facility modifications are expected from the implementation of PR 1469.1, 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, PR 1469.1 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, PR 1469.1 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 PR 1469.1 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 PR 1469.1 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 PR 1469.1 may install air pollution control equipment, the use of HEPA filtration technology at any one facility or all facilities combined would not 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 by city building departments or local fire departments are not expected. Finally, PR 1469.1 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 area is expected to be adequate to fill the short-term construction positions associated with implementing PR 1469.1. Therefore, there will be no increase in local population and thus no impacts are expected to local schools or parks.

XIV.e) Implementation of PR 1469.1 will result in the use of add-on control equipment. 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 PR 1469.1 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?	☐	☐	☑

	Potentially Significant Impact	Less Than Significant Impact	No Impact
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 effects 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 chrome spraying operations. PR 1469.1 would not 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 because it will not increase population.

Based upon these considerations, significant recreation impacts are not expected from the implementation of PR 1469.1 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 construction activities. Though the permit data do not indicate that there will be a need to dismantle or demolish any existing controls, if a facility owner or operator chooses to replace existing controls with a new air pollution control system, additional waste from dismantling or demolition activities may be generated during construction. However, it is expected that any construction debris, including any dismantled filter 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. It is speculative to assume that operators of affected facilities would dismantle and dispose of existing control equipment. As a result, potential solid waste impacts that may be generated from PR 1469.1 construction/demolition/dismantling activities cannot be quantified at this time. However, any increase would be minimal, and it is anticipated that existing landfill capacity in the district can easily accommodate this temporary increase in solid waste products. Therefore, temporary significant solid waste impacts associated with PR 1469.1 construction-related activities are not expected.

Operational Impacts

Once the HEPA filtrations systems are installed, PR 1469.1 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 PR 1469.1, generation of solid/hazardous waste due to the anticipated disposal of 62 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 twelve inches deep or four cubic feet. Therefore, disposal of 62 HEPA filters per year equates to approximately 248 cubic feet of hazardous waste per year, no more than one cubic foot per day. 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 additional 248 cubic feet of hazardous waste per year is not considered to be a significant adverse impact to existing hazardous waste disposal facilities.

Based on the above analyses, PR 1469.1 is not expected to substantially increase the volume of solid or hazardous wastes from chrome spraying operations that cannot be handled by existing municipal or hazardous waste disposal facilities, or require additional waste disposal capacity. Further, implementing PR 1469.1 is not expected to interfere with any affected facility's ability to comply with applicable local, state, or federal waste disposal regulations. Since no significant 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)?	☐	☐	☑
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?	☐	☐	☑

		Potentially Significant Impact	Less Than Significant Impact	No Impact
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, PR 1469.1 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 PR 1469.1 (e.g., installation of add-on controls) is expected to generate 12 additional one-way vehicle trips (six round trips) per facility from construction worker daily commutes. 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 12 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 used by the SCAQMD as another indicator of traffic impacts from a project.

The minor increase in commute 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 PR 1469.1. Therefore, the implementation of PR 1469.1 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, PR 1469.1 is not expected to significantly adversely affect circulation patterns on local roadways or the level of service at intersections near affected facilities.

XVII.c) PR 1469.1 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) PR 1469.1 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 hazard or incompatible uses. Consequently, this impact issue is not further evaluated in this ~~Draft~~ Final EA.

XVII.e) PR 1469.1 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 may be required for construction workers during the construction phase of PR 1469.1. 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. 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 PR 1469.1 will take place at existing facilities and will not result in conflicts with alternative transportation, such as bus turnouts, bicycle racks, et cetera. Therefore, this impact issue is not further evaluated in this ~~Draft~~Final EA.

Based upon the above considerations, PR 1469.1 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, PR 1469.1 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, natural communities or important examples of the major periods of California history or pre-history are not expected to be found within close proximity to the facilities affected by PR 1469.1.

XVIII.b) Based on the foregoing analyses, since PR 1469.1 will not result in project-specific significant environmental impacts, implementation of PR 1469.1 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 ATCP. The effects of PR 1469.1 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, hydrology and water quality, 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, 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 and reduction in toxic emissions. 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, PR 1469.1 is not expected to cause adverse effects on human beings. Significant air quality, energy, hazards and hazardous materials, solid/hazardous waste, and transportation/traffic are not expected from the implementation of PR 1469.1. 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 PR 1469.1, and thus, there is an overall air quality benefit.

No impacts to aesthetics, agricultural resources, biological resources, cultural resources, geology and soils, hydrology and water quality, land use/planning, mineral resources, noise, population and housing, pubic services, and recreation are expected as a result of the implementation of PR 1469.1. 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 RULE 1469.1 - SPRAYING OPERATIONS USING TOXIC CHEMICALS

To avoid repetition, the proposed rule is not included here. It is included as an Attachment to the Governing Board Adopt Hearing package.

