Initial Study/Negative Declaration for the Amendments to Bay Area Air Quality Management District Regulation 8, Rule 50: Polyester Resin Operations

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FIGURES:

TABLES:

CHAPTER 1

INTRODUCTION

PURPOSE OF THIS DOCUMENT

This Negative Declaration assesses the environmental impacts of the proposed adoption of amendments to Regulation 8, Rule 50 (Regulation 8-50) – Polyester Resin Operations – by the Bay Area Air Quality Management District (BAAQMD or District). This assessment is required by the California Environmental Quality Act (CEQA) and complies with the state CEQA Guidelines (Title 14 California Code of Regulations §15000 et seq.). A Negative Declaration serves as an informational document to be used in the decision-making process for a public agency that intends to carry out a project; it does not recommend approval or denial of the project analyzed in the document. The BAAQMD is the lead agency under CEQA and must consider the impacts of the proposed rule amendments when determining whether to adopt them. The BAAQMD has prepared this Negative Declaration because no significant adverse impacts are expected to result from the proposed rule amendments.

SCOPE OF THIS DOCUMENT

This document evaluates the potential impacts of the proposed amendments on the following resource areas:

- aesthetics,
- agricultural resources,
- air quality,
- biological resources,
- cultural resources,
- geology and soils,
- hazards and hazardous materials,
- hydrology and water quality,
- land use planning,
- mineral resources,

- noise,
- population and housing,
- public services,
- recreation,
- transportation and traffic, and
- utilities and service systems.

IMPACT TERMINOLOGY

The following terminology is used in this Negative Declaration to describe the levels of significance of impacts that would result from the proposed rule amendments:

- An impact is considered beneficial when the analysis concludes that the project would have a positive effect on a particular resource.
- A conclusion of no impact is appropriate when the analysis concludes that there would be no impact on a particular resource from the proposed project.
- An impact is considered less than significant if the analysis concludes that an impact on a particular resource topic would not be significant (i.e., would not exceed certain criteria or thresholds established by BAAQMD). Impacts are frequently considered less than significant when the changes are minor relative to the size of the available resource base or would not change an existing resource.
- An impact is considered less than significant with mitigation incorporated if the analysis concludes that an impact on a particular resource topic would be significant (i.e., would exceed certain criteria or guidelines established by BAAQMD), but would be reduced to a less than significant level through the implementation of mitigation measures.

ORGANIZATION OF THIS DOCUMENT

The content and format of this document, described below, are designed to meet the requirements of CEQA.

- Chapter 1, “Introduction,” identifies the purpose, scope, and terminology of the document.
- Chapter 2, “Description of the Proposed Rule,” provides background information of Regulation 8-50, describes the proposed rule amendments, and describes the area and facilities that would be affected by the amendments.

- Chapter 3, "Environmental Checklist," presents the checklist responses for each resource topic. This chapter includes a brief setting description for each resource area and identifies the impact of the proposed rule amendments on the resources topics listed in the checklist.

- Chapter 4, "References Cited," identifies all printed references and personal communications cited in this report.

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CHAPTER 2

DESCRIPTION OF THE PROPOSED RULE

BACKGROUND

The Bay Area Air Quality Management District (District or BAAQMD) regulates emissions of volatile organic compounds (VOC) from polyester resin operations during manufacturing and repair of composite products through limits contained in Regulation 8, Rule 50: Polyester Resin Operations (Regulation 8-50). The District is proposing amendments to Regulation 8-50 to reduce emissions of VOCs by reducing the VOC content requirements for polyester resin operations. The proposed amendments would apply to polyester resins, gel coats, cleaning products and vinyl ester resins (included with polyester resin) in the manufacturing of composite products. The District committed to updating this regulation in Control Measure SS-4 in the District's 2005 Ozone Strategy. Additionally, polyester resin operations also emit toxic air contaminations (TACs), which predominantly consist of styrene.

Control of VOC emissions from polyester resin operations is primarily the responsibility of the BAAQMD in the Bay Area. Currently, Bay Area polyester resin businesses that have permits to operate and are subject to Regulation 8-50 emit 1.3 tons per day (TPD) of VOC into the region's atmosphere from the application of resins and gel coats in composite operations. The District estimates that TAC emissions from polyester resin operations are approximately 0.8 TPD because styrene is the typical monomer used in polyester resin operations. Styrene is both TAC and a VOC. An additional 0.5 TPD of VOC is emitted from the use of cleaning products associated with resin and gel coat operations.

BAAQMD estimates the proposed amendments to Regulation 8-50 will result in a reduction of VOC emissions of approximately 0.46 TPD from polyester resin operations. The estimated VOC emission reductions are attributable to changes in chemistry for resin and gel coat materials, and the use of non-atomizing application technologies. Reductions in resin and gel coat monomer content will reduce VOC and TAC emissions. Furthermore, non-atomized applications enhance spray equipment transfer efficiencies, thus reducing VOC and TAC emissions and the amount of overspray waste. In addition, the proposed amendments to VOC limits for cleaning products will reduce emissions. The amendments for the controls on polyester resins, gel coats, cleaning products and vinyl ester resin operations would take effect on October 1, 2010.

VOCs contribute to the formation of ground-level ozone, which is the principal ingredient in smog. The Bay Area is not in compliance with State and federal ozone standards, and has committed to implement all feasible measures to reduce emissions of

ozone precursors, including VOC. Regulation 8-50 regulates VOC emissions from polyester resin operations by setting standards for the amount of VOCs that can be used in the surface preparation, coatings application, and cleanup for the manufacture and repair of composite materials. Polyester resins and other composite materials are used to manufacture and repair recreational and commercial watercraft; recreational vehicle bodies; automotive vehicle bodies and interior parts; commercial and military aircraft parts; bathware products; architectural products; personal computer board parts; pipelines; and storage tanks for the sewage treatment industry and secondary containment for gasoline fuel dispensing components.

The District adopted Regulation 8, Rule 50 on December 5, 1990 and amended it three times thereafter. The most recent amendments in 1996 addressed the definition of a VOC, the method of analyzing polyester resin material samples, and the method of determining emissions from polyester resin operations.

Rule 50 limits emissions from polyester resin operations in at least three ways. The owner/operator can comply with monomer content limits for uncured resins; the owner/operator can use vapor suppressants that minimize emissions from polyester resin operations; and/or the operator may use a closed mold system to minimize emissions from polyester resin operations. In addition, the rule sets application requirements to limit overspray and has a VOC content limit for gel coats, which is a type of polyester resin that is often applied as the surface of a polyester resin product to provide a smooth, attractive finish.

There are approximately 60 permitted polyester resin operations in the Bay Area that range in size from single-person shops to shops with 10 or more employees. Most facilities have less than 10 employees. Approximately half of the polyester resin operations in the Bay Area specialize in cast polymer operations. A cast polymer resin operation applies polyester resin to a mold to make a casting. Examples of finished castings include shower enclosures and bathroom vanity countertops.

COMPOSITE PRODUCTS OVERVIEW

Products manufactured by polyester resins are termed “composite products.” Finished products are composites of polyester resins, monomers, catalyzing agents, fillers, reinforcement fibers, or other materials and other chemicals and materials to impart desired properties to the finished product. Polyester resin operations fabricate and repair composite products by applying gel coats and/or resins mixed with reinforcement and other materials to molds, which provide the desired shape for finished products.

COMPONENTS OF POLYESTER RESIN COMPOSITES

Resins and Monomers

Resins are the backbone of a composite product. Resins polymerize, or react with, other polyester resin molecules to bind fibers and other materials in a composite product, thus

allowing the product to tolerate more stress and other forms of tension. Resins also provide a barrier to weather, water or chemicals. Thermosetting resins polymerize when exposed to heat or certain chemicals. Once cured, they cannot be reheated and re-shaped due to the molecular cross-linking process that has occurred, unlike thermoplastic resins that can be reheated and reshaped.

Polyester resins are polymers of ester molecules that are chained together in a particular order called ester linkages. Ester monomers are formulated by the reaction of acid and alcohol molecules. Polyester resins include isophthalic resins, orthophthalic resins halogenated/clorendic resins, bisphenol-A resins, and furan resins.

Other types of thermosetting resins include epoxies, phenolics, polyurethanes, and acrylics. Epoxy resins are typically used to fabricate marine craft parts, automotive parts, electrical composites, appliance parts, and aircraft components. Epoxy resins emit minimal amounts of VOC compared to polyester resins because they contain little to no monomer content. Phenolic resins are used primarily to fabricate products that can meet fire-resistant standards mandated by public transportation and aviation industries. They also are used to fabricate electrical switches, junction boxes, automotive parts, consumer appliance parts, handles for pots and pans, and billiard balls. Phenolic resins emit some VOC but the use of these resins is minimal. Polyurethane resins are used to manufacture products for the home-building industry, the ballistics industry, the sporting goods industry, the automotive industry, and to fabricate products used on highways. Typical polyurethane resin products include hockey sticks, bowling balls, automotive body and seat parts, laboratory equipment parts, highway sign posts, trusses, guardrails and light poles. Polyurethane resins emit little or no VOC. Acrylic resins are used to fabricate composite products requiring superior clarity and optical properties. Acrylic resins are typically used to fabricate lighting fixtures because they are slow-burning and do not produce harmful smoke or gases in the presence of flame. Acrylic resins are also used as tooling resins because they can withstand exposure to high stress and heat. Acrylic resins contain methyl methacrylate (MMA) monomer and can emit significant amounts of VOC. There is minimal production of composites using acrylic resin in the District.

Vinyl ester resins, which are produced from the esterification of an epoxy with a monocarboxylic acid, are considered a type of polyester resin and are regulated under this rule.

Some thermosetting resins emit VOCs and TACs while others do not. Emissions depend on the resin's monomer type and content. Monomers are small molecules that partially combine with themselves and/or catalyzing agents to form the basic repeating unit of a polymerized resin. Monomers reduce a resin's viscosity and are the integral building blocks in the curing reaction which transforms the resin from a liquid to a solid.

Styrene is by far the most commonly used monomer in composite manufacturing, although many specialty resins and gel coats contain other monomers, such as Methyl Methacrylate (MMA) or vinyl toluene. Styrene and MMA, the second most commonly used monomer, are emitted into the air during the application of resins to molds, while

rolling air bubbles out of composite materials, and during the curing phase. Styrene and MMA are TACs, so exposure to these emissions is an air quality concern. Because VOC emissions from composite products consist entirely of monomers, the monomer content of resin is regulated just as VOC content is regulated in coating rules. Polyester resins have the greatest emissions of all thermosetting resins because they are the most widely used and because emissions from polyester resins are the greatest per amount of resin used.

Gel Coats

Similar to thermosetting resins, different gel coats emit VOCs and HAPs to varying degrees, depending on the type and amount of monomer the gel coat resin is based on. Gel coats are modified polyester resins. When a resin and a gel coat are to be applied to a mold, the gel coat is applied first because it becomes the surface layer of the composite product. Gel coats have both decorative and protective features. A gel coat's surface is exposed to a variety of environments, so it must be able to resist UV light, chemicals, heat, discoloration, pock marks, and cracking.

