**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

**Final Environmental Assessment for:**
**Proposed Amended Rule 1162 – Polyester Resin Operations**

June 10, 2005

**SCAQMD No. 050504JK**



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## PREFACE

The Draft Environmental Assessment (EA) for the proposed amendments to Rule 1162 – Polyester Resin Operations was circulated for a 30-day public review and comment period from May 5, 2005, to June 3, 2005. The proposed project would provide an exemption for air atomizing spray application techniques for gel coat pin striping. The exemption would allow one gallon of pin striping gel coat by air atomizing spray application techniques daily per facility. The exemption would be a relaxation of the existing restriction on using air atomizing spray application techniques, which has a potential to increase styrene emissions by 47 pounds per day. The environmental analysis presented in this document determined that the proposed project would not generate significant adverse impacts to any environmental topic area. No public comment letters were received on Draft EA.

The gel coat pin striping exemption is one part of the proposed amendments to Rule 1162. PAR 1162 was originally developed to rescind the nonatomizing gel coat application technique requirement. Amendments related to rescinding the nonatomizing gel coat application technique requirement are addressed in a separate CEQA document titled the Final Subsequent Environmental Analysis (SEA) for Proposed Amended Rule 1162 – Polyester Resin Operations (SCAQMD No. 050316JK) dated June 10, 2005, which was circulated for a 45-day public review and comment period from March 17, 2005 to May 3, 2005. No comment letters were received on the Draft SEA. Amendments related to rescinding the nonatomizing gel coat application technique requirement are not addressed here, but can be found and analyzed in the Final SEA. The Final SEA for the limited exemption is located elsewhere in the final rule package.

Since the exemption was beyond the scope of the rescinding of the nonatomized gel coat application techniques analyzed in the Final SEA, evaluation of the gel coat pin striping exemption was presented in this separate Draft EA, so that the public and public agency decision-makers would have an opportunity to review and comment on the gel coat pin striping exemption. As stated earlier, this Final EA for the gel coat pin striping exemption concluded that there would be no significant adverse environmental impacts from implementing the proposed exemption.

Minor modifications were made PAR 1162; therefore, the Draft EA has been modified so it is now a Final EA. Deletions and additions to the text of the EA are denoted using strikethrough and underlined, respectively. Changes to the project description are minor and do not change the conclusions made in the Draft EA or worsen the environmental impact analyzed in the Draft EA. Pursuant to CEQA Guidelines §15073.5(c)(2), recirculation is not necessary since the information provided does not result in new avoidable significant effects.

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# CHAPTER 1 - PROJECT DESCRIPTION

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**Introduction**

**Legislative Authority**

**California Environmental Quality Act**

**Project Location**

**Project Background**

**Project Objectives**

**Project Description**

**Affected Facilities**

**Emission Inventory and Reductions**

**Control Technologies**

## 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* as amended in 1999 and the *2003 AQMP* concluded that major reductions in emissions of volatile organic compounds (VOCs) and oxides of nitrogen ($NO_x$) are necessary to attain the air quality standards for ozone (the key ingredient of smog) and particulate matter (PM10). Ozone, a criteria pollutant, is formed when VOCs react with $NO_x$ in the atmosphere and has been shown to adversely affect human health. VOC emissions also contribute to the formation of PM10.

Since VOC emissions contribute to ozone and PM10 formation, reducing the quantity of VOCs in the district has been an on-going priority and effort by the SCAQMD. Because materials used by the polyester resins industry have been considered by SCAQMD as one source where VOC emission reductions can be achieved, in March 1987, Rule 1162 – Polyester Resin Operations, was adopted. Rule 1162 was developed to reduce VOC emissions from all polyester resin operations that involve the fabrication, rework, repair, or touch-up of products used for commercial, military or industrial markets. Polyester resin operations use composite materials that include resins, gel coats, solvents, coatings and adhesives, including reinforcement materials such as fiberglass and fillers. The types of items produced in a polyester resin operation vary, including, but not limited to: boats; tubs; pools; shower enclosures; spas; bathroom fixtures; jigs; tools; molds; building panels; air pollution control equipment; sewage treatment equipment; storage tanks; transportation parts; automotive; aircraft and aerospace components; and other industrial and consumer products. The affected industries include manufacturers of the above-listed items. Currently, there are 81 facilities that are subject to the requirements of Rule 1162.

Industry requested an exemption for air atomizing spray gel coat applications for gel coat pin striping, because non-air atomizing gel coat application techniques cannot meet the performance standards required by the gel coat industry. To accommodate the request, staff is proposing to add an exemption that allows one gallon per day per facility of pin striping gel coat to be applied by air atomizing techniques. The exemption would relax the current prohibition against air atomizing spray application techniques.

Pursuant to the California Environmental Quality Act (CEQA) (California Public Resources Code §21000 et seq.), this Environmental Assessment (EA) includes an analysis of the potential adverse environmental impacts of implementing the limited exemption for pin striping using air atomizing gel coat application techniques. The environmental analysis in

[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).*

Chapter 2 concluded that the proposed project would result in no significant adverse impact to any environmental topic.

In addition to the exemption for air atomizing spray gel coat application for gel coat pin striping, modifications to rescind nonatomized gel coat application techniques will be presented to the Governing Board at the July 8, 2005 meeting. The environmental impacts from rescinding the nonatomized gel coat application technique requirement are addressed in a separate CEQA document titled the ~~Draft~~ Final Subsequent Environmental Analysis (SEA) for Proposed Amended Rule 1162 – Polyester Resin Operations (SCAQMD No. 050316JK) dated March 16, 2005, which was circulated for a 45-day public review and comment period from March 17, 2005 to May 3, 2005. No comments were received on the Draft SEA. The exemption for air atomizing spray gel coat application for gel coat pin striping is addressed in this document as a separate project under CEQA from rescinding the nonatomized gel coat application techniques, because the project evaluated in the ~~Draft~~ Final SEA was narrowly defined as a modification of a previously approved project, which included, in part, nonatomized gel coat application techniques. The project evaluated in the ~~Draft~~ Final SEA focused only on rescinding the nonatomized gel coat application requirements from the previously approved project. Rule 1162 was adopted without a provision allowing air atomizing application techniques; therefore, air atomizing application techniques were not part of the previously approved project. Therefore, a separate environmental analysis has been prepared.

## LEGISLATIVE AUTHORITY

The California Legislature created the SCAQMD in 1977 (Lewis-Presley Air Quality Management Act, California Health and Safety Code §§ 40400 et seq.) as the agency responsible for developing and enforcing air pollution control rules and regulations in the Basin and portions of the Salton Sea Air Basin and Mojave Desert Air Basin. By statute, SCAQMD is required to adopt an air quality management plan (AQMP) demonstrating compliance with all state and federal ambient air quality standards for the district [California Health and Safety Code §40460(a)]. Furthermore, SCAQMD must adopt rules and regulations that carry out the AQMP [California Health and Safety Code, §40440(a)].

## CALIFORNIA ENVIRONMENTAL QUALITY ACT

PAR 1162 is a "project" as defined by CEQA (California Public Resources Code §21080.5). SCAQMD is the lead agency for the proposed project and has prepared the appropriate environmental analysis pursuant to its certified regulatory program (SCAQMD Rule 110). 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 (EIR) once the Secretary of the Resources Agency has certified the regulatory program. The SCAQMD's regulatory program was certified by the Secretary of the Resources Agency on March 1, 1989, and is codified as SCAQMD Rule 110.

CEQA requires that the 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 EA to address the potential adverse environmental impacts associated with adopting and implementing PAR 1162. This ~~Draft~~ Final EA is intended to: (a) provide the lead agency, responsible agencies, decision makers and the general public with detailed information on the environmental effects of the proposed project; and, (b) to be used as a tool by decision makers to facilitate decision making on the proposed project.

~~All comments received during the public comment period on the analysis presented in the Draft EA will be responded to and included in the Final EA.~~ No comments were received on the Draft EA during the public review and comment period from May 5, 2005 to June 3, 2005. Prior to making a decision on the proposed amended rule, the SCAQMD Governing Board must review and certify the EA as providing adequate information on the potential adverse environmental impacts of the proposed amended rule.

SCAQMD's review of the proposed project shows that the project would not generate significant adverse effects on the environment. Therefore, pursuant to CEQA Guidelines §15252, no alternatives or mitigation measures are included in this ~~Draft~~ Final EA. The analysis in Chapter 2 supports the conclusion of no significant adverse environmental impacts.

## PROJECT LOCATION

PAR 1162 would apply to the SCAQMD's entire jurisdiction. The SCAQMD has jurisdiction over an area of 10,473 square miles (referred to hereafter as the district), 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 SCAQMD's jurisdiction, 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 nondesert 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 nonattainment 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).

## PROJECT BACKGROUND

*Rule 1162*

Rule 1162 has been amended several times, most recently in July 9, 2004 to delay part of the implementation of the second phase of the two-phase Control Measures CTS-08 – Further Emission Reductions from Industrial Coating and Solvent Operations, and CTS-09 – Further Emission Reductions from Large Solvent and Coating Sources from the 1997 AQMP.

The air quality objective of both control measures was to further reduce VOC emissions associated with the use of resins, coatings, solvents, and other VOC-containing materials used in polyester resin operations. Many of the materials used in polyester resin operations are considered toxic air contaminants (TACs); therefore, those TACs associated with the

polyester resin operations that are VOCs would be reduced by implementing the VOC control measures. Reducing emissions from these sources would help achieve and maintain, with a margin of safety, state and federal ambient air quality standards within SCAQMD's jurisdiction.