APPENDIX B

CONSTRUCTION-RELATED EMISSIONS CALCULATIONS

Appendix B: Potential Construction Emissions Due to the Implementation of PR 1469.1

Facility Type	Total No. of Control Equipment Installed in One year
PR 1469.1 Affected Facilities	31

Construction Equipment Hours of Operation

Construction Activity	Equipment Type	Pieces of Equipment	Hrs/day	Crew Size
Portable Equip. Operation	Air Compressor	1	4.00	6
(Actual Construction of Control Equipment)	Welder	1	4.00	

Construction Equipment Combustion Emission Factors

Equipment Type*	CO lb/BHP-hr	VOC lb/BHP-hr	NOx lb/BHP-hr	SOx lb/BHP-hr	PM10 lb/BHP-hr
Air Compressor < 50 HP	0.011	0.002	0.018	0.002	0.001
Welder < 50 HP	0.011	0.002	0.018	0.002	0.001

Source: Nonroad Engine and Vehicle Study Report, EPA 460/3-91-02, November 1991 *Assumed equipment is diesel fueled.

Construction Equipment Ratings and Load Factors

Equipment Type*	Rating (HP)	Load Factor (%)
Air Compressor < 50 HP	9	56
Welder < 50 HP	19	51

Source: Nonroad Engine and Vehicle Study Report, EPA 460/3-91-02, November 1991 *Assumed equipment is diesel fueled.

Construction Vehicle (Mobile Source) Emission Factors

Construction Related Activity	CO lb/mile	VOC lb/mile	NOx lb/mile	SOx lb/mile	PM10 lb/mile
Offsite (Construction Worker Vehicle)	0.016559	0.001771	0.0018	0.000010	0.000113
Offsite (Heavy Duty Delivery Truck)	0.0232	0.0028	0.0448	0.00038	0.00077

Source: CARB's emfac2002 v2.2, 2004 (Winter for all except CO for Construction Worker Vehicle is Annual)

Appendix B: Potential Construction Emissions Due to the Implementation of PR 1469.1 (continued)

Construction Worker Number of Trips and Trip Length

Vehicle	Number of Trips/Day	Trip Length (miles)
Offsite (Construction Worker)	6	20
Offsite (Heavy Duty Delivery Truck)	2	40

Incremental Increase in Onsite Combustion Emissions from Construction Equipment

Equation: Emission Factor (lb/BHP-hr) x Max No. of Equipment per quarter x Work Day (hr/day) x Equipment rating (hp) x Load Factor (%/100) = Onsite Construction Emissions (lbs/day)

Equipment Type	CO lbs/day	VOC lbs/day	NOx lbs/day	SOx lbs/day	PM10 lbs/day
Air Compressor < 50 HP	6.87	1.25	11.25	1.25	0.62
Welder < 50 HP	13.22	2.40	21.63	2.40	1.20
Total	**20.1**	**3.7**	**32.9**	**3.7**	**1.8**

Incremental Increase in Offsite Combustion Emissions from Construction Vehicles

Equation: Max. No. of Control Equipment per quarter x Emission Factor (lb/mile) x No. of Trips/Day x 2 x Trip length (mile) = Offsite Construction Emissions (lbs/day)

Vehicle	CO	VOC	NOx	SOx	PM10
Offsite (Construction Worker)	112.83	12.10	12.15	0.07	0.59
Offsite (Heavy Duty Delivery Truck)	2.02	0.45	13.29	0.13	0.25
Total	**114.8**	**12.5**	**25.5**	**0.2**	**0.8**

Appendix B: Potential Construction Emissions Due to the Implementation of PR 1469.1 (concluded)

Total Incremental Combustion Emissions from Construction Activities

Sources	CO lbs/day	VOC lbs/day	NOx lbs/day	SOx lbs/day	PM10 lbs/day
Equipment & Workers' Vehicles	**135**	**16**	**58**	**4**	**3**
Significance Threshold	***550***	***75***	***100***	***150***	***150***
Exceed Significance?	**NO**	**NO**	**NO**	**NO**	**NO**

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

Construction Activity	Total Hours of Operation*	Equipment Type	Equipment HP	Load Factor (%)	Construction Diesel Fuel Usage gal/yr**	Worker's Gasoline Fuel Usage gal/yr***
Portable Equip. Operation	240	Air Compressor	9	56	2,475	
(Actual Construction of control equip.)	240	Welder	19	51	4,758	
Workers' Vehicles	N/A	Light-Duty Trucks	N/A	N/A		22,320
		Heavy-Duty Trucks****	N/A	N/A	818	
			Total		**8,051**	**22,320**

*Assume actual construction will take approximately three months (60 days/yr, 4 hrs/day).