Specialized gel coats, known as tooling gel coats, have high levels of durability and are resistant to heat. They are used to manufacture molds which in turn are used to fabricate composite products. Such gel coats must resist mechanical and thermal stresses encountered during the curing and de-molding processes. A primer gel coat is a specialized gel coat designed to protect the exterior of a composite product that is painted after the product is removed from the mold.

ADDITIVES TO RESINS

Reinforcement Materials

Fiber reinforcement materials (FRM) are used in the manufacturing of composite products to enhance a variety of desirable properties that are of a mechanical and/or structural nature. The desirable properties include tensile strength, tensile modulus (elasticity), flexural strength, flexural modulus, compressive strength, stiffness, fatigue endurance, and elasticity. FRM enhances thermal, protective, and other ccomposite apabilities. FRM does not react with resins; however, they are an integral part of the composite matrix.

FRM include multi-filaments of glass or other fibrous materials such as carbon, graphite, aramid, boron, metal, silicon carbide, kevlar, and natural fibers. Due to its low price and excellent performance, fiberglass is the most commonly used FRM in the industry; available industrially either as mats of woven cloth or as filaments.

Fillers

Fillers are solid, finely divided materials, such as carbon black, titanium dioxide, limestone, talc, mica, silica, clay, and calcium carbonate, as well as short fibers of a

variety of materials. They are added to a polymer matrix for various reasons. Sometimes they are added to reduce the overall cost of the product by extending its volume.

Fillers are also added to enhance performance properties of a product. Fillers add a number of desirable properties to composite products, including flame retardation, heat resistance, optical clarity, color, thermal, magnetic or electrical properties, and lubricity.

Catalyzing Agents, Promoters and Inhibitors

Catalyzing agents, often called initiators in the composite industry, initiate monomer cross-linking reactions. Methyl ethyl ketone peroxide and benzoyl peroxide are the most commonly used catalyzing agents.

In order to initiate cross-linking reactions, in some circumstances, fabricators may heat catalysts or resins or add chemicals called promoters (sometimes referred to as "accelerators"). Promoters also affect color, odor, and reactivity with specific catalyzing agents. In the presence of a promoter, catalyzing agents are typically added separately, immediately prior to use.

Inhibitors are used to prolong the shelf life of resins and to adjust the cure rate of thermosetting resins to prevent cracking of thickly layered sections. Inhibitors prevent spontaneous cross-linking.

Suppressants

Suppressants are compounds that migrate to the surface resin to form a layer during the polymerization process, thus decreasing emissions into the ambient air. Consequently, suppressants are one method of HAP and VOC control. Usually, suppressants are wax compounds.

OPEN MOLD APPLICATIONS

Open mold production, the simplest fabrication technique, has been the most prevalent polyester resin composite operation for decades. EPA data suggests that open mold fabrication accounts for approximately 80% of polyester resin emissions nationally. Composite materials can be applied to open molds either manually or via spray technology.

The manual application method, often referred to as a "hand lay-up", involves a multi-step process. The mold's surface is treated with a mold release agent in the form of an alcohol or paste wax to facilitate the removal of the cured composite. Next, a catalyzed resin mix is applied over the mold release agent. Before the resin cures, fiber-reinforced materials are applied by hand. Additional resin, catalyst, and reinforced material may then be added. Hand rollers, brushes, or squeegees are used to saturate, to smooth out, and compact each layer of the matrix as it is applied.

MASS PRODUCTION OPEN MOLD APPLICATIONS

In addition to the manual application technique described above, composite material fabrication includes the following mass production open mold techniques:

- Continuous Lamination is a fabrication technique that pulls reinforcement material through a resin bath, brings the material (plies) together (sandwiches) between cellophane sheets, and pulls it through a forming die into a curing oven. Squeeze rolls control thickness and resin content as the various plies are brought together. Products made from continuous lamination include wall panels and sheeting.
- Pultrusion Operations continuously pull fiberglass material, which are in the form of strands or mats, through a tension device and immediately immerses them in a resin bath. As they exit the resin bath, the joint glass/resin composite strands are pulled first through a forming die and then through a heated die which cures the composite matrix into a shape. Examples of pultruded products include round tube or round bar fiberglass, square bar or square tube fiberglass, or wide flange beam products.
- Filament Winding Operations are used to manufacture large pipes, storage tanks, and other hollow vessels that may be subject to elevated internal pressure. In this process, continuous fiberglass strands are pulled by a rotating mandrel through a strand-tensioning device into a resin bath. After emerging from the resin bath, uniformly-coated strands are wound onto a mandrel to the shape and pattern required for the finished product. The wound product is then cured in an oven or at room temperature.

SPRAY TECHNOLOGIES

Similar to the hand lay-up method, spray-up methods also begin by treating an open mold's surface with a release agent. Over the release agent, reinforced material and a predetermined amount of resin and catalyst are applied with a spray gun. Industry representatives state that spray-up methods have several advantages over hand lay-up techniques, including increased production rates, increased uniformity of products, the utilization of a greater variety of molds, and less time to produce a product. Atomization spray technologies separate resin and gel coat liquids into a fine mist by forcing the liquid under high pressure through an orifice, by bombarding a liquid stream with air jets, or by a combination of each technique. The net result is some overspray that reduces the transfer efficiency (percent of material sprayed that adheres to the intended surface) of the material sprayed onto molds, resulting in emissions of VOCs and HAPs to the atmosphere. Open mold processes using air-atomized spray technology is the highest emitting method of creating a product.

In order to minimize this overspray, the current Regulation, Rule 50 allows only four types of spray gun technologies for the application of composite resins and gel coats.

- Airless Spray, which includes a pump to deliver the resin to the fluid tip at high pressure. As the high-pressure resin stream exits the small fluid tip (orifice), the

stream's flow is reduced and the sudden reduction in pressure causes the fluid to atomize into a spray pattern.

- Air-assisted Airless Spray, which is a hybrid of airless and air-atomized spray gun technologies, uses a pump to deliver the resin to the fluid tip (orifice) with much less pressure than an airless gun. Low pressure air improves the resin spray pattern exiting the gun's tip.
- Electrostatic Spray, where an electric charge is imparted to the mold surface and an opposite charge is imparted to the spray droplets, which are attracted to the mold. This technology is rarely used.
- High-volume, Low-pressure Spray, which is similar to air-assisted guns. They operate with air atomizing pressures of 10 psi or less. High pressure air typical of an air spray gun is replaced by a high volume of low pressure air.

The type of spray gun selected for a given application is based on four primary considerations: how the material is delivered to the gun, how the catalyst is added, how the resin or gel coat is atomized, and the type of mold which is receiving the resin or gel coat.

According to industry sources, non-atomizing spray techniques have been used effectively in other air districts for the application of resins. The net results are enhanced transfer efficiencies and reduced emissions. Details of non-atomizing application techniques are discussed later in this document.

CLOSED MOLD APPLICATIONS

Closed mold processing methods are those in which all or part of the fabrication takes place in a closed vessel or chamber. Closed molds are used to manufacture products with one or two smooth surfaces or complex shapes. Reinforced glass fibers, carbon fiber reinforced materials, and kevlar fiber reinforced polymers are used in closed mold applications. In the closed mold process, fiber is applied by hand into a mold, the mold is closed, and catalyzed polyester resin is poured or injected into the mold cavity. Resin may be forced into a mold under pressure, drawn in with a vacuum, or a combination of the two.

These following processes are examples of closed mold applications:

- Resin Transfer Molding,
- Vacuum-assisted Resin Transfer Molding,
- Vacuum Bag Molding,
- Resin Film Infusion,
- Compression Molding,
- Reaction Injection Molding,
- Tube Rolling,
- Automated Fiber Placement,
- Automated Tape Laying, and
- Centrifugal Casting.

CLEANING PRODUCTS

Cleaning products are materials used to clean equipment and parts associated with composite operations including operators' hands, tools, rollers, brushes, molds, work area, chopper guns, laminating equipment and other process-related equipment.

Acetone is the preferred cleaning product in the composite industry because it is the most effective product for cleaning cured resins and gel coats from application equipment. According to industry sources, other less flammable cleaning products are used (when possible) to enhance shop safety and to reduce the cost of property insurance. These cleaning products can only be used to clean non-cured composite materials.

Some Bay Area fabricators have had mixed results with aqueous cleaners, that combine water with an organic compound such as dibasic ester. Aqueous cleaners rely on mechanical action (such as brushing) to clean resin from contaminated applicators while acetone and other solvents clean by dissolving the resin. The resin droplets are wetted by the aqueous cleaner and settle to the bottom of a cleaning tank. Although aqueous cleaners contain few VOCs, they create waste materials, such as the spent liquid solution and under-cured resins, just as acetone cleaners do.

Soy-based cleaning materials are currently are in development according to the American Composites Manufacturing Association (ACMA). They can remove cured and uncured resins in an immersion cleaning process. The ACMA considers this an emerging technology with some promise and believes that soy-based cleaners are yet to be fully developed for all polyester resin manufacturing cleaning applications. Staff will work with industry to track the effectiveness of this emerging technology as cleaning product manufacturers endeavor to reformulate low-VOC soy-based cleaners.

OBJECTIVES

BAAQMD is proposing amendments to polyester resin operations meeting a commitment to update Regulation 8-50 in Control Measure SS-4 as part of the District's 2005 Ozone Strategy. The proposed amendments to Regulation 8-50 are aimed at further reducing VOC emissions in the Bay Area by reducing the VOC content requirements for polyester resin operations. The Bay Area is a non-attainment area for the state one-hour ozone and eight-hour standards and federal eight-hour ozone standard. The proposed amendments are expected to result in a reduction in VOC and TAC emissions from this source category.

PROPOSED AMENDMENTS

The proposed amendments to Regulation 8, Rule 50 that will reduce VOC and HAP emissions from the Bay Area's composite manufacturing industry primarily in three ways: (1) by lowering monomer content limits for resins; (2) by establishing monomer content limits for gel coats; and, (3) by requiring the use of non-atomizing spray systems when resins are applied to open molds. In addition, VOC emissions from cleaning products used in the composite manufacturing industry will be reduced by lowering the allowable VOC content. The majority of the VOC emission reductions for this control measure will be achieved by establishing new monomer limits for resins and gel coats and through a requirement to use non-atomizing spray technology.