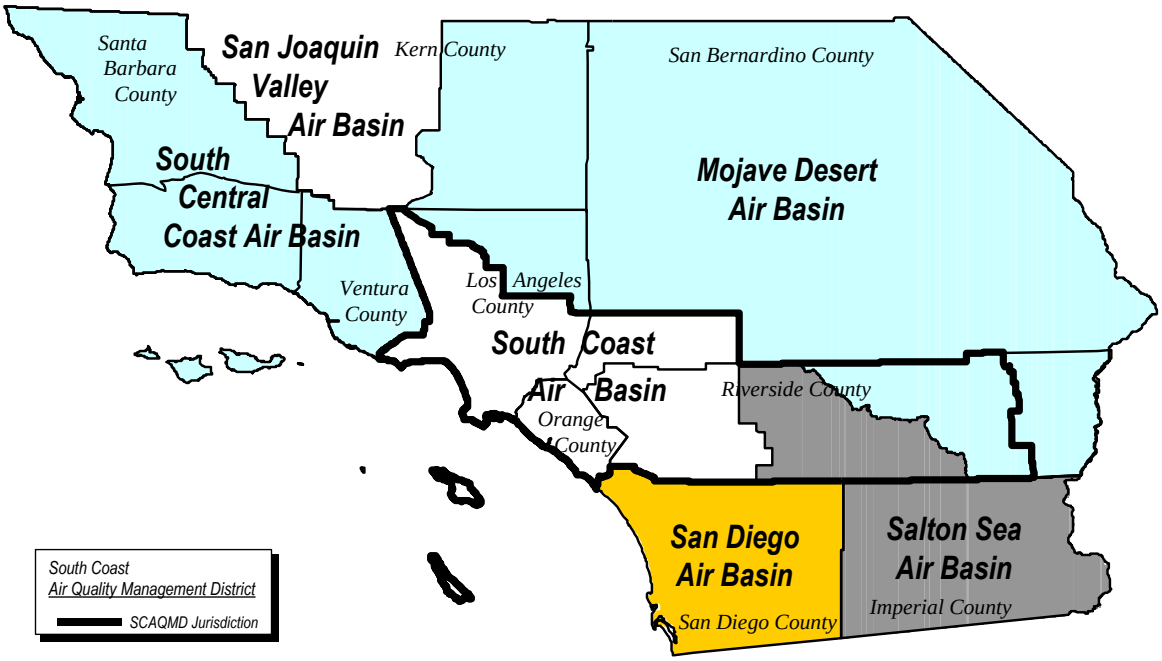


**FIGURE 1-1**

**South Coast Air Quality Management District**

The November 2001 amendments to Rule 1162 required operators of affected facilities to comply with the latest application techniques, material requirements, and process requirements in order to reduce VOC/TAC emissions from polyester resin operations. The proposed compliance dates varied between 2002 and 2003, depending on the method of compliance. Rule 1162 also contained updates to the applicability statement, test methods and procedures, new definitions, and other minor changes to improve clarity and promote consistency throughout the rule.

The November 2001 amendments added the definition for the nonatomizing spray application technique to Rule 1162. Staff recommended additional field testing to develop an appropriate definition of the nonatomizing application techniques for gel coats that would be used as a compliance tool for both composite fabricators and the SCAQMD compliance staff. This task was more difficult than anticipated, so Rule 1162 was amended on July 11,

2003, and July 9, 2004, to further delay the implementation of the nonatomizing application techniques from July 1, 2003 to July 1, 2004, then from July 1, 2004, to July 1, 2005, respectively, to allow further field testing of the nonatomizing application techniques. When nonatomizing gel coat application techniques were tested under the same conditions that the Unified Emission Factors (UEFs) were developed (i.e., low pressure and low flow), the products did not meet the performance specifications required to maintain product integrity. Thus the UEF limits were concluded to be infeasible. Based on these results, staff proposed to rescinding the nonatomizing gel coat application technique requirement from Rule 1162. The environmental impacts from rescinding the nonatomizing gel coat application technique requirement are addressed in a separate CEQA document titled the ~~Draft~~ Final Subsequent Environmental Analysis (SEA) for Proposed Amended Rule 1162 – Polyester Resin Operations (SCAQMD No. 050316JK) dated March 16, 2005, which was circulated for a 45-day public review and comment period from March 17, 2005 to May 3, 2005. No comments were received on the Draft SEA.

Rule 1162 was established allowing the use of only airless, air-assisted airless, or electrostatic spray equipment, which implicitly restricts the use of air atomizing application techniques. During the comment period on the Draft SEA, dated March 16, 2005, industry requested an exemption for air atomizing spray gel coat applications for gel coat pin striping, since other gel coat application techniques do not create products that meet industry performance standards. Industry stated that only hand-held cup guns provide the quarter to half inch thin line required for pin striping application. To accommodate industries request, staff added an exemption that allows one gallon per day per facility of pin striping gel coat. The exemption would relax the current prohibition against air atomizing spray application techniques.

## PROJECT OBJECTIVES

The objective of PAR 1162 is to provide a limited exemption to allow the use of air atomizing spray application techniques only for gel coat pin striping operations.

## PROJECT DESCRIPTION

PAR 1162 is composed of the following detailed components, listed in the order they appear in the rule. The complete proposed amended rule can be found in Appendix A. (Note: PAR 1162 in Appendix A includes proposed amendments related to rescinding the nonatomizing gel coat application technique requirement which are addressed in a separate CEQA document titled the ~~Draft~~ Final Subsequent Environmental Analysis (SEA) for Proposed Amended Rule 1162 – Polyester Resin Operations (SCAQMD No. 050316JK) dated June 10, 2005, which was circulated for a 45-day public review and comment period from March 17, 2005 to May 3, 2005. No comments were received on the Draft SEA. Amendments related to rescinding the nonatomizing gel coat application technique requirement are not addressed here, but can be found and analyzed in the ~~Draft~~ Final SEA. ~~If you wish to receive the Draft SEA, please call SCAQMD's Public Information Center at (909) 396-2039. The Draft SEA can also be downloaded by~~

~~accessing the SCAQMD's website at http://www.aqmd.gov/ceqa/ aqmd.html~~). The Final SEA can be found elsewhere in the final board package.

(a) Applicability

No modifications are proposed to this subdivision of the rule.

(b) Definitions

No modifications are proposed to this subdivision of the rule.

(c) Requirements

No modifications are proposed to this subdivision of the rule.

(d) Control Equipment

No modifications are proposed to this subdivision of the rule.

(e) Recordkeeping Requirements

No modifications are proposed to this subdivision of the rule.

(f) Test Methods and Procedures

No modifications are proposed to this subdivision of the rule.

(g) Alternative Compliance Option

No modifications are proposed to this subdivision of the rule.

(h) Exemptions

The proposed project consists of an exemption that allows operators of gel coat spray application operations to use nonatomizing application technique; air-assisted airless spray; electrostatic attraction; or high-volume, low-pressure (HVLP) for pin striping provided that the total amount of gel coat materials sprayed does not exceed one gallon per day per facility.

For a complete description of PAR 1162, the reader is referred to Appendix A of this ~~Draft~~ Final EA.

## AFFECTED FACILITIES

Polyester resin operations use composite materials that include resins, gel coats, solvents, coatings and adhesives, including reinforcement materials such as fiberglass and fillers. The types of items produced in a polyester resin operation vary, including, but not limited to, boats, tubs, pools, shower enclosures, spas, bathroom fixtures, jigs, tools, molds, building panels, air pollution control equipment, sewage treatment equipment, storage tanks,

transportation parts, automotive, aircraft, and aerospace components, and other industrial and consumer products. The affected industries include manufacturers of the above-listed items. Currently, there are 81 facilities that are subject to the requirements of Rule 1162.

Composite materials, also known as fiber reinforced plastics, are created from combining fiber reinforcement materials with polyester resin materials. Fiber reinforcement materials are formed by pultrusion. Pultrusion is a process where continuous roving strands are moved through a strand-tensioning device into a resin bath for impregnation and then passed through a heated die for curing, such as for making fiber reinforcement materials like fiberglass and other fibrous materials used to reinforce plastic.

Molding is a technique of forming a product comprised of composite materials, such as plastics, into various shapes. Typically, the process for creating a molded product involves the following key phases:

1. Mixing the various materials in specific proportions according to a recipe appropriate for the type of product being fabricated. The materials are gel coats, polyester resins, fiberglass or other fiber substrate, solvents, catalyst(s), inhibitors and other chemical additives.
2. Applying the composite material onto a mold, using either manual or mechanical application techniques.
3. Composite material finishing, which involves joining, machining and coating the final product.

There are two main types of molding techniques, closed molding systems and open molding systems. Closed molding systems are different from open molding systems in that they utilize a confining or enclosed mold cavity and rely on pressure and/or heat to set the materials that are applied to the mold. An open molding system is the most widely used method for applying the various polyester resin materials onto an open mold.

Composite materials can be applied to either type of mold manually or mechanically by using a “hand lay-up” or “spray-up” technique respectively. When applying materials using the hand lay-up method, a mold is prepared by first applying a mold release agent (which is often an alcohol- or wax-based paste) to its surface and it is allowed to set for a period of time (usually overnight). If the operator includes gel coat pin striping, specific areas will be masked off to define the bands, marks or streaks dimensions on the spray mold of the composite product. The gel coat pin stripes would be added and the masks removed. Next, a layer of gel coat is applied on top of the mold release agent and pin stripes. After the gel coat has cured, a layer of chopped fiberglass strands is manually applied. Then a mixture of polyester resin and catalyst (to quicken the final curing process of the resin) is applied to the fiberglass layer by using hand rollers, brushes, or squeegees. Additional rolling may be required to remove any air bubbles remaining after the initial application process.

For the spray-up method, the same mold release agent preparation method used for the hand lay-up method is followed. Next, fiberglass, polyester resin, and catalyst are applied simultaneously to the mold surface with a "chopper gun.” There are two methods for

spraying the polyester resin mixed with a catalyst and the fiberglass onto a mold, the internal mix and the external mix. For an internal mix, the polyester resin and the catalyst are mixed inside the gun and then sprayed with the fiberglass onto the mold. An external mix is when all three components remain separate from each other as they enter the gun, and instead they are mixed outside the gun as they exit the nozzle.

**Status of the Materials Used in Polyester Resin Operations**

Among the materials currently used in practice are composite materials that include resins, gel coats, solvents, coatings and adhesives, including reinforcement materials such as fiberglass and fillers. With the exception of the fiberglass and fillers, the composite materials contain monomers that emit VOCs as TACs, such as styrene, MMA, methylene chloride, toluene, xylene, n-hexane, MEK, MIBK, and 1,1,1-trichloroethane[4]. Reducing VOC emissions by limiting the monomer content of polyester resin materials as applied, especially during the open molding processes, is the main focus of Rule 1162. To the extent that VOCs regulated by Rule 1162 are also TACs, Rule 1162 also produces a secondary benefit of reducing TAC emissions.

A variety of materials, namely resins, gel coats, fiber reinforcement materials, fillers, clean up solvents, inhibitors, catalysts, curing agents, and additives are necessary for manufacturing or fabricating products made of composite materials. The following discussion addresses the current technology status of these materials used by the fiber reinforced plastics industry for polyester resin operations. Analysis regarding the effect the proposed rule amendment will have on VOC emissions is discussed in Chapter 4.