**Used conversion factor of 0.066 gal/BHP-hr for diesel fired equipment. SCAQMD 1993 CEQA Air Quality Handbook.

***Assume that construction workers' vehicles get 20 mi/gal and round trip length is 40 miles.

****Assume that workers' vehicles for deliveries use diesel and get 4.89 mi/gal and round trip length is 80 miles.

APPENDIX C

OPERATION-RELATED EMISSIONS CALCULATIONS

Appendix C: Potential Operation Emissions Due to the Implementation of PR 1469.1

Facility Type	**Total No. of Facilities Requiring Deliveries of Fresh HEPA Filters**
PR 1469.1 Affected Facilities	17

Operation Vehicle (Mobile Source) Emission Factors

Operation Related Activity	**CO**	**VOC**	**NOx**	**SOx**	**PM10**
	lb/mile	lb/mile	lb/mile	lb/mile	lb/mile
Offsite (Truck Delivery of Fresh HEPA Filters)	0.020984	0.002955	0.028142	0.000246	0.0005

Source: CARB's EMFAC2002 V2.2, 2004 (Winter)

Worker Number of Trips and Trip Length

Vehicle	**No. of Trips/Day**	**Trip Length (miles)**
Offsite (Truck Delivery of Fresh HEPA Filters)	1	40

Incremental Increase in Offsite Combustion Emissions from Transport or Delivery Vehicles

Equation: Emission Factor (lb/mile) x No. of Trips/Day x 2 x Trip length (mile) = Offsite Transport/Delivery Emissions (lbs/day)

	CO	**VOC**	**NOx**	**SOx**	**PM10**
Vehicle	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day
Offsite (Truck Delivery of Fresh HEPA Filters)	1.68	0.24	2.25	0.02	0.04
Total	**1.68**	**0.24**	**2.25**	**0.02**	**0.04**

Total Incremental Combustion Emissions from Operation Activities

	CO	**VOC**	**NOx**	**SOx**	**PM10**
Sources	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day
Offsite Vehicles	**2**	**0**	**2**	**0**	**0**
Significance Threshold	***550***	***55***	***55***	***150***	***150***
Exceed Significance?	**NO**	**NO**	**NO**	**NO**	**NO**

Appendix C: Potential Operation Emissions Due to the Implementation of PR 1469.1 (concluded)

Incremental Increase in Fuel Usage From Offsite Vehicles

Operation Activity	Total Hours of Operation	Equipment Type	Rating (hp)	Diesel Fuel Usage (gal/yr)**	Gasoline Fuel Usage (gal/yr)
Workers' Delivery Vehicles*	N/A	Delivery Truck	N/A	556	N/A
			Total	**556**	N/A

*Assumes an additional of 1 truck delivery per year per facility.

**Assume that workers' vehicles for offsite hauling use diesel and get 4.89 mi/gal and round trip length is 80 miles.

APPENDIX D

VENTILATION RATES AND ENERGY CONSUMPTION FROM OPERATION OF CONTROL EQUIPMENT

A. Estimated Ventilation Rates for Designing New HEPA Filtrations Systems

Assumptions:

1. HEPA filter replacement frequency depends upon particulate loading, which is a function of airflow and volume of overspray. Thus, filter replacement frequency will be different for each affected facility. For the purpose of this analysis, a filter change out frequency of one year is assumed.
2. Based on vendor-supplied data, control systems and the individual filters for the spray booths are typically sized to handle either 5,000 or 10,000 cfm. Also, based on the designed ventilation rate, the number of HEPA filters required is determined by their individual capacities. Table D-1 summarizes these assumptions.

Table D-1
Vendor Design Ventilation Rates &
Filter Parameters for HEPA Systems

No. of Spray Booths	Designed Ventilation Rate for Entire System (cfm)	Estimated Total Number of HEPA Filters Needed
31	10,000	62

3. To comply with PR 1469.1, 31 new air pollution control systems venting 31 spray booths at 17 facilities are expected to be installed, as summarized in Table D-2.

Table D-2
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
10,000	31	62
Total	**31**	**62**

B. Energy Consumption From Operation of HEPA Filtration Systems

1) Total Number of Facilities: 17
2) Number of Systems per Ventilation Rate: 31 @ 10,000 cfm

Assumptions:

1) The horse-power (hp) rating of the blower/exhaust fan depends on the ventilation rate of the HEPA filtration system. The following blower ratings are assumed for the following ventilation rates:

Ventilation Rate (cfm)	Blower Rating (hp)
10,000	20

2) Electricity is used to operate the HEPA filtration systems.
3) 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).
4) Abbreviations Key:

hp	= horsepower	W	= watt
hr	= hour	M	= mega
yr	= year	k	= kilo
wk	= week	scf	= standard cubic feet
lb	= pound		

10,000 cfm System

17 Facilities installing 31 HEPA systems rated at 10,000 cfm

Electrical Rating = 20 hp

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 kW-hr for 17 facilities equipped with a total of 31 - 10,000 cfm systems = (46,532 kW-hr/yr x 31) = 1,442,492 kW-hr/yr

Instantaneous Electricity Used for 17 facilities equipped with 31 - 10,000 cfm systems =
1,442,492 kW-hr/yr x 1 work yr/260 days x 1 work day/12 hr x 1 MW/1000 kW = 0.462 MW

GRAND TOTALS FOR FACILITY UNIVERSE:

Total MW-hrs per year of electricity used = 1,442 MW-hrs/yr

0.462 MW = instantaneous demand