MONOMER LIMIT REQUIREMENTS

Presently, Regulation 8, Rule 50 requires that Bay Area polyester resin operations use gel coats, a specialized form of resin, with a maximum VOC content of 250 grams per liter. Polyester resin operations must use resin materials with a maximum monomer content of 35% by weight, except for corrosion-resistant polyester resins which have a monomer content limit of 50%. The polyester resin rules of several California air pollution control districts currently regulate VOC emissions from composite manufacturing operations by limiting monomer content for both resins and gel coats. Staff proposes to define several subcategories of resins and gel coats and to impose specific monomer content limits on these subcategories. Staff has identified studies and field testing that have established maximum monomer content for polyester resin and gel coat subclasses that enable them to work effectively while reducing VOC and HAP emissions. Staff proposes that monomer limits, rather than VOC content limits, apply to gel coats used in Bay Area composite operations. The new monomer limits for Regulation 8, Rule 50 are proposed to become effective on October 1, 2010 (see Table 2-1).

TABLE 2-1

Proposed Monomer Limits for Resin and Gel Coat Materials

Gel Coats and Resin Materials	Monomer Percentage by Weight as Applied
Gel Coat Materials	
Clear Gel Coats	
Marble Resin	42%
Boat Manufacturing Resins	48%
Other Resins (all other "clear gel coat" resins)	44%
Pigmented Gel Coats	
White and Off-White Gel Coats	30%
Non-White Boat Manufacturing Gel Coats	33%
Other Non-White Gel Coats	37%
Primer Gel Coats	28%
Specialty Gel Coats	48%

Resin Materials	
Marble Resins	10% with fillers or 32% without fillers
Solid Surface Resins	17%
Tub/Shower Resins	24% with fillers or 35% without fillers
Boat Manufacturing (atomized)	28%
Boat Manufacturing (non-atomized)	35%
Laminated Resins	31% with fillers or 35% without fillers
Fire Retardant Resins	38%
Corrosion Resistant, High Strength and Tooling Resins	
Mechanical (non-atomizing)	46%
Filament application	42%
Manual application	40%
Other Resins (non "clear gel coat" resins)	35%

Monomer percent by weight includes the addition of any VOC-containing materials.

SPRAY TECHNOLOGY REQUIREMENTS

Non-atomizing (fluid impingement) spray guns that effectively apply polyester resins have been available for several years. This spray technology provides the best transfer efficiency in the polyester resin industry. Staff recommends requiring non-atomizing spray guns as the only type of spray application technique allowed for the application of polyester resins to open molds. Staff proposes setting the implementation date for non-atomizing spray guns at October 1, 2011, one year after the new resin and gel coat monomer content limits are effective. This compliance deadline is proposed in response to comments received during the public workshop and review process. Staff also recommends re-naming Section 8-50-302, currently entitled "Spray Operations" to "Application Requirements."

The proposed amendments do not require that the application of gel coats to open molds to use non-atomizing spray guns. A study has shown that there are no significant differences between the VOC emission rates between air-assisted airless and non-atomizing applications when the non-atomizing spray gun is used at a pressure high enough to achieve an acceptable surface quality. Due to the results of that study, other California air districts that had previously required non-atomizing spray application techniques for gel coats have deleted the requirement.

The proposed amendments also allow the use of air spray hopper guns for the application of viscous blends of resin or gel coat to open molds. A hopper gun is an air-atomized spray gun connected to a large upright gravity-fed hopper. The underside of the gun's nozzle is connected to a specialized hose which is connected to an air compressor. When the gun's trigger is pressed, it expels the contents from the hopper through the nozzle in a

thick, viscous mixture of catalyzed resin (or gel coat) and rock crushed to the consistency of sand in a stream or spray. The hopper gun uses high air pressure (30 psi – 40 psi) but does not atomize the mixture because it is too heavy. Hopper guns are typically used in the composites manufacturing industry to spray mixtures of crushed stone and resin into a mold to create architectural facades. The monomer emissions from hopper guns are minimal compared to other spray guns that use air pressure. Thus, amendments to the rule will allow the use of hopper guns.

WIPE CLEANING

Wipe cleaning involves wetting a rag or cloth with solvent or an aqueous solution and wiping an equipment part to free it of contaminants. Currently, the VOC limit for wipe cleaning products used in Bay Area composite operations is 200 grams per liter. Cleaning products that comply with a VOC limit of 25 grams per liter have been used in other California air districts for several years and are effective for certain applications. Other air districts have confirmed that, to date, they have not received complaints from the composite industry about the restriction to use low-VOC products for wipe cleaning. Staff recommends lowering the VOC limit for cleaning products used in Bay Area composite operations from 200 grams per liter to 25 grams per liter. Staff believes this limit is feasible because owners/operators generally rely on acetone (a solvent determined by the EPA to be negligibly photochemically-reactive) which is exempt as a VOC for the majority of their equipment cleaning needs and because cleaning products that meet the 25 gram/liter limit are available.

COLD CLEANING

Cold cleaning refers to soaking a piece of equipment in a solvent or aqueous solution. The solution dissolves cured or partly cured resin so that it can be easily removed by brushing or wiping. Particularly, equipment with inaccessible components or narrow crevices needs to be soaked. Cold cleaning is subject to the provisions of Regulation 8, Rule 16: Solvent Cleaning Operations, which does not exempt acetone or any other solvent. Acetone has a low reactivity but a high evaporation rate, so an exemption for acetone in Rule 16 would create more ozone than regulated, but lower evaporating solvents. Because acetone is the most effective cleaning solvent, industry has requested the District consider amending Rule 50 to allow the use of acetone in cold cleaners. Staff proposes to allow the use of acetone in cold cleaners for the composite industry provided that steps are taken to minimize evaporation. These include use of a self-closing cover and the prohibition of brushing and wipe cleaning parts while they are in the cold cleaner.

ADDITIONAL AMENDMENTS

To clarify the scope and to enhance the enforceability of Regulation 8, Rule 50, District staff also proposes a number of other changes in the form of modifications and additional amendments. They include:

- an expansion to the rule's description;

- modifications to the section exempting touch-up and repair and the inclusion of a limited exemption for field installation of composite products;
- new and modified definitions throughout;
- enhanced recordkeeping requirements;
- clarification for emission control systems;
- new monitoring requirements for emission control equipment;
- a prohibition of specification section, consistent with other District rules, that makes it a violation to specify the use of non-compliant materials; and,
- a new compliance statement requirement for manufacturers of resins and gel coats to reflect monomer content.

EMISSIONS REDUCTIONS

Total VOC emissions from the Bay Area polyester resin industry are estimated at 1.3 TPD. This figure is derived from the 2005 Base Year inventory, adjusted downward to account for the recent closings of the Hubbel-Lenoir Company and the Isola Corporation, two large sources of polyester resin emissions in the Bay Area. VOC emissions from the application of polyester resin and gel coat are estimated to be 0.8 TPD, roughly half from resin application and half from gel coat application. The VOC emissions from the use of cleaning products for polyester resin operations are estimated to be 0.5 TPD. TAC emissions from polyester resin and gel coat operations are also estimated to be 0.8 TPD because styrene, the monomer which according to industry is typically emitted from polyester resin operations, is both a TAC and a VOC.

The calculations for the estimated emission reductions are based on the emission inventories and reports from permitted Bay Area polyester resin operations. For VOC emissions from gel coats, District staff calculated the estimated emission reductions based on the anticipated switch from a maximum allowable VOC content to a maximum allowable monomer content. VOC emission reductions from gel coats with lower monomer content will be 0.12 TPD. For VOC emissions from polyester resins, District staff calculated the estimated emission reductions based on the anticipated reduction of maximum allowable monomer content. Emission reductions will be 0.2 TPD from resins with lower monomer content. After the new monomer content limits are implemented, the VOC and TAC emissions from resin and gel coat monomers will total approximately 0.32 TPD.

The additional VOC emission reduction from resin application operations that must switch to non-atomization spray application equipment is difficult to quantify. The number of facilities that must make the switch is approximately 15. Because most polyester resin facilities in the Bay Area are small facilities, staff assumed one non-atomizing spray system will need to be implemented per facility with the exception of one large facility. Staff conservatively estimates an additional 0.05 TPD in VOC emission reductions from the requirement to use non-atomizing spray systems. The VOC emission reduction from cleaning product usage will be 0.09 TPD. When fully implemented, the amendments to Regulation, Rule 50 will result in a total VOC emission reduction of 0.46 TPD and a TAC emission reduction of 0.37 TPD.

AFFECTED AREA

The proposed rule amendments would apply to facilities and operations under BAAQMD jurisdiction. The BAAQMD jurisdiction includes all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma counties (approximately 5,600 square miles). The San Francisco Bay Area is characterized by a large, shallow basin surrounded by coastal mountain ranges tapering into sheltered inland valleys. The combined climatic and topographic factors result in increased potential for the accumulation of air pollutants in the inland valleys and reduced potential for buildup of air pollutants along the coast. The Basin is bounded by the Pacific Ocean to the west and includes complex terrain consisting of coastal mountain ranges, inland valleys, and bays.

The facilities affected by the proposed rule amendments are located within the jurisdiction of the BAAQMD (see Figure 1).

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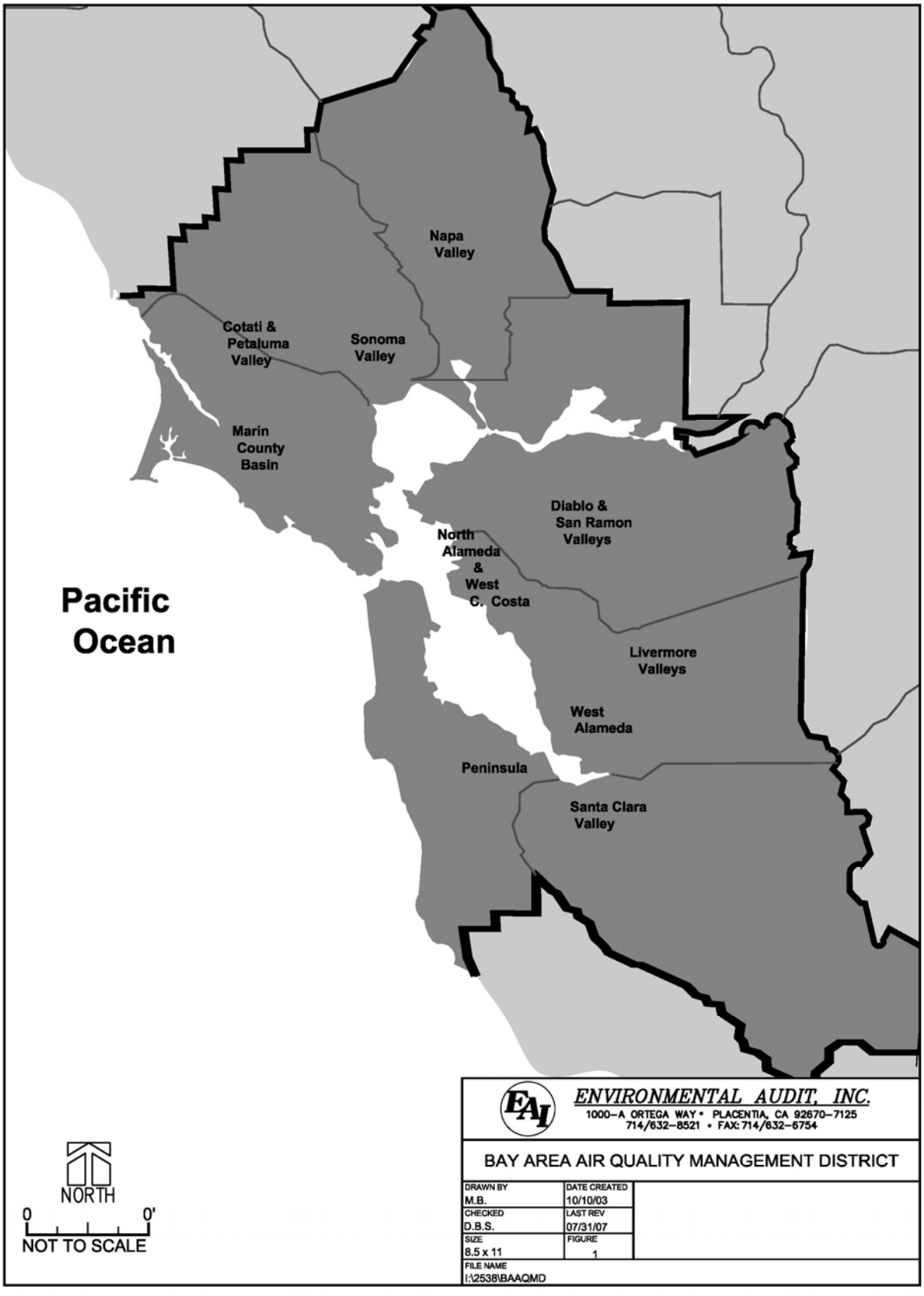
Napa Valley
Cotati & Petaluma Valley
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Marin County Basin
Diablo & San Ramon Valleys
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BAY AREA AIR QUALITY MANAGEMENT DISTRICT
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FIGURE 1
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CHAPTER 3