***Resin Materials***

There is a large variety of resin materials manufactured for the purpose of composite manufacturing. Polyester resins are the primary resin materials manufactured and used by this industry. The polyester resin category includes several sub-categories that vary by chemical formulations such as phthalic resins, halogenated/clorendic resins, bisphenol-A resins, furan resins, and vinyl ester resins. The usage of a particular polyester resin depends on the mechanical properties of the material and the needs or specifications of the product being manufactured.

Of the resin materials manufactured and used for composite manufacturing, styrene is the monomer that is found most often in polyester resin. There are many specialty resins and gel coats that also contain MMA, another widely used monomer. Nationally, 17,000 tons per year of styrene is emitted and approximately 75 percent is attributed to the use of styrene-based polyester resin materials during several phases of the open molding process. The key sources of styrene and other monomer emissions occur when the resin is first applied to the mold, later when the air bubbles are rolled out, and during the curing stage of the final product.

[4] EPA has classified styrene, MMA, methylene chloride, toluene, xylene, n-hexane, MEK, MIBK, and TCA as possibly carcinogenic to humans; however, only methylene chloride has a unit risk factor. A screening risk analysis is completed in Chapter 4 based on risk values established by CARB/OEHHA.

Another category of material, polyurethanes, is slowly becoming the emerging technology in this industry because of the low- or zero-VOC and TAC contents. However, when compared to polyester resins, the use of polyurethanes is less common throughout the industry. Polyurethanes are currently being used to manufacture automotive parts (i.e., campers, inner door panels and seat backs), analytical and laboratory instrumentation; snow and water skis and boards and to fabricate diagnostic equipment.

***Gel Coats***

A gel coat is a clear or pigmented layer of coating that is applied to the surface of a polyester resin. Its purpose is to cosmetically enhance the appearance of the product being made while improving the product's ability to resist degradation due to exposure to weather, light, heat, et cetera. All gel coats have application- and use-based performance specifications or requirements based on the physical properties of the specific material. The application-based specifications consider the spraying properties, resistance to sagging, porosity and resin-tearing potential of the gel coats. The use-based performance specifications consider the ability of a particular gel to resist cracking and other damage due to exposure to weather and water.

Gel coat pin striping is a spray technique used to apply narrow bands, marks or streaks of gel coats onto the surface of boats, amusement park structures and other composite products for decorative or identification purposes. The gel coat used for pin stripping may be different in color or texture than the surrounding areas of the composite products.

In the pin stripe spray application procedure, the operator will mask off specific area to define the bands, marks or streaks dimensions on the spray mold of the composite product. After the application of the striping gel coat(s), the operator will continue the build up of the composite products (spray gel coat, resin and fiberglass).

***Fiber Reinforcement Materials***

Fiber reinforcement materials are made of multiple filaments or fibers comprised of glass, carbon, boron, metal, or amid polymers and are used to reinforce the strength of plastic. The most common type of fiber reinforcement material is fiberglass. Regardless of what the fibers are made of, the fibers can remain as continuous or discontinuous filaments or they can be woven into continuous multi-filament yarns that consist of strands with several hundred filaments, each of which is five to 20 micrometers in diameter. The yarns can then be woven into mats or cloth. An example of how fiberglass mats are used in hand lay-up applications, the mats are arranged over a mold and sprayed with a matrix forming resin, such as an epoxy, to assure a good adhesion to the glass fibers.

***Fillers***

Fillers are finely divided materials or short fibers, made of materials such as silica, carbon black, talc, mica, and calcium carbonate that are used to enhance or reinforce the mechanical properties of plastics. Adding fillers will stretch the amount of resin material or gel coat that would otherwise be needed to fabricate a particular product and will displace the quantity of monomer that would otherwise be emitted if 100 percent of a resin material or gel coat (i.e., no added fillers) was used.

***Clean-up Solvents***

There are several solvents that are either VOCs or non-VOCs, used for cleaning-up polyester resin operations, though their use is subject to the requirements of Rule 1171. For example, solvents such as methanol and MEK (both contain VOCs), and acetone (a non-VOC[5]) are currently used in large quantities to clean equipment and tools. However, previously adopted amendments to Rule 1171 lowered the VOC content limit for cleaning materials used in polyester resin operations to 25 grams per liter, which subsequently encouraged an industry-wide transition from VOC-based cleaning materials to aqueous and other low-VOC cleaning materials. In response to the October 8, 1999 changes to Rule 1171, many manufacturers have begun to replace some clean-up solvents with products that are less volatile or less flammable. For example, products such as aqueous cleaners, dibasic ester (DBE), diacetone alcohol (DAA), n-methyl pyrolidone (NUT), propylene carbonate (dioxolanone) and acetone are being used for cleaning polyester resin operations.

The type of cleaner chosen (i.e., solvent- or aqueous-based cleaners) depends on the item being cleaned and the cleaning method. For example, the effectiveness of aqueous cleaners relies on mechanical action (such as brushing) to clean resin from contaminated applicators while acetone and other solvent-based cleaners with high boiling points clean by dissolving the resin. Aqueous cleaners are effective for certain applications because the mechanical action causes droplets of resin to separate from the device being cleaned, wets the resin droplets with the cleaner, and subsequently causes the droplets to settle to the bottom of the cleaning tank. Solvent-based cleaners are effective because the item being cleaned can be soaked and eventually the resin will be dissolved and suspended within the solvent.

***Inhibitors, Catalysts and Curing Agents***

The nature of resin materials and gel coats is such that they are designed to chemically cure or cross-link the monomers shortly after they are applied to a mold. In order to prevent the premature curing of these materials when they are manufactured and stored for future use, inhibitors are added. Inhibitors are chemical additives that specifically control the spontaneous cross-linking reaction of monomers that exist in the resin materials and gel coats. Inhibitors are added to keep the resin materials and gel coats in a stable, liquid state for a minimum amount of time and at a given ambient temperature (e.g., three months at 73 $^{o}$F).

The process of curing resin materials and gel coats employs curing agents or hardeners and catalysts to develop the desirable curing properties. Curing agents include anhydrides,

[5] Acetone is considered a "Group I Exempt Compound" in accordance with SCAQMD Rule 102 – Definitions.

aldehyde and amine compounds and are often used for curing a product at room temperature or at elevated temperatures as appropriate. Catalysts, also referred to as accelerators, are substances that are added in specific quantities to resin materials or gel coats to make them cure or achieve cross-linked bonds more rapidly. Also, most fabricators rely on catalysts to overcome the presence of inhibitors in the materials. Methyl ethyl ketone peroxide (MEKP) and benzoyl peroxide (BPO) are the most common catalysts used in polyester resin operations. BPO has been reported to have a beneficial effect because it is effective in reducing gel drying time and lowering the peak temperature during the curing process.

***Additives***

Chemical additives are introduced into resin materials and gel coats to obtain certain desirable product characteristics such as the ability to resist heat and aging, electrical properties, optical clarity, permeability, flame retardant, and ease of application. There are four classes of additives, which represent about 90 percent of all additives used in plastics. They are fillers (as previously discussed), plasticizers, colorants and stabilizers. Plasticizers are used to change the flammability, odor, biodegradability, and the glass transition temperature ($T_{g)}$ of a polymer in a resin material or gel coat.

For most consumer applications, plastics are manufactured in a variety of colors. When compared to metals and ceramics, which depend on surface coatings for color, plastics have an advantage in that they can become a particular color throughout its molded form, simply because of the addition of a colorant to the resin material or gel coat. Popular pigments for colorants include titanium dioxide and zinc oxide (white), carbon (black), and various other inorganic oxides such as iron and chromium oxides. Organic compounds can also be used to add color either as pigments (insoluble) or as dyes (soluble).

In order for a plastic to have a long and useful life in any application, it is desirable for properties of that plastic to change as little as possible over time. To counter the effects of aging, small quantities of stabilizers are added. The type of stabilizer used depends on the application. For example, some stabilizers are designed specifically to reduce degradation by sunlight, ozone, and biological agents.

## EMISSION INVENTORY AND REDUCTIONS

SCAQMD staff identified ten facilities that currently perform pin striping: seven boat manufacturers and three amusement parks). Based on conversations with the facility operators, staff determined that facility operators performing pin striping operations use approximately one pound per day of gel coat per facility. Using the emission factor for air-assisted airless gel coat application from the American Composite Manufacturers Association's (ACMA's) UEFs (UEF 2001) Table for Open Modeling of Composite, dated July 23, 2001, staff estimated that approximately 20 pounds of styrene per day are emitted from pin striping in the district (see Table 1-1). Styrene is considered both a VOC and a TAC.

**Table 1-1**
**Existing VOC Emissions from Air-Assisted Airless Spray Application**

| Description | Parameter |
|---|---|
| Monomer Content Percent | 37% |
| Single Facility Usage, gal/day/facility | 1 |
| Average Density, lb/gal | 10.65 |
| Single Facility Use, lb/day/facility | 10.65 |
| UEA Emission Rate, lb VOC/lb sprayed | 0.1885 |
| Number of Facilities | 10 |
| VOC Emissions, lb/day | 20.1 |

Emission Rate American Composite Manufacturers Association, Unified Emission Factors (UEF 2001) Table for Open Modeling of Composite, dated July 23, 2001
Single facility use, lb/day/facility = monomer percent/100% x single facility usage, gal/day/facility x average density, lb/gal
Styrene emissions, lb/day = single facility use, gal/day/facility x UEF emission rate, lb VOC/lb sprayed x number of facilities

## CONTROL TECHNOLOGIES

### Air-Assisted Airless Spray Application Techniques

Air-assisted airless spray application systems consist of a pressure pot and spray guns. Gel coat is forced from the pressure pot to the gun by hydraulic pressure. Air is injected at the spray gun nozzle to assist with atomizing the gel coat into small droplets. Air pressures can be less than 10 psig at the shaping horns; however, the fluid pressures are relatively high (200-1,000 psig). The lower turbulence and low gel coat velocity provided by this equipment improve the coating efficiency over standard high volume, low pressure (HVLP) gel coating systems.

### Air Atomized Spray Application Techniques

Air atomizing spray application techniques consist of a spray gun with gel coat supplied by siphon, gravity or pressure feed. Gel coats flow through the nozzle of the spray gun in a liquid stream. Compressed air from the center of the nozzle surrounds the gel coat with a hollow cone as it leaves the nozzle. The compressed air breaks the gel coat into small droplets and imparts a forward velocity to them. Additional jets of high-pressure compressed air from the face and horns of the air nozzle are directed into the droplets, breaking them up into even smaller droplets in an elliptical or fan spray pattern. The system provides the finest atomization of the application techniques and; therefore, the finest finish. It also has the lowest transfer efficiency, because the spray has a high velocity and the pattern is large.

# CHAPTER 2 - ENVIRONMENTAL CHECKLIST

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**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 adverse environmental impacts. This checklist identifies and evaluates potential adverse environmental impacts that may be created by the PAR 1162 – Polyester Resin Operations.

## GENERAL INFORMATION

| | |
|---|---|
| Project Title: | Proposed Amended Rule 1162 Polyester Resin Operations |
| Lead Agency Name: | South Coast Air Quality Management District |
| Lead Agency Address: | 21865 Copley Drive<br>Diamond Bar, CA 91765 |
| CEQA Contact Person: | James Koizumi (909) 396-3234 |
| Rule Contact Person: | Helmy Sultan, Ph.D. (909) 396-2362 |
| Project Sponsor's Name: | South Coast Air Quality Management District |
| Project Sponsor's Address: | 21865 Copley Drive<br>Diamond Bar, CA 91765 |
| General Plan Designation: | Not applicable |
| Zoning: | Not applicable |
| Description of Project: | Proposed amendments to Rule 1162 that would allow one gallon per day exemption per facility for pin striping gel coat operations. |
| 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. None of the environmental topics are expected to 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 | ☐ | Geology and Soils | ☐ | Population/ Housing |
| ☐ | Agricultural Resources | ☐ | Hazards and Hazardous Materials | ☐ | Public Services |
| ☐ | Air Quality | ☐ | Hydrology and Water Resources | ☐ | Recreation |
| ☐ | Biological Resources | ☐ | Land Use and Planning | ☐ | Solid/Hazardous Waste |
| ☐ | Cultural Resources | ☐ | Mineral Resources | ☐ | Transportation/ Circulation. |
| ☐ | Energy | ☐ | Noise | ☐ | Mandatory Findings |

**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** May 4, 2005 **Signature:** Steve Smith

Steve Smith, Ph.D.
Program Supervisor
Planning, Rule Development & Area Sources

## ENVIRONMENTAL CHECKLIST AND DISCUSSION

As discussed in Chapter 1, PAR 1162 may potentially increase styrene (VOC and TAC) emissions from existing open mold polyester resin operations by exempting air atomizing application techniques.

| | | 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? | ☐ | ☐ | ☑ |

The proposed project impacts on aesthetics would 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.

**I.a), b), & c)** The proposed project would allow the use of air atomizing spray application techniques for pin striping. The use of these techniques would occur in enclosed areas within existing facilities that apply gel coats to open molds. Since existing applications occur within existing gel coat operation facilities in enclosed areas, and the proposed project would allow change in application techniques only, no new construction is expected. Therefore, no 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 are anticipated by the change in application methodologies. Therefore, the proposed project is not expected to have adverse impact on scenic resources.

**I.d)** Since the proposed project would only result in a change in application techniques in enclosed areas at existing facilities with similar processes, no new lighting is expected to be required. As a result, additional light or glare impacts are expected, which could adversely affect day or nighttime views in the area.

Based upon these considerations, adverse significant aesthetic impacts are not anticipated from the proposed project and will not be considered further.

| | | 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 would 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.

**II.a), b), & c)** PAR 1162 would not result in changes to operations at existing facilities, except for allowing limited air atomizing spray application techniques for pin striping. This will not result in any new construction of buildings or other structures that would convert any classification of farmland to non-agricultural use or conflict with zoning for agricultural use or a Williamson Act contract.

Based upon these considerations, significant adverse agricultural resource impacts are not anticipated as a result of implementing PAR 1162 and will not be analyzed further.

| | 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)? | ☐ | ☑ | ☐ |

**Significance Criteria**

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**
**SCAQMD 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<br>Hazard Index ≥ 1.0 (project increment)<br>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<br><br>1-hour average<br>annual average | SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards:<br>0.25 ppm (state)<br>0.053 ppm (federal) | |
| PM10<br>24-hour average<br><br>annual geometric average<br>annual arithmetic mean | 10.4 $\mu g/m^3$ (recommended for construction) [b]<br>2.5 $\mu g/m^3$ (operation)<br>1.0 $\mu g/m^3$<br>20 $\mu g/m^3$ | |
| Sulfate<br>24-hour average | 1 $ug/m^3$ | |
| CO<br><br>1-hour average<br>8-hour average | SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards:<br>20 ppm (state)<br>9.0 ppm (state/federal) | |

[a] Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.
[b] Ambient air quality threshold based on SCAQMD Rule 403.

KEY: lbs/day = pounds per day; ppm = parts per million; $ug/m^3$ = microgram per cubic meter; ≥ greater than or equal to

**III.a)** The VOC emission increases are considered insignificant because the amount is below the SCAQMD VOC significance threshold of 55 pounds per day (see III.c. below). Significance thresholds were established at levels that are expected not to conflict or obstruct implementation of AQMPs. In addition, the emission increases are not expected to conflict with or obstruct implementation of the applicable air quality plan (2003 AQMP), since Rule 1162 should be

viewed as a part of an overall strategy to reduce air quality detailed in the AQMP. Rule 1162 contributes to carrying out the goals of the AQMP to reduce VOC emissions, which in turn, contribute to attaining the state and federal ambient air quality standards for ozone and, to a lesser extent, PM10. Thus, Rule 1162 overall assists in attaining and maintaining ambient air quality standards with a margin of safety, which contributes to carrying out the 2003 AQMP.

**III. b), d) & f)** The proposed project is not expected to cause or contribute to a violation of any air quality standard. Although the proposed project will slightly diminish an existing air quality rule, the effect of the proposed project is not expected to be significant. The rationale for these conclusions is explained in the following paragraphs.

Gel coat pin striping is a flourish added to gel coated products and not a product in itself. For example, gel coat pin stripes are added to boats or amusement park attractions. So a facility that does not currently perform gel coating operations would not perform gel coat pin striping, but may instead perform pin striping using coatings that would not be subject to Rule 1162, but would be subject to applicable coating rules. Therefore, the following analysis is focused on existing gel coat facilities, since gel coat pin striping is completed in conjunction with other gel coat operations.

The analysis evaluates the affect of the proposed project on facilities that currently perform gel coat pin striping and those that do not perform gel coat pin striping. Existing facilities that do not currently perform pin striping would switch from air-assisted airless to air atomized techniques. Staff has contacted existing gel coat facilities and identified ten facilities that currently pin stripe and would switch from air-assisted airless to air atomized techniques. Some facilities that gel coat currently do not pin stripe now because of the performance problems with techniques currently allowed by the existing rule. Staff contacted existing operators and found ten facilities that may decide to pin stripe, if the limited exemption is adopted. Therefore, a total of twenty facilities may be affected by the limited exemption. Potential VOC emission increases that may arise from facilities using the limited exemption are analyzed below.

It is expected that there would not be enough economic incentive for a facility that does not currently include gel coat operations to begin to gel coat because of the exemption, since pin striping is a flourish added to a limited variety of gel coated products. However, operators of new gel coat facilities may choose to include pin striping as part of their process. New gel coat operations would be subject to New Source Review (NSR) and requirements, which includes offsetting emission increases (Rule 1303(b)(2)). Any VOC emission over a pound per day would require VOC offsets. Facilities that generate over four tons per year would be required to acquire offsets at least equivalent to the VOC emissions estimated from the process. Facilities that generate less than four tons per year are exempt from offset requirement. However, SCAQMD maintains a bank of credits and applies credits as necessary to new facilities with a potential to emit of less than four tons per year to comply with state and federal offset requirements. Therefore, although new facilities could take advantage of the limited exemption for gel coat pin stripping operations, emission increases from these operations would be mitigated by offset requirements under Rule 1303(b)(2) or though the SCAQMD's bank of credits for facilities that emit less than four tons per year. Therefore, emissions from new facilities are not analyzed in this document.

**Construction Air Quality Impacts**

Construction is not expected necessary for the purpose of the proposed project because it is expected allow the continued use, or allow operators of existing facilities to use air atomizing spray application techniques, since PAR 1162 is only expected to effect existing facilities with similar processes. Air atomizing spray application techniques are expected to occur in existing enclosed areas where pin striping already occurs. Therefore, no construction air quality impacts are expected and will not be analyzed further.

**Summary of Operational Air Quality Impacts**

The overall objective of the proposed project is allow the limited use of atomizing gel coat application techniques for pin striping operations at existing open molding operations. As a result, the proposed project would relax slightly existing requirements in Rule 1162 by allowing the limited use of air atomizing spray application techniques. The net effect of the proposed project is that VOC and TAC emissions could increase at affected facilities.

***Air Atomizing Spray Application Techniques***

The Unified Emission Factors (UEF 2001) table for open molding of composite materials does not specifically identify gel coat emission rates for air atomizing spray application techniques. Additionally, staff has not identified any published emission rates for gel coat air atomizing spray application. However; the emission rate for the air atomized spray application can be calculated using the emission rates of the air-assisted airless spray of the UEF (gel coat application), the transfer efficiency of both the air atomized spray and air-assisted airless spray applications and the following assumptions and analysis:

- Each composite part requires one gallon of gel coat.
- 100 gallons of gel coat sprayed using and air-assisted airless spray application (40 percent transfer efficiency) to produce 40 composite parts.
- 100 gallons of the same gel coat sprayed using an air atomized spray gun (24 percent transfer efficiency) on the same composite parts will produce 24 parts.
- To complete the spraying of the other 16 parts (40 – 24 = 16) using an air atomized spray gun, the operator needs to increase his usage of gel coat materials.
- The amount of gel coat materials required to spray the 40 parts using air atomized spray (100 gallons x 40 parts/24 parts) application is calculated as 166.7 gallons.
- The amount of gel coat materials required to produce 40 composite parts using air atomized spray and air-assisted airless spray applications are 166.7 and 100 gallons, respectively.
- VOC emissions from both air atomized spray and air-assisted airless spray applications is proportional to the gel coat materials usage.