ENVIRONMENTAL CHECKLIST

ENVIRONMENTAL CHECKLIST FORM

1. Project Title:	Bay Area Air Quality Management District (BAAQMD) Proposed Amendments to Polyester Resin Operations.
2. Lead Agency Name and Address:	Bay Area Air Quality Management District 939 Ellis Street San Francisco, California 94109
3. Contact Person and Phone Number:	William Thomas Saltz, Air Quality Specialist 415-749-4698 or wsaltz@baaqmd.gov
4. Project Location:	This rule amendment applies to the area within the jurisdiction of the Bay Area Air Quality Management District, which encompasses all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties.
5. Project Sponsor's Name and Address:	Bay Area Air Quality Management District 939 Ellis Street San Francisco, California 94109
6. General Plan Designation:	These rule amendments apply to polyester resin operations within the District. Polyester resin operations generally are located in commercial or industrial areas.
7. Zoning	These rule amendments apply to polyester resin operations within the District. Polyester resin operations generally are located in commercial or industrial areas.
8. Description of Project	See "Background" in Chapter 2.
9. Surrounding Land Uses and Setting	See "Affected Area" in Chapter 2.
10. Other Public Agencies Whose Approval Is Required	None

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would potentially be affected by this Project (i.e., the project would involve one impact that is a "Potentially Significant Impact"), as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Hazards & Hazardous Materials	☐ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☐ Noise	☐ Population/Housing
☐ Public Services	☐ Recreation	☐ Transportation/Traffic
☐ Utilities/Service Systems	☐ Mandatory Findings of Significance	

DETERMINATION

On the basis of this initial evaluation:

☑ I find the proposed project COULD NOT have a significant effect on the environment, and that a NEGATIVE DECLARATION 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 to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have an impact on the environment that is "potentially significant" or "potentially significant unless mitigated" 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 IMPACT REPORT 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 IMPACT REPORT or NEGATIVE DECLARATION, pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

_____ _____

Signature Date

_____ _____

Printed Name For

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	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 along a 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 that would adversely affect daytime or nighttime views in the area?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles), so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses.

The proposed rule amendments affect polyester resin operations in at least three ways, by reducing the allowable monomer content for various polyester resins and by establishing monomer content limits for gel coats; by lowering the VOC limits for cleaning products used in composite operations; and by requiring the use of non-atomizing spray guns. These types of facilities and equipment are most often found in commercial or industrial areas. Scenic highways or corridors may be, but are not commonly located, near commercial or industrial areas.

Regulatory Background

Visual resources are generally protected by the City and/or County General Plans through land use and zoning requirements.

Discussion of Impacts

I a-d. The proposed amendments to Regulation 8-50 do not require any changes in the physical environment that would obstruct any scenic vistas or views of interest to the public. Additionally, no major changes to existing polyester resin operations outside of existing facilities, are expected. The proposed amendments to Regulation 8-50 are not expected to produce any physical changes because the amendments are only expected to reduce the monomer content for various polyester resins, lower the VOC limits for cleaning products used in composite operations, and require the use of non-atomizing spray guns at polyester resin operations in the Bay Area. Air pollution control equipment can be used to control emissions. However, there are no known polyester resin facilities that currently use such equipment and no use of such equipment will likely occur. Therefore, no major construction activities are expected. Changes to operations (e.g., non-atomizing spray guns) would occur within the confines of existing facilities so no significant adverse impacts to visual resources such as scenic views or vistas are expected.

The proposed amendments are not expected to require the construction of any major new structures, and are not expected to result in any adverse aesthetic impacts. Implementation of the proposed amendments would not require equipment that would be visible as the amendments primarily impose further limits on existing polyester resin operations. Compliance with the proposed rule amendments are expected through the use of reformulated products. Products that comply with the monomer limits and VOC limits have been implemented in other air districts in California. It is generally more cost effective to comply with reformulated products than through the construction of add on control devices. Therefore, while the proposed rule amendments would continue to allow compliance through the use of add on control equipment, such equipment is not expected to be used for compliance purposes.

The proposed amendments to Regulation 8-50 would also not require any new sources of light or glare as they do not require construction of any new buildings or facilities.

Based upon these considerations, no significant adverse aesthetic impacts are expected from the implementation of the amendments to Regulation 8-50.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURE RESOURCES.					
In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation. 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 conflict with a Williamson Act contract?	☐	☐	☐	☑
c)	Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. Some of these agricultural lands are under Williamson Act contracts. The polyester resin operations affected by the proposed rule amendments are primarily located in commercial or industrial areas of the BAAQMD.

Regulatory Background

Agricultural resources are generally protected by the City and/or County General Plans, Community Plans through land use and zoning requirements, as well as any applicable specific plans, ordinances, local coastal plans, and redevelopment plans.

Discussion of Impacts

II a-c. The proposed amendments to Regulation 8-50 would further reduce VOC emissions from polyester resin operations throughout the Bay Area. The proposed amendments are not expected to require the construction of any major new equipment and would not require any additional construction activities. The existing polyester resin operations are generally located in industrial and commercial areas. No construction activities are expected, as compliance with the amendments would be achieved by the use of reformulated product rather than the use of add-on control equipment. Therefore, the proposed amendments would not require the conversion of agricultural land for other uses.

Based upon these considerations, no significant adverse impacts to agricultural resources are expected from the implementation of the proposed rule amendments.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY:				
When available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. 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 a non-attainment area for 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)?	☐	☐	☐	☑

Setting

Meteorological Conditions

The summer climate of the West Coast is dominated by a semi-permanent high centered over the northeastern Pacific Ocean. Because this high pressure cell is quite persistent, storms rarely affect the California coast during the summer. Thus the conditions that persist along the coast of California during summer are a northwest air flow and negligible precipitation. A thermal low pressure area from the Sonoran-Mojave Desert also causes air to flow onshore over the San Francisco Bay Area much of the summer.

In winter, the Pacific High weakens and shifts southward, upwelling ceases, and winter storms become frequent. Almost all of the Bay Area's annual precipitation takes place in the November through April period. During the winter rainy periods, inversions are

weak or nonexistent, winds are often moderate and air pollution potential is very low. During winter periods when the Pacific high becomes dominant, inversions become strong and often are surface based; winds are light and pollution potential is high. These periods are characterized by winds that flow out of the Central Valley into the Bay Area and often include tule fog.

Topography

The San Francisco Bay Area is characterized by complex terrain consisting of coastal mountain ranges, inland valleys, and bays. Elevations of 1,500 feet are common in the higher terrain of this area. Normal wind flow over the area becomes distorted in the lower elevations, especially when the wind velocity is not strong. This distortion is reduced when stronger winds and unstable air masses move over the areas. The distortion is greatest when low level inversions are present with the surface air, beneath the inversion, flowing independently of the air above the inversion.

Winds

In summer, the northwest winds to the west of the Pacific coastline are drawn into the interior through the Golden Gate and over the lower portions of the San Francisco Peninsula. Immediately to the south of Mount Tamalpais, the northwesterly winds accelerate considerably and come more nearly from the west as they stream through the Golden Gate. This channeling of the flow through the Golden Gate produces a jet that sweeps eastward but widens downstream producing southwest winds at Berkeley and northwest winds at San Jose; a branch curves eastward through the Carquinez Straits and into the Central Valley. Wind speeds may be locally strong in regions where air is channeled through a narrow opening such as the Carquinez Strait, the Golden Gate, or San Bruno Gap.

In winter, the Bay Area experiences periods of storminess and moderate-to-strong winds and periods of stagnation with very light winds. Winter stagnation episodes are characterized by outflow from the Central Valley, nighttime drainage flows in coastal valleys, weak onshore flows in the afternoon, and otherwise light and variable winds.

Temperature

In summer, the distribution of temperature near the surface over the Bay Area is determined in large part by the effect of the differential heating between land and water surfaces. This process produces a large-scale gradient between the coast and the Central Valley as well as small-scale local gradients along the shorelines of the ocean and bays. The winter mean temperature high and lows reverse the summer relationship; daytime variations are small while mean minimum nighttime temperatures show large differences and strong gradients. The moderating effect of the ocean influences warmer minimums along the coast and penetrating the Bay. The coldest temperatures are in the sheltered valleys, implying strong radiation inversions and very limited vertical diffusion.

Inversions

A primary factor in air quality is the mixing depth, i.e., the vertical dimension available for dilution of contaminant sources near the ground. Over the Bay Area, the frequent occurrence of temperature inversions limits this mixing depth and consequently limits the availability of air for dilution. A temperature inversion may be described as a layer or layers of warmer air over cooler air.

Precipitation

The San Francisco Bay Area climate is characterized by moderately wet winters and dry summers. Winter rains (December through March) account for about 75 percent of the average annual rainfall; about 90 percent of the annual total rainfall is received in November to April period; and between June and September, normal rainfall is typically less than 0.10 inches. Annual precipitation amounts show greater differences in short distances. Annual totals exceed 40 inches in the mountains and are less than 15 inches in the sheltered valleys.

Pollution Potential

The Bay Area is subject to a combination of physiographic and climatic factors which result in a low potential for pollutant buildups near the coast and a high potential in sheltered inland valleys. In summer, areas with high average maximum temperatures tend to be sheltered inland valleys with abundant sunshine and light winds. Areas with low average maximum temperatures are exposed to the prevailing ocean breeze and experience frequent fog or stratus. Locations with warm summer days have a higher pollution potential than the cooler locations along the coast and bays.

In winter, pollution potential is related to the nighttime minimum temperature. Low minimum temperatures are associated with strong radiation inversions in inland valleys that are protected from the moderating influences of the ocean and bays. Conversely, coastal locations experience higher average nighttime temperatures, weaker inversions, stronger breezes and, consequently, less air pollution potential.

Air Quality

Criteria Pollutants: It is the responsibility of the BAAQMD to ensure that state and federal ambient air quality standards are achieved and maintained in its geographical jurisdiction. Health-based air quality standards have been established by California and the federal government for the following criteria air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), particulate matter less than 10 microns in diameter (PM10), particulate matter less than 2.5 microns in diameter (PM2.5), sulfur dioxide (SO_2), and lead. These standards were established to protect sensitive receptors with a margin of safety from adverse health impacts due to exposure to air pollution. The California standards are more stringent than the federal standards. California has also established standards for sulfate, visibility, hydrogen sulfide, and vinyl chloride.

The state and national ambient air quality standards for each of these pollutants and their associated health effects are summarized in Table 3-1. The BAAQMD monitors levels of various criteria pollutants at 25 monitoring stations. The 2008 air quality data from the BAAQMD's monitoring stations are presented in Table 3-2.

Air quality conditions in the San Francisco Bay Area have improved since the Air District was created in 1955. Ambient concentrations of air pollutants and the number of days on which the region exceeds air quality standards have fallen dramatically (see Table 3-3). The Air District is in attainment of the State and federal ambient air quality standards for CO, nitrogen oxides (NOx), and sulfur oxides (SOx). The Air District is unclassified for the federal 24-hour PM10 standard. Unclassified means that the monitoring data were incomplete and at the time of designations did not support a designation of attainment or non-attainment. However, the Air District does not comply with the State 24-hour PM10 standard.

The 2008 air quality data from the BAAQMD monitoring stations are presented in Table 3-2. All monitoring stations were below the State standard and federal ambient air quality standards for CO, NO_2, and SO_2. The Bay Area is designated as a non-attainment area for the federal and state 8-hour ozone standards. The State 8-hour standard was exceeded on 20 days in 2008 in the Air District, most frequently in the Eastern District (Bethel Island, Livermore, Concord, and Benecia) (see Table 3-2). The federal 8-hour standard was exceeded on 12 days in 2008.

All monitoring stations were in compliance with the federal PM10 standards. The California PM10 standards were exceeded on five days in 2008, most frequently in the Eastern District (Bethel Island). The area under the jurisdiction of the BAAQMD exceeded the federal PM2.5 standard on 12 days in 2008, most frequently in Vallejo and San Jose (see Table 3-2).

TABLE 3-1

Federal and State Ambient Air Quality Standards

	STATE STANDARD	FEDERAL PRIMARY STANDARD	MOST RELEVANT EFFECTS
AIR POLLUTANT	CONCENTRATION/ AVERAGING TIME	CONCENTRATION/ AVERAGING TIME	
Ozone	0.09 ppm, 1-hr. avg. > 0.070 ppm, 8-hr	0.075 ppm, 8-hr avg. >	(a) Short-term exposures: (1) Pulmonary function decrements and localized lung edema in humans and animals (2) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (b) Long-term exposures: Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (c) Vegetation damage; (d) Property damage
Carbon Monoxide	9.0 ppm, 8-hr avg. > 20 ppm, 1-hr avg. >	9 ppm, 8-hr avg.> 35 ppm, 1-hr avg.>	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses
Nitrogen Dioxide	0.25 ppm, 1-hr avg. >	0.053 ppm, ann. avg.>	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration
Sulfur Dioxide	0.04 ppm, 24-hr avg.> 0.25 ppm, 1-hr. avg. >	0.03 ppm, ann. avg.> 0.14 ppm, 24-hr avg.>	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma
Suspended Particulate Matter (PM10)	20 $\mu g/m^3$, annarithmetic mean > 50 $\mu g/m^3$, 24-hr average>	50 $\mu g/m^3$, annual arithmetic mean > 150 $\mu g/m^3$, 24-hr avg.>	(a) Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients with respiratory disease; (b) Excess seasonal declines in pulmonary function, especially in children
Suspended Particulate Matter (PM2.5)	12 $\mu g/m^3$, annual arithmetic mean>	15 $\mu g/m^3$, annual arithmetic mean> 35 $\mu g/m^3$, 24-hour average>	Decreased lung function from exposures and exacerbation of symptoms in sensitive patients with respiratory disease; elderly; children.
Sulfates	25 $\mu g/m^3$, 24-hr avg. >=		(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage
Lead	1.5 $\mu g/m^3$, 30-day avg. >=	1.5 $\mu g/m^3$, calendar quarter>	(a) Increased body burden; (b) Impairment of blood formation and nerve conduction
Visibility-Reducing Particles	In sufficient amount to give an extinction coefficient >0.23 inverse kilometers (visual range to less than 10 miles) with relative humidity less than 70%, 8-hour average (10am – 6pm PST)		Nephelometry and AISI Tape Sampler; instrumental measurement on days when relative humidity is less than 70 percent

TABLE 3-2
Bay Area Air Pollution Summary 2008

MONITORING STATIONS	Ozone						CARBON MONOXIDE			NITROGEN DIOXIDE			SULFUR DIOXIDE			PM10				PM2.5				
	Max 1-Hr	Cal 1-Hr Days	Max 8-Hr	Nat. 8-Hr Days	Cal Days	3-Yr Avg	Max 1-Hr	Max 8-Hr	Nat/Cal Days	Max 1-Hr	Ann Avg	Nat/Cal Days	Max 24-Hr	Ann Avg	Nat/Cal Days	Ann Avg	Max 24-Hr	Nat Day	Cal Days	Max 24-Hr	Nat Days	3-Yr Avg	Ann Avg	3-Yr Avg
NORTH COUNTIES	(ppb)		(ppb)				(ppm)			(ppb)			(ppb)			($\mu g/m^3$)				($\mu g/m^3$)			($\mu g/m^3$)	
Napa	107	1	77	2	2	61	3.2	1.8	0	64	10	0	--	--	--	21.6	50	0	0	--	--	--	--	--
San Rafael	85	0	69	0	0	50	1.8	1.1	0	56	13	0	--	--	--	18.6	41	0	0	--	--	--	--	--
Santa Rosa*	76	0	64	0	0	51	3.5	1.5	0	49	11	0	--	--	--	*	*	*	*	30.8	0	30.4	8.6	8.4
Vallejo*	109	1	75	0	3	60	2.7	2.3	0	67	10	0	4	1.2	0	*	*	*	*	50.0	7	36.4	9.9	9.8
COAST & CENTRAL BAY																								
Berkley*	53	0	49	0	0	*	2.8	1.7	0	55	14	0	4	13	0	22.5	44	0	0	--	--	--	--	--
Oakland*	86	0	64	0	0	*	3.0	1.6	0	70	15	0	--	--	--	--	--	--	--	30.1	0	*	9.5	*
Richmond	--	--	--	--	--	--	--	--	--	--	--	--	8	1.5	0	--	--	--	--	--	--	--	--	--
San Francisco	82	0	66	0	0	46	5.7	2.3	0	62	16	0	5	1.5	0	22.0	41	0	0	29.4	0	26.3	9.8	9.4
San Pablo	84	0	63	0	0	50	2.5	1.3	0	67	12	0	4	1.4	0	20.9	44	0	0	--	--	--	--	--
EASTERN DISTRICT																								
Benecia*	123	2	86	3	7	*	1.0	0.8	0	38	7	0	5	1.6	0	18.1	52	0	1	--	--	--	--	--
Bethel Island	109	4	90	4	10	76	1.5	1.1	0	41	7	0	4	1.4	0	24.1	77	0	3	--	--	--	--	--
Concord	119	3	88	6	8	78	1.6	1.1	0	50	10	0	4	1.2	0	17.5	51	0	1	60.3	3	34.6	9.3	9.0
Crockett	--	--	--	--	--	--	--	--	--	--	--	--	13	2.1	0	--	--	--	--	--	--	--	--	--
Fairfield	116	2	90	1	2	68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Livermore*	141	5	110	6	8	81	2.4	1.4	0	58	13	0	--	--	--	*	*	*	*	38.6	2	36.2	10.1	9.6
Martinez	--	--	--	--	--	--	--	--	--	--	--	--	6	1.7	0	--	--	--	--	--	--	--	--	--
Pittsburg*	106	1	83	1	2	71	2.8	1.4	0	56	10	0	6	1.8	0	*	*	*	*	--	--	--	--	--
SOUTH CENTRAL BAY																								
Fremont*	112	1	78	1	3	61	1.9	1.4	0	62	14	0	--	--	--	*	*	*	*	28.6	0	28.8	9.4	9.5
Hayward	114	1	86	1	3	63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Redwood City*	82	0	69	0	0	53	4.3	1.9	0	69	14	0	--	--	--	*	*	*	*	27.9	0	29.3	9.1	9.0
San Leandro	96	1	68	0	0	55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SANTA CLARA VALLEY																								
Gilroy*	103	1	79	1	4	73	--	--	--	--	--	--	--	--	--	--	--	--	--	25.5	0	*	--	--
Los Gatos	122	2	97	2	6	72	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Jose Central	118	1	80	2	3	65	3.3	2.5	0	80	17	0	--	--	--	23.4	57	0	1	41.9	5	35.8	11.5	11.0
San Martin	123	2	77	2	5	76	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sunnyvale	93	0	76	1	2	60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Bay Area Days over Standard		**9**		**12**	**20**				**0**			**0**			**0**			**0**	**5**		**12**			

*Station Information: $PM_{2.5}$ monitoring at Gilroy began Mar. 1, 2007, three-year average statistics not available. Benicia and Berkeley sites opened in 2007, Apr. 1 and Dec. 13 respectively; no three-year ozone statistics available. Oakland site opened Nov. 1, 2007, no three-year ozone or $PM_{2.5}$ statistics available. PM_{10} monitoring was discontinued on June 30, 2008 at Fremont, Livermore, Pittsburg, Redwood City, Santa Rosa, and Vallejo, statistics no longer available. SO_2 monitoring was discontinued at San Francisco Dec. 31, 2008

(ppb) = parts per billion (ppm) = parts per million, ($\mu g/m^3$) = micrograms per cubic meter

TABLE 3-3

Ten-Year Bay Area Air Quality Summary
(days over standard)

Year	Ozone			Carbon Monoxide				Nitrogen Dioxide	Sulfur Dioxide		PM10		PM2.5
	8-Hr	1-Hr	8-Hr	1-Hr		8-Hr		1-Hr	24-Hr		24-Hr*		24-Hr**
	Nat.	Cal.	Cal.	Nat.	Cal.	Nat.	Cal.	Cal.	Nat.	Cal.	Nat.	Cal.	Nat.
1999	9	20	--	0	0	0	0	0	0	0	0	12	--
2000	4	12	--	0	0	0	0	0	0	0	0	7	1
2001	7	15	--	0	0	0	0	0	0	0	0	10	5
2002	7	16	--	0	0	0	0	0	0	0	0	6	7
2003	7	19	--	0	0	0	0	0	0	0	0	6	0
2004	0	7	--	0	0	0	0	0	0	0	0	7	1
2005	1	9	9	0	0	0	0	0	0	0	0	6	0
2006	12	18	22	0	0	0	0	0	0	0	0	15	10
2007	1	4	9	0	0	0	0	0	0	0	0	4	14
2008	12	9	20	0	0	0	0	0	0	0	0	5	12

* PM10 is sampled every sixth day – actual days over standard can be estimated to be six times the numbers listed.