Therefore the relationship between the emission rate of the air-assisted airless spray ($E_1$) and the emission rate of the air atomized spray application ($E_2$) may be illustrated as follows:

$$\mathbf{E_2 = E_1 \times 1.67}$$

$E_1$ The emission rates of the UEFs (UEF 2001) table in pounds of VOC per pound of gel coat sprayed using the air-assisted airless spray application.

$E_2$ The calculated emission rates in pounds of VOC per pound of gel coat sprayed using the air atomized spray application.

The emission rates using air-assisted airless spray (E1) and air atomized spray (E2) application equipment for pin striping/multi color gel coat (37 percent monomer content) are 0.1885 and 0.3148 pounds of VOC per pound of sprayed gel coat materials. Therefore, the difference in emission rates between the air atomizing and air-assisted airless spray application is 0.1263 pound of VOC per pound of sprayed gel coat materials.

***Potential Emission Increases by Adding a Limited Exemption for Air Atomizing Spray Application Techniques to PAR 1162***

Styrene is considered a VOC. The amount of potential VOC (styrene) emissions from existing facilities switching from air-assisted airless gel coat application techniques to air atomized gel coat application techniques is presented in Table 2-2 and is estimated to be 13.4 pounds of VOC per day. The amount of potential emissions from gel coat operators at existing facilities that do not pin stripe, but may decide to pin stripe using air atomized gel coat application techniques is estimated to be 33.5 pounds of VOC per day and presented in Table 2-3. Therefore, the maximum total potential increase in VOC emissions from this project is 47 pounds of VOC per day. Since styrene is both a VOC and a TAC, the project generates 47 pounds of VOC/TAC (Table 2-4).

**Table 2-2**
**Potential VOC Emissions Increases from Existing Facilities Currently Performing Pin Striping that May Switch to Atomized Spray Techniques**

| Category | Air-Assisted Airless Pin Striping | Air Atomized Spray Pin Striping |
|---|---|---|
| Gel Coat Type | Pigmented | Pigmented |
| Monomer Content Percent | 37% | 37% |
| Usage, gal/day/facility | 1 | 1 |
| Average Density, lb/gal | 10.65 | 10.65 |
| Single Facility Usage, gal/day/facility | 10.65 | 10.65 |
| UEA Emission Rate, lb VOC/lb sprayed | 0.1885 | 0.3148 |
| Number of Affected Sources | 10 | 10 |
| VOC Emissions, lb/day | 20.1 | 33.5 |
| Potential Increase in Existing Facility VOC Emissions, lb/day | | 13.4 |

Styrene is considered a VOC.
Emission Rate American Composite Manufacturers Association, Unified Emission Factors (UEF 2001) Table for Open Modeling of Composite, dated July 23, 2001.
Single facility use, lb/day/facility = monomer percent/100% x single facility usage, gal/day/facility x average density, lb/gal
Styrene emissions, lb/day = single facility use, gal/day/facility x UEF emission rate, lb VOC/lb sprayed x number of facilities

**Table 2-3**
**Potential VOC Emissions Increases from Existing Facilities Start Pin Striping Air Atomized Spray Operations**

| Category | Air Atomized Spray Pin Striping |
|---|---|
| Gel Coat Type | Pigmented |
| Monomer Content Percent | 37% |
| Usage, gal/day/facility | 1 |
| Average Density, lb/gal | 10.65 |
| Single Facility Usage, gal/day/facility | 10.65 |
| UEA Emission Rate, lb VOC/lb sprayed | 0.3148 |
| Number of Affected Sources | 10 |
| Potential VOC Emissions, lb/day | 33.5 |

Styrene is considered a VOC.
Emission Rate American Composite Manufacturers Association, Unified Emission Factors (UEF 2001) Table for Open Modeling of Composite, dated July 23, 2001
Single facility use, lb/day/facility = monomer percent/100% x single facility usage, gal/day/facility x average density, lb/gal
Styrene emissions, lb/day = single facility use, gal/day/facility x UEF emission rate, lb VOC/lb sprayed x number of facilities

**Table 2-4**
**Total Potential VOC Emissions Increases Due to the Proposed Exemptions**

| Description | VOC Emissions , lb/day |
|---|---|
| Emissions from Existing Facilities That Switch Application Techniques | 13.4 |
| Emissions from Existing Facilities That Start Pin Striping | 33.5 |
| Total | 46.9 |

***Criteria Impacts from PAR 1162***
The 47 pounds of potential VOC emission increases are below the VOC significance threshold of 55 pounds per day.

**Toxic Air Contaminate Emissions**
TACs associated with composite materials, such as gel coats, include styrene, MMA, methylene chloride.

***Carcinogenic Risk***
Methylene chloride is the only compound used at affected facilities, recognized as carcinogenic by either federal or state regulations. Methylene chloride, however, is not a component of gel coats, but was used at one time to etch or roughen the surface of gel coats so that resin could be applied. Since it is not a constituent of gel coats, methylene chloride emissions are not affected by gel coat application techniques. Therefore, PAR 1162 would not alter existing carcinogenic risk from affected facilities.

***Noncarcinogenic Risk***

The SCAQMD assumes that all nonmonomer VOC TACs are emitted to the atmosphere; therefore, nonmonomer VOC TACs evaporate despite the application used. It is suspected that MMA may volatilize less when applied with nonatomizing applications. But emission factors have not been established by application for MMA; therefore, the difference in MMA emissions between air atomizing and air-assessed airless application techniques was not quantifiable at this time. Toluene, xylene, n-hexane, MEK, and MIBK are considered minor components in gel coats , so were not included in the noncarcinogenic risk analysis.

Since TAC emissions generate localized impacts, the analysis of non-carcinogenic risks is a facility-based analysis. To evaluate noncarcinogenic risk, the maximum increase of styrene emissions at a single facility is evaluated under the worst meteorological conditions with the closest receptor distance.

TAC emissions from existing facilities that currently pin stripe would be the difference between the emission from air atomized and air-assisted airless spray application techniques. While TAC emissions from existing facilities that would start pin striping would be the full emissions from air atomizing application techniques. Therefore, maximum amount of emissions from a single facility would originate from an existing facility that currently does not pin stripe, but that starts to pin stripe after the exemption become effective. Table 2-5 presents the maximum TAC emissions from a single facility that would pin stripe under the proposed exemption.

**Table 2-5**
**Single Facility Maximum Styrene Emission Increases from Exemption for Air Atomized Spray Application Techniques**

| Category | Amount Exempted, gal/day/facility | Monomer Content, percent | Air Atomizing Emission Rate lb VOC/lb Gel Coat | Maximum Single Facility Styrene Emissions Total, lb/day |
|---|---|---|---|---|
| Pin Striping | 1 | 37 | 0.3148 | 0.1 |

*Noncarcinogenic Chronic Risk from Potential Increased Styrene Emissions*

Table 2-6 demonstrates that the chronic hazard indices from 0.1 pounds per day, which is 0.006. The chronic hazard index is below the significance threshold of 1.0. Therefore, the increase in styrene emissions from the exemption for air atomized spray techniques is not significant.

**Table 2-6**
**Chronic Hazard Index for Styrene Emission Increases from Exemption for Air Atomized Spray Application Techniques**

| Compound | Emission Reduction[a] (in tons per year) | Dispersion Factor[b] X/Q (in [µg/m$^3$]/ [tons/year]) | Meteorological Correction Factors[c] MET | Chronic Reference Exposure Level[d] REL (in µg/m$^3$) | Multi Pathway Factor (MP) | Chronic Hazard Index (HI) |
|---|---|---|---|---|---|---|
| Styrene | 0.1 | 51.18 | 1 | 900 | 1 | 0.006 |

SCAQMD, Attachment H, *Risk Assessment Procedures for Rules 1401 and 212*, Version 6.0, August 18, 2000
a) "Worst-case" Throughput estimate in Table 4-4
b) Dispersion Factor (X/Q) from Table-2A: point source, > 12 hr/day, ≥ 14 to 24 stack height, receptor distance 25 meters down wind
c) Meteorological Correction Factors (MET) from Table-2B: West L.A.
d) Reference Exposure Level (REL), Multi Pathway Factor (MP) and from Table-8A
e) Hazard Index (HI) = (Throughput x X/Q x MET x REL x MP)

*Noncarcinogenic Acute Risk from Potential Increased Styrene Emissions*
Table 2-7 demonstrates that the acute hazard indices from 0.1 pounds per day, which is 0.0005. The acute hazard index is below the significance threshold of 1.0. Therefore, the increase in styrene emissions from the exemptions for air atomized spray techniques is not significant.

**Table 2-7**
**Acute Hazard Index for Styrene Emission Increases from Exemption for Air Atomized Spray Application Techniques**

| Compound | Emission Reduction[a] (in pounds per hour) | Dispersion Factor[b] X/Qhr (in [µg/m$^3$]/ [pound/hour]) | Acute Reference Exposure Level[c] REL | Acute Hazard Index[d] HI |
|---|---|---|---|---|
| Styrene | 0.1 | 2,000 | 21,000 | 0.0005 |

SCAQMD, Attachment K, *Risk Assessment Procedures for Rules 1401 and 212*, Version 6.0, August 18, 2000
a) Worst Case Throughput estimate in Table 4-5
b) Dispersion Factor (X/Q) from Table-6: point source, > 12 hr/day, ≥ 14 to 24 stack height, receptor distance 25 meters down wind
d) Acute Reference Exposure Level (REL) from Table-8A
e) Hazard Index (HI) = (Throughput x X/Q)/(REL)

## Conclusion

The propose project does not require construction so there would be no construction emission. The total amount of potential increased styrene emissions from the project are 47 pounds per day. This is below the VOC significance threshold of 55 pounds per day. Gel coats do not contain carcinogens, so no carcinogenic risk would be created by this project. Styrene exposure generates noncarcinogenic acute and chronic risk. Based on a screening risk assessment of the acute and chronic risk the acute and chronic hazard indices are below the significance threshold of 1.0. Emissions generated by the project are below the SCAQMD significance thresholds for VOCs and health risk. Therefore, the proposed project is considered insignificant for air quality.