** On Dec. 17, 2006, the U.S. EPA implemented a more stringent national 24-hour PM2.5 standard – revising it from 5 g/m3 to 25 g/m3. PM2.5 exceedance days for 2006 and 2007 reflect the new standard.

Toxic Air Contaminants

Table 3-4 (BAAQMD, 2007) contains a summary of ambient air toxics monitoring data of toxic air contaminants (TACs) measured at monitoring stations in the Bay Area by the District in 2003. One of the primary health risks of concern due to exposure to TACs is the risk of contracting cancer. Styrene, identified as a TAC, is the prevalent monomer currently used in composite manufacturing.

Regulatory Background

Criteria Pollutants

At the federal level, the Clean Air Act (CAA) Amendments of 1990 give the U.S. EPA additional authority to require states to reduce emissions of ozone precursors and particulate matter in non-attainment areas. The amendments set attainment deadlines based on the severity of problems. At the state level, CARB has traditionally established state ambient air quality standards, maintained oversight authority in air quality planning, developed programs for reducing emissions from motor vehicles, developed air emission inventories, collected air quality and meteorological data, and approved state implementation plans. At a local level, California's air districts, including the BAAQMD, are responsible for overseeing stationary source emissions, approving permits, maintaining emission inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality-related sections of environmental documents required by CEQA.

TABLE 3-4

Summary of 2003 BAAQMD Ambient Air Toxics Monitoring Data

Compound	LOD (ppb)[1]	% of Samples < LOD[2]	Max. Conc. (ppb)[3]	Min. Conc. (ppb)[4]	Mean Conc. (ppb)[5]
Acetone	0.30	0	121.4	0.6	6.80
Benzene	0.10	1.78	2.4	0.5	0.401
1,3-butadiene	0.15	75.7	0.89	0.075	0.12
Carbon tetrachloride	0.01	0	0.16	0.09	0.108
Chloroform	0.02	62.5	1.47	0.01	0.024
Ethylbenzene	0.10	44.2	0.90	0.05	0.135
Ethylene dibromide	0.02	100	0.01	0.01	0.01
Ethylene dichloride	0.10	100	0.05	0.05	0.05
Methylene chloride	0.50	82.9	3.40	0.25	0.356
Methyl ethyl ketone	0.20	7.7	5.80	0.1	0.496
Metyl tert-butyl ether	0.30	32.9	4.80	0.15	0.532
Perchloroethylene	0.01	42.4	0.28	0.005	0.026
Toluene	0.10	0.2	6.0	0.05	1.062
1,1,1-Trichloroethane	0.05	72.3	2.47	0.025	0.084
Trichloroethylene	0.05	93.8	0.33	0.025	0.029
Trichlorofluoromethane	0.01	0	.046	0.18	0.266
1,1,2-trichlorotrifluoroethane	0.01	0	1.16	0.06	0.077
Vinyl chloride	0.30	100	0.15	0.15	0.15
m/p-xylene	0.10	2.8	3.40	0.05	0.535
o-xylene	0.10	27.9	1.30	0.05	0.186

NOTES: Table 3-4 summarizes the results of the BAAQMD gaseous toxic air contaminant monitoring network for the year 2003. These data represent monitoring results at 19 of the 20 separate sites at which samples were collected. Data from the Fort Cronkhite "clean-air" background site was not included. Data from the Oakland-Davie Stadium site was available from January through March.

(1) "LOD" is the limit of detection of the analytical method used.
(2) "% of samples < LOD" is the percent of the total number of air samples collected in 2003 that had pollutant concentrations less than the LOD.
(3) "Maximum Conc." is the highest daily concentration measured at any of the 19 monitoring sites.
(4) "Minimum Conc." is the lowest daily concentration measured at any of the 19 monitoring sites.
(5) "Mean Conc." is the arithmetic average of the air samples collected in 2003 at the 19 monitoring sites. In calculating the mean, samples with concentrations less than the LOD were assumed to be equal to one half the LOD concentration.

The BAAQMD is governed by a 22-member Board of Directors composed of publicly-elected officials apportioned according to the population of the represented counties. The Board has the authority to develop and enforce regulations for the control of air pollution within its jurisdiction. The BAAQMD is responsible for implementing emissions standards and other requirements of federal and state laws. It is also responsible for developing air quality planning documents required by both federal and state laws.

Toxic Air Contaminants

TACs are regulated in the District through federal, state, and local programs. At the federal level, TACs are regulated primarily under the authority of the CAA. Prior to the amendment of the CAA in 1990,

source-specific National Emission Standards for Hazardous Air Pollutants (NESHAPs) were promulgated under Section 112 of the CAA for certain sources of radionuclides and Hazardous Air Pollutants (HAPs).

Title III of the 1990 CAA amendments requires U.S. EPA to promulgate NESHAPs on a specified schedule for certain categories of sources identified by U.S. EPA as emitting one or more of the 189 listed HAPs. Emission standards for major sources must require the maximum achievable control technology (MACT). MACT is defined as the maximum degree of emission reduction achievable considering cost and non-air quality health and environmental impacts and energy requirements. All NESHAPs were to be promulgated by the year 2000. Specific incremental progress in establishing standards must be made by the years 1992 (at least 40 source categories), 1994 (25 percent of the listed categories), 1997 (50 percent of remaining listed categories), and 2000 (remaining balance). The 1992 requirement was met; however, many of the four-year standards were not promulgated as scheduled. Promulgation of those standards has been rescheduled based on court ordered deadlines, or the aim to satisfy all Section 112 requirements in a timely manner.

Many of the sources of TACs that have been identified under the CAA are also subject to the California TAC regulatory programs. CARB developed three regulatory programs for the control of TACs. Each of the programs is discussed in the following subsections.

Control of TACs under the TAC Identification and Control Program: California's TAC identification and control program, adopted in 1983 as Assembly Bill 1807 (AB 1807) (California Health and Safety Code §39662), is a two-step program in which substances are identified as TACs, and airborne toxic control measures (ATCMs) are adopted to control emissions from specific sources. Since adoption of the program, CARB has identified 18 TACs, and CARB adopted a regulation designating all 189 federal HAPs as TACs.

Control of TACs under the Air Toxics "Hot Spots" Act: The Air Toxics Hot Spot Information and Assessment Act of 1987 (AB 2588) (California Health and Safety Code §39656) establishes a state-wide program to inventory and assess the risks from facilities that emit TACs and to notify the public about significant health risks associated with those emissions. Inventory reports must be updated every four years under current State law. The BAAQMD uses a maximum individual cancer risk of 10 per one million, or an ambient concentration above a non-cancer reference exposure level, as the threshold for notification.

Senate Bill (SB) 1731, enacted in 1992 (California Health and Safety Code §44390 et seq.), amended AB 2588 to include a requirement for facilities with significant risks to prepare and implement a risk reduction plan which will reduce the risk below a defined significant risk level within specified time limits. At a minimum, such facilities must, as quickly as feasible, reduce cancer risk levels that exceed 100 per one million. The BAAQMD adopted risk reduction requirements for perchloroethylene dry cleaners to fulfill the requirements of SB 1731.

Targeted Control of TACs Under the Community Air Risk Evaluation Program: In 2004, BAAQMD established the Community Air Risk Evaluation (CARE) program to identify locations with high emissions of TACs and high exposures of sensitive populations to TAC and to use this information to help establish policies to guide mitigation strategies that obtain the greatest health benefit from TAC

emission reductions. For example, BAAQMD will use information derived from the CARE program to develop and implement targeted risk reduction programs, including grant and incentive programs, community outreach efforts, collaboration with other governmental agencies, model ordinances, new regulations for stationary sources and indirect sources, and advocacy for additional legislation.

Greenhouse Gas Emissions

In June 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05, which established GHG emissions reduction targets for the state, as well as a process to ensure that the targets are met. As a result of this executive order, the California Climate Action Team (CAT), led by the Secretary of the California State Environmental Protection Agency (CalEPA), was formed. The CAT published its report in March 2006, in which it laid out several recommendations and strategies for reducing GHG emissions and reaching the targets established in the Executive Order. The greenhouse gas targets are:

- By 2010, reduce to 2000 emission levels;
- By 2020, reduce to 1990 emission levels; and,
- By 2050, reduce to 80 percent below 1990 levels.

In September 2006, Governor Schwarzenegger signed California's Global Warming Solutions Act of 2006 (AB32). AB32 required CARB to:

- Establish a statewide GHG emissions cap for 2020, based on 1990 emissions, by January 1, 2008;
- Adopt mandatory reporting rules for significant sources of GHG emissions by January 1, 2008;
- Adopt an emissions reduction plan by January 1, 2009, indicating how emissions reductions will be achieved via regulations, market mechanisms, and other actions; and,
- Adopt regulations to achieve the maximum technologically feasible and cost-effective reductions of GHGs by January 1, 2011.

SB1368, a companion bill to AB32, requires the CPUC and the CEC to establish GHG emission performance standards for the generation of electricity, whether generated inside the State, or generated outside, and then imported into California. SB1368 provides a mechanism for reducing the emissions of electricity providers, thereby assisting CARB to meet its mandate under AB32.

SB97, passed in August 2007, is designed to work in conjunction with CEQA and AB32. SB97 requires the California Office of Planning and Research (OPR) to prepare and develop guidelines for the mitigation of GHG emissions or the effects thereof, including but not limited to, effects associated with transportation and energy consumption. These guidelines were required to be transmitted to the Resources Agency by July 1, 2009 and to be certified and adopted by January 1, 2010. The OPR and the Resources Agency shall periodically update these guidelines to incorporate new information or criteria established by CARB pursuant to AB32. SB97 will apply to any EIR, negative declaration,

mitigated negative declaration, or other document required by CEQA, prepared for a limited number of types of projects. SB 97 will be automatically repealed January 1, 2010.

Discussion of Impacts

III a. The objectives of the proposed rule amendments are to reduce VOC emissions from polyester resin operations in the Bay Area. The proposed amendments would reduce VOC emissions from facilities that manufacture polyester resin products within the jurisdiction of the BAAQMD. Consequently, the proposed rule amendments are expected to reduce exposure to VOCs in the region and reduce ozone formation, providing overall health benefits. The proposed amendments to Regulation 8-50 would implement Control Measure SS-4 in the 2005 Ozone Strategy, the most recent air quality planning strategy for the Bay Area, and is consistent with that plan. Therefore, the proposed rule amendments are not expected to conflict with an Air Quality Plan, but instead would further the objectives of the 2005 Ozone Strategy, ultimately reducing ozone concentrations in the Bay Area.

III b and f. The proposed amendments to Regulation 8-50 are expected to reduce VOC emissions from polyester ester resin operations. There are approximately 60 permitted polyester resin operations in the Bay Area than range in size from single-person shops to shops with 10 or more employees. Polyester resin operations that have permits to operate and are subject to Regulation 8-50 emit 1.3 tons per day (TPD) of VOCs. Approximately half of the VOC emissions are from resin application while the other half are from gel coat application.

The proposed amendments to Rule 8-50 are expected to result in reduction in VOC emissions of approximately 0.46 TPD from permitted polyester resin and vinyl resin operations. The estimated VOC emission reductions are attributable to changes in chemistry for resin and gel coat materials, and the use of non-atomizing application technologies. VOC emission reductions from the amendment of VOC limits for related cleaning and surface preparation operations are negligible. Reductions in resin and gel coat monomer content will reduce VOC and toxic air contaminant emissions. Furthermore, non-atomized applications enhance spray equipment transfer efficiencies, thus reducing VOC and toxic air contaminants emissions and the amount of overspray. The BAAQMD staff estimated an additional 0.04 TPD of VOC emissions and from the use of non-atomized spray equipment. When fully implemented, the amendments to Regulation 8-50 will result in a total VOC emission reduction of 0.46 TPD and a reduction in toxic air contaminants of 0.37 TPD providing a beneficial impact on air quality.

Since the affected facilities would be able to implement the amendments to Regulation 8-50 without installing new equipment or modifying or building new facilities, no additional construction emissions are expected as a result of the proposed rule amendments. The proposed rule amendments are not expected to alter or increase the construction emissions from new facilities nor will the proposed project provide an incentive to construct new polyester resin operations. Any new facilities would likely be required to undergo a siting review and approval by the local cities or counties (with or without the proposed rule amendments).

Based on the preceding analysis of potential secondary air quality impacts from implementing the proposed amendments to Regulation 8-50, it is concluded that the overall air quality effects will be a VOC emission reduction. Therefore, based on the significance criteria, no significant impacts are expected due to implementation of the proposed amendments.

III c. CEQA Guidelines indicate that cumulative impacts of a project shall be discussed when the project's incremental effect is cumulatively considerable, as defined in CEQA Guidelines §15065(c). The overall impact of the proposed rule amendments is a decrease in VOC emissions. Therefore, the cumulative air quality impacts of the proposed rule amendments are expected to be beneficial.

The proposed rule amendments are not expected to result in an increase in greenhouse gas (GHG) emissions. GHG emissions are largely generated by the combustion of conventional hydrocarbon fuel that results in the release of energy as bonds between carbon and hydrogen are broken and reformed with oxygen to create water vapor and the carbon dioxide (CO_2). Greenhouse gases, which alter the amount of heat, or infrared radiation, that can escape the Earth's surface, have been linked to a gradual warming of the Earth's surface and lower atmosphere. In the United States, the largest source of greenhouse gas emissions is from fossil fuel combustion, which accounted for approximately 81 percent of greenhouse emissions in 1996 (CARB, 2006a). CO_2 is not commonly used or generated in the polyester resin operations. The proposed amendments would reduce/establish monomer content limits, lower VOC limits for cleaning products used in composite operations; and require the use of non-atomizing spray guns. The proposed amendments are not expected to require the combustion of additional fuel nor increase the generation of GHG emissions. No increase in the use or production of polyester resins is expected due the proposed amendments to Regulation 8-50. Therefore, the proposed rule amendments are not expected to result in an increase in GHG emissions.

III d. The proposed amendments are expected to lead to a reduction in VOCs and reduced exposure to sensitive populations. Facilities are expected to comply with the proposed amendments to Regulation 8-50 by reducing the monomer content of polyester resins and gel coats and using non-atomizing spray guns. Styrene is the most commonly used monomer in composite manufacturing, although many specialty resins and gel coats contain monomers, such a vinyl toluene or methyl methacrylate. Styrene and other monomers are emitted into the air when resins are applied to molds, when air bubbles are rolled out of the composite materials, and during the curing phase. Styrene is a toxic air contaminant (TAC).

The proposed amendments to Rule 8-50 are expected to result in reduction in TACs (styrene) primarily due to the reduced monomer content of the polyester resins. Reductions in resin and gel coat monomer content will reduce VOC and TAC emissions. Furthermore, non-atomized applications enhance spray equipment transfer efficiencies, thus reducing VOC and TAC emissions and the amount of overspray. When fully implemented, the amendments to Regulation 8-50 are expected to result in a reduction in TAC emissions (styrene) of 0.37 TPD providing a beneficial impact on air quality and health risk impacts related to exposure to TACs (primarily styrene).

III e. The proposed amendments are not expected to result in an increase in odors. The proposed amendments to Regulation 8-50 are expected to reduce VOC and TAC emissions (primarily styrene) from polyester resin operations. The use of materials with lower monomer content is expected to generate less VOC emissions and ultimately reduce the potential for odor impacts. Therefore, no significantly adverse incremental odor impacts are expected due to the proposed rule amendments.

Based upon these considerations, no significant adverse air quality impacts are expected from the implementation of the proposed rule amendments. In fact, the proposed rule amendments are expected

to provide beneficial air quality impacts by reducing VOC emissions and ultimately reducing ozone formation.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	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 Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☑
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☑
e)	Conflicting with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☑
f)	Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. A wide variety of biological resources are located within the Bay Area.

The entire area under the jurisdiction of the BAAQMD is affected by the proposed rule amendments, and is located within the Bay Area-Delta Bioregion (as defined by the State's Natural Communities Conservation Program). This Bioregion is comprised of a variety of natural communities, which range from salt marshes to chaparral to oak woodland. A majority of the affected areas have been graded to develop various commercial or residential structures. Native vegetation, other than landscape vegetation, has generally been removed from areas to minimize safety and fire hazards. Any new development would fall under the requirements of the City or County General Plans.

Regulatory Background

Biological resources are generally protected by the City and/or County General Plans through land use and zoning requirements which minimize or prohibit development in biologically sensitive areas. Biological resources are also protected by the California Department of Fish and Game, and the U.S. Fish and Wildlife Service. The U.S. Fish and Wildlife Service and National Marine Fisheries Service oversee the federal Endangered Species Act. Development permits may be required from one or both of these agencies if development would impact rare or endangered species. The California Department of Fish and Game administers the California Endangered Species Act which prohibits impacting endangered and threatened species. The U.S. Army Corps of Engineers and the U.S. EPA regulate the discharge of dredge or fill material into waters of the United States, including wetlands.

Discussion of Impacts

IV a – f. No impacts on biological resources are anticipated from the proposed rule amendments which would apply to polyester resin operations which are primarily located in industrial and commercial areas, which generally lack native vegetation. The proposed amendments are not expected to require the construction of any major new facilities and would not require construction activities outside of existing facilities. Most areas where polyester resin operations are located have typically been graded and developed, and biological resources, with the exception of landscape species, have generally been removed. Implementation of the proposed amendments to Regulation 8-50 would reduce the monomer content of polyester resins through reformulation. The amendments to Regulation 8-50 would not require development outside of existing areas and would not impact any native biological resources.

Based upon these considerations, no significant adverse impacts to biological resources are expected from the implementation of the proposed rule amendments.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	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 Section 15064.5?	☐	☐	☐	☑
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 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?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses vary greatly and include commercial, industrial, residential, agricultural and open space uses. Cultural resources are defined as buildings, sites, structures, or objects which might have historical architectural, archaeological, cultural, or scientific importance.

The Carquinez Strait represents the entry point for the Sacramento and San Joaquin Rivers into the San Francisco Bay. This locality lies within the San Francisco Bay and the west end of the Central Valley archaeological regions, both of which contain a rich array of prehistoric and historical cultural resources. The areas surrounding the Carquinez Strait and Suisun Bay have been occupied for millennia given their abundant combination of littoral and oak woodland resources. The polyester resin operations affected by the proposed rule amendments to Regulation 8-50 are primarily located in industrial and commercial areas of the BAAQMD which have been graded and developed.

Regulatory Background

The State CEQA Guidelines define a significant cultural resource as a “resource listed or eligible for listing on the California Register of Historical Resources” (Public Resources Code Section 5024.1). A project would have a significant impact if it would cause a substantial adverse change in the significance of a historical resource (State CEQA Guidelines Section 15064.5(b)). A substantial adverse change in the significance of a historical resource would result from an action that would demolish or adversely alter the physical characteristics of the historical resource that convey its historical significance and that

qualify the resource for inclusion in the California Register of Historical Resources or a local register or survey that meets the requirements of Public Resources Code Sections 50020.1(k) and 5024.1(g).

Discussion of Impacts

V a – d. No impacts on cultural resources are anticipated from the proposed rule amendments that would apply to polyester resin operations. There are existing laws designed to protect and mitigate potential impacts to cultural resources. Amendments to Regulation 8-50 are not expected to affect archeological or cultural sites because the proposed amendments would not require any construction activities. Existing facilities are predominately located within industrial and commercial areas and have been graded and developed. No new construction would be required outside of the existing facility boundaries due to the adoption of the proposed amendments to Regulation 8-50. As a result, no significant adverse impacts to cultural resources are expected due to the proposed amendments to Regulation 8-50.

Based upon these considerations, no significant adverse impacts to cultural resources are expected from the implementation of the proposed rule amendments.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VI.	**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? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☑
	• Strong seismic groundshaking?	☐	☐	☐	☑
	• 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 onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☑
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☑
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. The polyester resin operations affected by the proposed rule amendments are located throughout the area within the jurisdiction of the BAAQMD.

The Bay Area is located in the natural region of California known as the Coast Ranges geomorphic province. The province is characterized by a series of northwest trending ridges and valleys controlled by tectonic folding and faulting, examples of which include the Suisun Bay, East Bay Hills, Briones Hills, Vaca Mountains, Napa Valley, and Diablo Ranges.