**III.c)** Cumulative air quality impacts from the proposed amendments, PAR 1162, previous amendments and all other AQMP control measures considered together are not expected to be significant because implementation of all AQMP control measures is expected to result in net emission reductions and overall air quality improvement. This determination is consistent with the conclusion in the 2003 AQMP Program EIR that cumulative air quality impacts from all AQMP control measures are not expected to be significant (SCAQMD, 2003). Indeed, air quality modeling performed for the 2003 AQMP indicated that the district would achieve all federal ambient air quality standards by the year 2010 (SCAQMD, 2003). Future VOC control measures will assist in achieving the goal of ozone attainment by 2010. Based on regional modeling analyses performed for the 2003 AQMP, implementing the control measures contained in the 2003 AQMP, in addition to the air quality benefits of the existing rules, is anticipated to bring the district into attainment with all national and most state ambient air quality standards by the year 2010. Further, because project-specific impacts are not significant, air quality impacts are not considered to be cumulatively considerable as defined by CEQA Guidelines 15065(a)(3). Therefore, there will be no cumulative adverse air quality impacts from implanting PAR 1162. There are no provisions of PAR 1162 that result in either project-specific or cumulative air quality impacts. Since the proposed project is not expected to create significant adverse project-specific air quality impacts, the proposed project's contribution to significant adverse cumulative impacts are less than cumulatively considerable (CEQA Guidelines 15130(a)(3) and, therefore, are not significant.

**III.e)** Most of the existing polyester resin facilities are located in industrial and commercial areas, but some are located near residential areas. Historically, the SCAQMD has enforced odor nuisance complaints through SCAQMD Rule 402 - Nuisance. SCAQMD records show that some polyester resin facilities have received some odor nuisance complaints. Affected facilities are not expected to create objectionable odors affecting a substantial number of people because open molding surfaces would remain at approximately current levels. Only the method of application is expected to change. Therefore, no significant additional odor impacts are expected to result from implementing the proposed amendments.

**Conclusion**

Based on the information provided above, the proposed project would not result in significant adverse air quality impacts. The proposed project would allow the limited use of air atomized spray application techniques for pin striping resulting in a slight relaxation in the application technique requirements for pin striping. Approximately 47 pounds of VOC (styrene) would potentially be emitted per day, which is under the 55 pounds of VOC per day significance threshold. In addition acute and chronic hazard indices were estimated to be below the significance threshold of 1.0. Since project-specific impacts are not significant, air quality impacts are not considered to be cumulatively considerable as defined by CEQA Guidelines 15065(a)(3).

The proposed amendments to Rule 1162 that would rescind the nonatomizing gel coat application technique requirements were concluded to be significant for air quality. Rescinding the nonatomizing gel coat application technique requirements is estimated to forego 853 pounds of anticipated future VOC/TAC (styrene) emission reductions. The proposed amendments related to rescinding the nonatomizing gel coat application technique requirements were presented and analyzed in a separate CEQA document titled the ~~Draft~~ Final Subsequent Environmental Analysis (SEA) for Proposed Amended Rule 1162 – Polyester Resin Operations

(SCAQMD No. 050316JK) dated March 16, 2005, which was circulated for a 45-day public review and comment period from March 17, 2005 to May 3, 2005. No comments were received on the Draft SEA.

Because the air quality impacts from currently proposed amendments to Rule 1162 to provide a limited exemption for pin striping operations were concluded to be less than the applicable VOC significance threshold, they do not constitute a substantial increase in VOC emissions nor are they considered to be cumulatively considerable. As a result, it is concluded that the currently proposed amendments to Rule 1162 do not generate significant adverse cumulative air quality impacts.

Since the impacts from the proposed project are below SCAQMD significance thresholds, the project will not hinder the SCAQMD's progress in attaining state and national standards for ozone and PM10. As such, the proposal would insignificantly diminish an existing air quality rule or future compliance requirement, but does not conflict with or obstruct implementation of the applicable air quality plan. Because, the proposal's impacts are below the SCAQMD significance thresholds, it has no provision that would cause a violation of any air quality standard or directly contribute to an existing or projected air quality violation. Since air quality impacts are below significance further analysis will not be completed.

| | | **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? | ☐ | ☐ | ☑ |

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| d) | Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | ☐ | ☐ | ☑ |
| e) | Conflicting with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | ☐ | ☐ | ☑ |
| f) | Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | ☐ | ☐ | ☑ |

**Significance Criteria**
Impacts on biological resources would 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.

**IV.a), b), c), & d)** PAR 1162 would not require any additional construction; therefore, it is not anticipated to have adverse impacts to candidate, sensitive or special status species; riparian habitat; federally protected wetlands; or migratory corridors from the use of air atomizing spray application techniques. PAR1162 would allow existing facilities that perform pin striping operations to use one gallon per day per facility of gel coat for pin striping using air atomizing techniques. Since existing facilities are typically located in industrial or commercial areas, special status plants, animals, or natural communities are not expected to be found in close proximity to the affected facilities.

**IV.e) & f)** PAR 1162 is not expected to conflict with local policies or ordinances protecting biological resources nor local, regional, or state conservation plans because it will only affect existing polyester resin facilities that perform pin striping operations located in industrial and commercial areas. For this reason, PAR 1162 will not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or any other relevant habitat conservation plan for the same reason.

Based upon these considerations, significant adverse biological resources impacts are not anticipated from implementing the proposed project and will not be analyzed further.

| | | 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 would 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.

**V.a), b), c), & d)** Since no construction-related activities are associated with the implementation of PAR 1162, and only one gallon of gel coat per day using air atomizing gel coat spray application techniques would occur at existing facilities with gel coat operations, no impacts to cultural or historical resources are expect to occur as a result of this proposed project. PAR 1162 is not expected to require physical changes to the environment, which may disturb paleontological or archaeological resources because the proposed project would only affect spray operations at 10 existing pin striping facilities. Furthermore, it is assumed these areas, where polyester resin facilities with gel coat operations exist, are already either devoid of significant cultural resources or whose cultural resources have been previously disturbed. Based upon these considerations, significant cultural resources adverse impacts are not expected from the implementation of PAR 1162 and will not be examined further.

| | Potentially | Less Than | No |
|---|---|---|---|

| | | Significant Impact | Significant Impact | 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**

The impacts to energy and mineral resources would 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.

**VI.a) & e)** No significant change in energy usage is expected from the limited use of air atomizing gel coat spray application techniques for pin striping. Both air atomizing gel coat spray and the existing air-assisted airless spray application techniques require electricity to operate air compressors. Additional electricity may be required since only ten facilities may switch from air-assisted airless to air atomized gel coat application techniques for pin striping operations and ten additional existing facilities may begin pin striping. Since so few facilities are expected to take advantage of the exemption and additional demand per facility would be small; the proposed project is not expected to create or represent an additional significant demand for energy at affected facilities. As a result, PAR 1162 would not conflict with energy conservation plans, use non-renewable resources in a wasteful manner, or result in the need for new or substantially altered power or natural gas systems. Since PAR 1162 would affect existing facilities, it will not conflict with adopted energy conservation plans. Additionally, affected facilities are expected to comply with existing energy conservation plans and standards to minimize operating costs.

**VI.b), c), & d)** In light of the discussion above and since it would affect existing gel coat facilities, PAR 1162 would not create any significant effects on peak and base period demands for electricity and other forms of energy and would not be expected to affect a facilities ability to comply with existing energy standards.

Accordingly, PAR 1162 is not expected to generate significant adverse energy impacts and will not be discussed further.

| | | 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? | ☐ | ☐ | ☑ |
| | • 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? | ☐ | ☐ | ☑ |

| | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|
| 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 would be considered significant if any of the following criteria apply:

- Topographic alterations would result in significant changes, disruptions, displacement, excavation, and 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.

**VII.a)** Southern California is an area of known seismic activity. Structures must be designed to comply with the Uniform Building Code Zone 4 requirements if they are located in a seismically active area. The local city or county is responsible for assuring that a proposed project complies 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 represent the foundation conditions at the site.

Accordingly, buildings and equipment at existing affected facilities should currently conform with the Uniform Building Code and all other applicable state codes. Further, since PAR 1162 involves only allowing air atomizing spray application techniques, new construction is not anticipated. As a result, substantial exposure of people or structure to the risk of loss, injury, or death involving seismic-related activities is not anticipated and will not be further analyzed.

**VII.b)** PAR 1162 would affect polyester resin operations, which occur at existing industrial or commercial facilities. Since PAR 1162 would allow the limit use of air atomizing spray gel coat application techniques for pin striping, which would not require construction, no soil disruption from excavation, grading, or filling activities; changes in topography or surface relief features; erosion of tope soil; or changes in existing siltation rates are anticipated from the implementation of PAR 1162.

**VII.c)** Since PAR 1162 would not require new construction, it is expected that the soil types present at existing affected facilities will not affect in any way expansion or liquefaction characteristics at any existing facility location. Subsidence is not anticipated to be a problem since no excavation, grading, or filling activities will occur at affected facilities. Further, the proposed project does not involve drilling or removal of underground products (e.g., water, crude oil, et cetera) that could produce subsidence effects. Additionally, the affected areas are not expected to be prone to landslides or have unique geologic features since the affected facilities are located in industrial or commercial areas where such features have already been altered or removed.

**VII.d) & e)** Since the proposed project would not require new construction, it is expected that people or property would not be exposed to expansive soils or soils incapable of supporting water disposal. Further, the proposed project does not involve installation of septic tanks or other alternative waste water disposal systems.

Based upon these considerations, significant adverse geology and soils impacts are not expected from the implementation of PAR 1162 and will not be examined further.

| | | 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**

The impacts associated with hazards would 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.

**VIII.a)** The limited exemption in the proposed amended rule is expected to slightly increase the total amount of gel coat materials currently used by affected facilities. These facilities already use materials that contain toxics, such as styrene, methylene chloride, toluene, xylene, n-hexane,

MEK, TCA and methanol, which all currently require solvent delivery and waste transport services. The amount of gel coat allowed by the exemption for pin striping at a single facility would be one pound. Assuming that gel coat operations occur five days a week and four weeks per month, then a maximum of 20 gallons of gel coat could be sprayed per month per facility (1 gal/day x 5 days/week x 4 week/month = 20 gal/month). It is assumed that increase of 20 gallons per month (less than a 55-gallon barrel) would not require an additional delivery trip, but could be delivered with other gel coat materials. Once gel coat is sprayed, it begins to crosslink. After the material has cross-linked, the resulting product and waste material are no longer considered hazardous and can be used or disposed of as solid waste.

Air atomizing spray gel coat application techniques would use less cleaning solvent than air-assisted airless spray application techniques for the following reason. In air atomizing spray application techniques, gel coat is held within a chamber attached directly to the air atomizing spray gun. Gel coat flows from the chamber through the nozzle of the gun in a liquid stream. Compressed air is fed into the center of the nozzle to atomize the gel coat. Guns are cleaned between gel coats (e.g. between colors for pin striping) and at the end of use.

Air-assisted airless spray application systems consist of a pressure pot and spray guns. Gel coat is forced from the pressure pot through a line to the gun by hydraulic pressure. Air is injected at the spray gun nozzle to assist with atomizing the gel coat into small droplets. The lower turbulence and low gel coat velocity provided by this equipment improves the coating efficiency for most operation over standard high volume, low pressure (HVLP) application systems. Guns and hoses are cleaned between gel coats and at the end of use. Hoses are typically 20 feet long. Pressure pots are typically larger than in air atomizing spray gel coat applications; therefore, are not cleaned as often.

Air-assisted airless guns are expected to generate more hazardous waste, since guns and hoses (typically 20 feet long) would need cleaning between gel coats and use, while air atomizing spray equipment would only require cleaning of the guns. In addition, air-assisted air less pressure pots are larger than air atomizing spray chambers; therefore, air-assisted air less pressure is expected to generate more waste.

It is expected that gel coat operators would use acetone to clean gel coat application equipment, since gel coat is an exempt solvent and cleans gel coat effectively. The limitation of one gallon per day of pin striping gel coat by air atomizing spray application techniques would keep solvent cleaning use and waste low.

Therefore, it is not expected that any increase in gel coat usage caused by the exemption would significantly increase routine transport, use or disposal of hazardous materials.

**VIII.b) & i)** Since no change in operation are expected by PAR 1162 except for allowing air atomizing spray application techniques, existing emergency planning is anticipated to adequately minimize the risk associated with these facilities. Businesses are required to report increases in the storage or use of flammable and otherwise hazardous materials to local fire departments. Local fire departments ensure that adequate permit conditions are in place to protect against potential risk of upset.

The Uniform Fire Code and Uniform Building Code set 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 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 the potential for explosions or accidental releases of hazardous materials is not significant.

**VIII.c), e), & f)** The air quality section examined the impacts from hazardous emissions and found the impacts to be below significant (see Air Quality III). The proposed project is expected to affect existing gel coat facilities that perform pin striping (10 facilities), and existing gel coat facilities that may decide to pin stripe (10 facilities). These facilities currently handle hazardous or acutely hazardous materials, substances and waste and may exist within one-quarter mile or an existing or proposed school, or public/private airport. No provision from PAR 1162 is expected to cause the construction or operation of a new facility. Any new facility proposed after the adoption of PAR 1162 is expected to require permits for air atomizing spray application techniques; therefore, would require a CEQA evaluation at that time and would be subject to New Source Review requirements in Regulation XIII.

As stated in item VIII.a), the potential increase in handling hazardous or acutely hazardous materials in the gel coats and cleaning solvents at existing facilities is expected to be insignificant. Waste streams from gel coat operations are isolated to the cleaning solvents (typically acetone), since the waste gel coats are plastics that are not considered hazardous. Solvent cleaning use is expected to remain the same or decrease. Therefore, while existing gel coat facilities that are within one-quarter mile of an existing or proposed school or near a public/private airport may apply gel coats by atomized application techniques allowed by the limited exemption, the resulting emissions, and hazards from handling hazardous or acutely hazardous materials, substances, or waste are not expected to be significant. Since PAR 1162 would maintain or increase gel coat use at levels considered insignificant, no significant increase or new hazardous emissions which would adversely affect existing/proposed schools or public/private airports located in close proximity to the affected facilities is expected.

**VIII.d)** Some affected facilities may be designated as a large quantity generator of hazardous waste pursuant to Government Code §65962.5. However, it is not anticipated that complying with PAR 1162 will alter in any way how affected facilities manage their hazardous wastes and that they will continue to be managed in accordance with all applicable federal, state, and local rules and regulations. As stated in item VIII.a), the routine transport, use or disposal of hazardous materials caused by PAR 1162 is not expected to be significant at any facility.

Therefore, since the routine transport, use or disposal of hazardous materials caused by PAR 1162 is not expected to be significant at any facility, it is not expected to be significant at sites that are large quantity generators of hazardous waste.

**VIII.g)** It should be noted that the proposed amended rule has no provisions that dictate the use of any specific material. Owners or operators of regulated facilities have the flexibility of choosing the gel coat material best suited for their operations. The proposed amendment would allow the limited use of an additional application technique (atomized spray). It is not anticipated that PAR 1162 would impair implementation of or physically interfere with an adopted or modified emergency response plan or emergency evacuation plan because of this limited exemption.

In addition, 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;
    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.

**VIII.h)** The proposed project might result in a slight increase in gel coats or cleaning solvents (see discussion in item XIII.a)). 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.

In conclusion, potentially significant adverse hazard impacts resulting from adopting and implementing PAR 1162 are not expected and will not be discussed further.

| | | 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? | ☐ | ☐ | ☑ |
| 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? | ☐ | ☐ | ☑ |

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| g) | Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | ☐ | ☐ | ☑ |
| h) | Place within a 100-year flood hazard area structures which would impede or redirect flood flaws? | ☐ | ☐ | ☑ |
| i) | Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | ☐ | ☐ | ☑ |
| j) | Inundation by seiche, tsunami, or mudflow? | ☐ | ☐ | ☑ |
| 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 would 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 would 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.

**IX.a), f), k), l), & o)** As stated in the Hazardous Waste discussion under item VIII.a), no increase in solvent cleaning is expected from the proposed project. It is important to note that PAR 1162 does not change the current requirements specific to solvent cleaning, storage and disposal. The exemption for air atomizing spray application techniques may increase of gel coat used by a maximum of one gallon per day at any facility by 10 gallons per day overall (1 gal/day x 10 additional pin striping operations. Facilities that currently pin stripe are assumed to maintain existing usage). Cleaning solvent use is expected to remain the same or decrease (see Hazards and Hazardous Materials), and solvents are expected to be disposed of as hazardous waste (i.e., sent to a hazardous waste disposal facility and not disposed of through the sewer system). Since gel coats are not expected to be cleaned with water, and waste gel coats and solvents are typically disposed of as hazardous waste, the proposed project is not expected to cause an additional potential to adversely affect hydrology or water quality. Further, since the change in solvent use is expected to decline or "worst-case" remain the same as existing gel coat operations, no additional wastewater generation is expected nor is it expected to cause adverse water quality impacts. Therefore, exemptions are not expected to result in new adverse water quality impacts, require additional wastewater disposal capacity, violate any water quality standard or wastewater discharge requirements, or otherwise substantially degrade water quality.

PAR 1162 would only allow air atomizing spray application techniques, and 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. PAR 1162 would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

Since gel coat application techniques do not require water, as part of the application process or clean up, no change in water usage is expected to occur at facilities using air-assisted airless instead of air atomized gel coat application techniques. As a result, there are no potential changes in wastewater volume or composition expected from facilities complying with the requirements in PAR 1162. Further, PAR 1162 is not expected to cause affected facilities to violate any water quality standard or wastewater discharge requirements since wastewater volumes associated with PAR 1162 are not expected to change. PAR 1162 is not expected to have significant adverse water demand and 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.

**IX.b) & n)** The proposed project affects existing facilities whose current operations have little or no effect on the groundwater supplies. The proposed amendments to PAR 1162 do not require water; the proposed project 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 PAR 1162 will not increase demand for water from existing entitlements and resources, and will not require new or expanded entitlements. The proposed project does not result in substantial increases in the area of impervious surfaces, such that interference with groundwater recharge efforts occurs. Therefore, no significant adverse water demand impacts are expected as the result of implementing the proposed amendments.

**IX.c), d), & e)** Implementation of PAR 1162 would occur at existing facilities whose current operations are typically located in industrial or commercial areas that are paved and the drainage infrastructures are already in place. Since the proposed project does not involve construction activities, no new increases to storm water runoff, drainage patterns, groundwater characteristics, or flow are expected. Therefore, these impact areas are not expected to be significantly adversely affected by PAR 1162 and will not be discussed further.

**IX.g), h), i), & j)** The proposed project is not expected to require building new housing or contribute to the construction of new building structures because no facility modifications or changes are expected to occur at existing facilities as a result of implementing PAR 1162. Therefore, PAR 1162 is not expected to generate construction of any new structures in 100-year flood areas as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood delineation map. Since there would be no new construction associate with the proposed project, the proposed project would not result in alterations to the course or flow of floodwaters. As a result, PAR 1162 is not expected to expose people or structures to significant new flooding risks. Finally, PAR 1162 will not affect in any way any potential flood hazards inundation by seiche, tsunami, or mud flow that may already exist relative to existing facilities.

**IX.m)** PAR 1162 will not increase storm water discharge, since no construction activities are expected at affected facilities. Therefore, no new storm water discharge treatment facilities or modifications to existing facilities will be required due to the implementation of PAR 1162. Accordingly, PAR 1162 is not expected to generate significant adverse impacts relative to construction of new storm water drainage facilities.

Based upon the above considerations, implementing PAR 1162 is not expected to create any significant adverse hydrology or water quality impacts and will not be evaluated further.

| | | 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.

**X.a)** PAR 1162 would affect existing gel coat operations at existing facilities; therefore, it will not result in physically dividing an established community.

**X.b)** There are no provisions in PAR 1162 that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no land use or planning requirements would be altered by allowing limited atomizing spray application techniques.

**X.c)** Since PAR 1162 would allow limited air atomizing spray application techniques at affected facilities, it is not expected to affect in any way habitat conservation or natural community conservation plans, agricultural resources or operations, and would not create divisions in any existing communities. Therefore, present or planned land uses in the region would not be significantly adversely affected as a result of the proposed amended rule.

Based on the above considerations, PAR 1162 is not expected to significantly adversely affect local agencies land use and planning decisions or ordinances and will not be discussed further.

| | | 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 would 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.

**XI.a) & b)** There are no provisions in PAR 1162 that would result in the loss of availability of a known mineral resource 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. Some examples of mineral resources are gravel, asphalt, bauxite, and gypsum and are commonly used for construction activities. Since the proposed project would only allow a limited exemption for air atomizing spray application techniques for pin striping operations, no construction activities would be involved. Therefore, no new demand on mineral resources is expected to occur and significant adverse mineral resources impacts from implementing PAR 1162 are not anticipated and will not be discussed further.

| | | 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 airship, would the project expose people residing or working in the project area to excessive noise levels? | ☐ | ☐ | ☑ |

**SIGNIFICANCE CRITERIA**

Impacts on noise would be considered significant if:

- Construction noise levels exceed 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.

**XII.a)** Modifications or changes associated with the implementation of PAR 1162 will take place at facilities that are located in existing industrial or commercial settings. Since, PAR 1162 only allows limited use of air atomizing spray application techniques for pin striping; the proposed project is not expected to expose persons to the generation of excessive noise levels above current facility levels. It is expected that any facility affected by PAR 1162 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)** PAR 1162 is not anticipated to expose people to or generate excessive groundborne vibration or groundborne noise levels since no construction activities are expected to occur at the existing facilities and air atomizing spray equipment do not generate vibrations that can be felt outside of the facility boundaries.

**XII.c)** Allowing the limited use of air atomizing spray application techniques for pin striping in gel coat open molding operations is not expected to cause a substantial permanent increase in ambient noise at affected facilities. Air atomizing spray equipment is expected to occur in enclosed areas within existing gel coat facilities. As a result, a substantial permanent increase in ambient noise levels in the vicinity of affected facilities is not anticipated.

**XII.d)** No increase in periodic or temporary ambient noise levels in the vicinity of affected facilities above levels existing prior to PAR 1162 is anticipated because the proposed project would not require construction-related activities nor is it expected to change the overall existing operations at the affected facilities. PAR 1162 would only allow limited air atomizing spray application techniques for pin striping in open gel coat operations.

**XII.e) & f)** Even if an affected facility is located near a public/private airport, there are no new noise impacts expected from any of the existing facilities as a result of complying with PAR 1162. Thus, PAR 1162 is not expected to expose people residing or working in the project vicinities to excessive noise levels.

Based upon these considerations, significant adverse noise impacts are not expected from the implementation of PAR 1162 and will not be discussed further.

| | 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**

The impacts of the proposed project on population and housing would 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.

**XIII.a)** Since PAR 1162 allows limited use of air atomizing spray gel coat application techniques, the proposed project is not anticipated to generate any additional effects, either direct or indirect, on the district's population or population distribution as no additional workers are anticipated to be required at facilities that take advantage of the limited exemption. Human population within the jurisdiction of the SCAQMD is anticipated to grow regardless of implementing PAR 1162. As such, PAR 1162 will not result in changes in population densities or induce significant growth in population.

**XIII.b) & c)** Because the proposed project includes modifications and/or changes at existing industrial and commercial facilities, PAR 1162 is not expected 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 or housing elsewhere in the district.

Based upon these considerations, significant adverse population and housing impacts are not expected from the implementation of PAR 1162 and will not be discussed further.

| | Potentially | Less Than | No |
|---|---|---|---|

| | Significant Impact | Significant Impact | 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 would 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.

**XIV.a) & b)** A change in formulations of gel coat materials is not expected and the use of air atomizing spray application techniques are not expected to increase the chances for fires or explosions. PAR 1162 is not expected to have any adverse effects on local police or fire departments' resources or response times because enforcement of the rule will be the responsibility of the SCAQMD.

**XIV.c) & d)** The local labor pool (e.g., workforce) at affected facilities is not expected to be affected in any way since PAR 1162 would only allow limited use of air atomizing spray application techniques at existing affected facilities. Therefore, with no increase in local population anticipated, construction of new or additional demands on existing schools and parks are not anticipated. Therefore, no significant adverse impacts are expected to local schools or parks.

**XIV.e)** The proposed project will not result in the use of new formulations of gel coat materials. Besides permitting the equipment or altering permit conditions, there is no other need for additional or altered 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 adverse public services impacts are not expected from the implementation of PAR 1162 and will not be analyzed further.

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

**SIGNIFICANCE CRITERIA**
The impacts to recreation would be considered significant if:

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

**XV.a) & b)** As discussed under "Land Use and Planning" above, there are no provisions in the PAR 1162 that would affect 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 the changes proposed in PAR 1162. The proposed project 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.

Based upon these considerations, significant adverse recreation impacts are not expected from the implementation of PAR 116 and will not be discussed further.

| | 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 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 would be considered significant if the following occur:

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

**XVI.a) & b)** PAR 1162 would allow limit air atomizing spray gel coat application techniques for pin striping on open molding surfaces.

**Solid Waste**

Transfer efficiency describes the amount of sprayed material that is deposited on the desired substrate. The remainder of the material, overspray, is emitted or settles on the floor or spray booth. Air atomizing spray application techniques have a lower transfer efficiency than other gel coat application techniques. An increase in overspray would result in an increase in the amount of solid waste from the disposable floor coverings, cured resin waste, and waste from personal protective equipment for workers. The cured gel coat waste is plastic; therefore, not a hazardous waste.

Cured gel coat waste, lb/day = [maximum usage, gal/day x density, lb/gal x (1 - transfer efficiency)] – Air Emissions, lb/day
Cured gel coat waste, lb/day = [20 gal/day x 11 lb/gal x (1 – 0.25)] – 47 lb/day
Cured gel coat waste, lb/day = 118 lb/day
Cured gel coat waste, ton/day = 118 lb/day x (ton/2,000 lb) = 0.059 ton/day

The Final Program Environmental Impact Report for the 2003 AQMP states that the daily landfill capacity for Los Angeles, Orange, Riverside and San Bernardino Counties is 101,344 tons per day (Table 3.5-1, page 3.5-2). The maximum increase in cured gel coat waste is $5.82 \times 10^{-5}$ percent of the total daily landfill capacity (0.059 ton/101,344 ton/100 = $5.82 \times 10^{-5}$). Therefore, the increase in solid waste that would be generated from the proposed project is less than significant.

**Hazardous Waste**

Equivalent or less cleaning solvent (typically acetone) is needed to clean air atomizing gel coat application equipment than is used for air-assisted airless spray application equipment. Therefore, no substantial change in hazardous waste disposal is expected. Since this effect is related to hazardous material wastewater impacts it is discussed in the "Hazards and Hazardous Material and Hydrology and Water Quality" sections, the reader is referred to those section for more detail on this topic.

**Conclusion**
Therefore, there are no significant adverse solid and hazardous waste impacts associated with the proposed amendments to Rule 1162. As a result, no significant net increase in the amount or character of solid or hazardous waste streams is expected to occur. PAR 1162 is not expected to significantly increase the volume of solid or hazardous wastes from polyester resin operations, require additional waste disposal capacity, or generate waste that does not meet applicable local, state, or federal regulations.

As a result of the above considerations, implementing PAR 1162 is not expected to generate significant adverse solid/hazardous wastes impacts and will not be discussed.

| | | 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? | ☐ | ☐ | ☑ |

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| 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? | ☐ | ☐ | ☑ |
| f) | Result in inadequate parking capacity? | ☐ | ☐ | ☑ |
| g) | Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)? | ☐ | ☐ | ☑ |

**SIGNIFICANCE CRITERIA**

The impacts on transportation/traffic would 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 (e.g., 350 heavy-duty truck round-trips per day) 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.

**XVII.a) & b)** No significant change in transportation is expected by allowing limited use of air atomizing spray gel coat application techniques. The amount of gel coat allowed by the exemption for pin striping at a single facility would be one gallon. Assuming that gel coat operations occur five days a week and four weeks per month, then a maximum of 20 gallons of gel coat could be sprayed per month at a single facility (1 gal/day x 5 days/week x 4 week/month = 20 gal/month). It is assumed that increase of 20 gallons per month (less than a 55 gallon barrel) would not require an additional delivery trip, but could be delivered with other gel coat materials. Therefore, the proposed amendments would have no affect on existing gel coat operations that would change or cause additional transportation demands or services. Therefore, since no additional operational-related trips are anticipated, the implementation of PAR 1162 is not expected to significantly adversely affect circulation patterns on local roadways or the level of service at intersections near affected facilities.

**XVII.c)** PAR 1162 would affect the physical features of existing gel coat facilities. The height and appearance of the existing structures are not expected to change and, therefore, implementation of PAR 1162 is not expected to adversely affect air traffic patterns in the region.

**XVII.d)** PAR 1162 would only impact existing affected gel coat pin striping facilities such that no offsite modifications to roadways are anticipated for the proposed project that would result in additional roadway hazards or incompatible uses.

**XVII.e)** Because no changes in traffic are expected, no changes are expected to emergency access at or in the vicinity of the affected facilities by PAR 1162. Therefore, the proposed project is not expected to adversely impact emergency access.

**XVII.f)** PAR 1162 would only affect existing gel coat pin striping facilities with no changes expected to the parking capacity at or in the vicinity of the affected facilities. As previously noted, PAR 1162 will not increase demand for additional employees at affected facilities. Therefore, the proposed project is not expected to adversely impact on- or off-site parking capacity.

**XVII.g)** PAR 1162 would only affect existing facilities with no facility modifications or changes expected. The implementation of PAR 1162 will not result in conflicts with alternative transportation, such as bus turnouts, bicycle racks, et cetera.

Based on the above considerations, significant adverse transportation/circulation impacts are not anticipated and will not be discussed further.

| | | 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) | ☐ | ☐ | ☑ |

| | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|---|---|---|---|
| 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 items I through XVII above, the proposed amended rule would not cause significant adverse environmental effects because it would a result in overall VOC emission increase that are below the applicable significance criteria. Therefore, the proposed project is not expected 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. Similarly, PAR 1162 would not eliminate important examples of the major periods of California history or prehistory or otherwise degrade cultural resources.

**XVIII.b)** Based on the foregoing analyses, since PAR 1162 will not result in project-specific significant environmental impacts, PAR 1162 is not expected to cause cumulative impacts in conjunction with other projects that may occur concurrently with or subsequent to the proposed project. Furthermore, PAR 1162 impacts will not be "cumulatively considerable" (CEQA Guidelines § 15065(a)(3)) because the incremental impacts are not considerable when viewed in connection with the effects of past, current, or probable future projects.

**XVIII.c)** Based on the foregoing analyses, PAR 1162 is not expected to cause significant adverse effects on human beings, either directly, or indirectly.

# APPENDIX A

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## PROPOSED AMENDED RULE 1162

## PROPOSED AMENDED RULE 1162

In order to save space and avoid repetition, please refer to the latest version of the proposed amended Rule 1162 located elsewhere in the final rule package.