Regional basement rocks consist of the highly deformed Great Valley Sequence, which include massive beds of sandstone inter-fingered with siltstone and shale. Unconsolidated alluvial deposits, artificial fill, and estuarine deposits, (including Bay Mud) underlie the low-lying region along the margins of the Carquinez Straight and Suisun Bay. The estuarine sediments found along the shorelines of Solano County are soft, water-saturated mud, peat and loose sands. The organic, soft, clay-rich sediments along the San Francisco and San Pablo Bays are referred to locally as Bay Mud and can present a variety of engineering challenges due to inherent low strength, compressibility and saturated conditions. Landslides in the region occur in weak, easily weathered bedrock on relatively steep slopes.

The San Francisco Bay Area is a seismically active region, which is situated on a plate boundary marked by the San Andreas Fault System. Several northwest trending active and potentially active faults are included with this fault system. Under the Alquist-Priolo Earthquake Fault Zoning Act, Earthquake Fault Zones were established by the California Division of Mines and Geology along "active" faults, or faults along which surface rupture occurred in Holocene time (the last 11,000 years). In the Bay area, these faults include the San Andreas, Hayward, Rodgers Creek-Healdsburg, Concord-Green Valley, Greenville-Marsh Creek, Seal Cove/San Gregorio and West Napa faults. Other smaller faults in the region classified as potentially active include the Southampton and Franklin faults.

Ground movement intensity during an earthquake can vary depending on the overall magnitude, distance to the fault, focus of earthquake energy, and type of geological material. Areas that are underlain by bedrock tend to experience less ground shaking than those underlain by unconsolidated sediments such as artificial fill. Earthquake ground shaking may have secondary effects on certain foundation materials, including liquefaction, seismically induced settlement, and lateral spreading.

Regulatory Background

Construction is regulated by the local City or County building codes that provide requirements for construction, grading, excavations, use of fill, and foundation work including type of materials, design, procedures, etc., which are intended to limit the probability of occurrence and the severity of consequences from geological hazards. Necessary permits, plan checks, and inspections are generally required.

The City or County General Plan includes the Seismic Safety Element. The Element serves primarily to identify seismic hazards and their location in order that they may be taken into account in the planning of future development. The Uniform Building Code is the principle mechanism for protection against and relief from the danger of earthquakes and related events.

In addition, the Seismic Hazard Zone Mapping Act (Public Resources Code §§2690 – 2699.6) was passed by the California legislature in 1990 following the Loma Prieta earthquake. The Act required that the California Division of Mines and Geology (DMG) develop maps that identify the areas of the state that require site specific investigation for earthquake-triggered landslides and/or potential liquefaction prior to permitting most urban developments. The act directs cities, counties, and state agencies to use the maps in their land use planning and permitting processes.

Local governments are responsible for implementing the requirements of the Seismic Hazards Mapping Act. The maps and guidelines are tools for local governments to use in establishing their land use management policies and in developing ordinances and review procedures that will reduce losses from ground failure during future earthquakes.

Discussion of Impacts

VI a. No major construction activities would be required as a result of adopting the proposed amendments to Regulation 8-50, as the proposed amendments would require reduced monomer content limits in polyester resin operations, reduce VOC limits on cleaning products, and the use of non-atomizing spray guns. No construction activities are required to install non-atomizing spray guns. The proposed amendments will have no effects on geophysical formations in the District as no new structures would need to be constructed. Polyester resin operations would not change substantially from current practices, i.e., people will not be exposed to adverse geological effects greater than what currently exists. No significant adverse impacts from seismic hazards are expected since no new major development is required to implement the proposed amendments to Regulation 8-50.

VII b. The proposed amendments to Regulation 8-50 do not require major construction activities such as grading or trenching, so existing geophysical conditions will be unaffected. Since no major development will be required as a result of the proposed amendments, no major soil disturbance activities are expected. Therefore, lowering the monomer content of resins and the VOC content of cleaning solvents would not result in soil erosion or the loss of topsoil, as no major construction activities would be required.

VII c – e. The proposed amendments to Regulation 8-50 are not expected to require major new development. Since affected facilities already exist, no additional structures would be constructed on a geologic unit or soil that is unstable, or that would become unstable, or potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse. Likewise, no structure would be constructed on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property. Compliance with the Uniform Building Code would minimize the impacts associated with existing geological hazards. Major construction activities would not be required and would not affect soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater. Therefore, no significant adverse impacts to geology and soils are expected due to the proposed amendments to Regulation 8-50.

Based upon these considerations, no significant geology and soils impacts are expected from the implementation of the proposed rule amendments.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VII.	**HAZARDS AND HAZARDOUS MATERIALS.** Would the project:				
a)	Create a significant hazard to the public or the environment through the routine transport, use, or 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 involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☑
d)	Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☑
e)	Be located within an airport land use plan or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☑
f)	Be located within the vicinity of a private airstrip and 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?	☐	☐	☐	☑

Setting

The affected polyester resin facilities handle and process measurable quantities of flammable, hazardous, and acutely hazardous materials. Accidents involving these substances can result in worker or public exposure to fire, heat, blast from an explosion, or airborne exposure to hazardous substances.

Hazards are related to the risks of fire, explosions, or releases of hazardous substances in the event of accident or upset conditions. Hazards are thus related to the production, use, storage, and transport of hazardous materials. Industrial production and processing facilities are potential sites for hazardous materials. Some facilities produce hazardous materials as their end product, while others use such materials as an input to their production processes. Examples of hazardous materials used by consumers include fuels, paints, paint thinner, nail polish, and solvents. Hazardous materials may be stored at facilities producing such materials and at facilities where hazardous materials are part of the production processes. Storage refers to the bulk handling of hazardous materials before and after they are transported to the general geographical area of use. Currently, hazardous materials are transported throughout the Bay Area in great quantities via all modes of transportation including rail, highway, water, air, and pipeline.

The potential hazards associated with handling such materials are a function of the materials being processed, processing systems, and procedures used to operate and maintain the facilities where they exist. The hazards that are likely to exist are identified by the physical and chemical properties of the materials being handled and their process conditions, including the following events.

- Torch fires (gas and liquefied gas releases), flash fires (liquefied gas releases), pool fires, and vapor cloud explosions (gas and liquefied gas releases): The rupture of a storage tank or vessel containing a flammable gaseous material (like propane), without immediate ignition, can result in a vapor cloud explosion. The “worst-case” upset would be a release that produces a large aerosol cloud with flammable properties. If the flammable cloud does not ignite after dispersion, the cloud would simply dissipate. If the flammable cloud were to ignite during the release, a flash fire or vapor cloud explosion could occur. If the flammable cloud were to ignite immediately upon release, a torch fire would ensue.

- Thermal Radiation: Thermal radiation is the heat generated by a fire and the potential impacts associated with exposure. Exposure to thermal radiation would result in burns, the severity of which would depend on the intensity of the fire, the duration of exposure, and the distance of an individual to the fire.

- Explosion/Overpressure: Process vessels containing flammable explosive vapors and potential ignition sources are present at many types of industrial facilities. Explosions may occur if the flammable/explosive vapors came into contact with an ignition source. An explosion could cause impacts to individuals and structures in the area due to overpressure.

Regulatory Background

The use, storage and transport of hazardous materials are subject to numerous laws and regulations at all levels of government. The most relevant existing hazardous materials laws and regulations include hazardous materials management planning, hazardous materials transportation, hazardous materials worker safety requirements, hazardous waste handling requirements, and emergency response to hazardous materials and waste incidents. There are many federal and state rules and regulations that facilities handling hazardous materials must comply with which serve to minimize the potential impacts associated with hazards at these facilities.

Under the Occupational Safety and Health Administration (OSHA) regulations [29 Code of Federal Regulations (CFR) Part 1910], facilities which use, store, manufacture, handle, process, or move highly hazardous materials must prepare a fire prevention plan. In addition, 29 CFR Part 1910.119, Process Safety Management (PSM) of Highly Hazardous Chemicals, and Title 8 of the California Code of Regulations, General Industry Safety Order §5189, specify required prevention program elements to protect workers at facilities that handle toxic, flammable, reactive, or explosive materials.

Section 112 (r) of the Clean Air Act Amendments of 1990 [42 U.S.C. 7401 et. Seq.] and Article 2, Chapter 6.95 of the California Health and Safety Code require facilities that handle listed regulated substances to develop Risk Management Programs (RMPs) to prevent accidental releases of these substances, U.S. EPA regulations are set forth in 40 CFR Part 68. In California, the California Accidental Release Prevention (CalARP) Program regulation (CCR Title 19, Division 2, Chapter 4.5) was issued by the Governor's Office of Emergency Services (OES). RMPs consist of three main elements: a hazard assessment that includes off-site consequences analyses and a five-year accident history, a prevention program, and an emergency response program.

Affected facilities that store materials are required to have a Spill Prevention Control and Countermeasures (SPCC) Plan per the requirements of 40 CFR, Section 112. The SPCC is designed to prevent spills from on-site facilities and includes requirements for secondary containment, provides emergency response procedures, establishes training requirements, and so forth.

The Hazardous Materials Transportation (HMT) Act is the federal legislation that regulates transportation of hazardous materials. The primary regulatory authorities are the U.S. Department of Transportation, the Federal Highway Administration, and the Federal Railroad Administration. The HMT Act requires that carriers report accidental releases of hazardous materials to the U.S. Department of Transportation at the earliest practical moment (49 CFR Subchapter C). The California Department of Transportation (Caltrans) sets standards for trucks in California. The regulations are enforced by the California Highway Patrol.

California Assembly Bill 2185 requires local agencies to regulate the storage and handling of hazardous materials and requires development of a plan to mitigate the release of hazardous materials. Businesses that handle any of the specified hazardous materials must submit to government agencies (i.e., fire departments), an inventory of the hazardous materials, an emergency response plan, and an employee training program. The information in the business plan can then be used in the event of an emergency to determine the appropriate response action, the need for public notification, and the need for evacuation.

Contra Costa County has adopted an industrial safety ordinance that addresses the human factors that lead to accidents. The ordinance requires stationary sources to develop a written human factors program that considers human factors as part of process hazards analyses, incident investigations, training, operating procedures, among others.

Discussion of Impacts

VII a - c. It is expected that the proposed amendments to Regulation 8-50 will lead to a reduction in VOC emissions from polyester resin operations. Polyester resin operations already use materials that contain toxic and hazardous materials, such as styrene, and acetone, which currently require solvent and waste transport services. There are no provisions in the proposed amendments that would increase the total amount of polyester resins or cleaning products currently used by affected facilities. Acetone is currently the most common cleaning agent and is still expected to be the most common cleaning product used for equipment cleaning needs after implementation of the proposed amendments.

Polyester resin operations are not expected to change from current practice and, thus, the amount of solvents used or transported is not expected to change. As the production and use of polyester resins is not expected to change as a result of implementing Regulation 8-50, no additional transport of the solvents is expected and, thus, no new hazards to the public will be created through transport, use, or disposal of hazardous materials. As a result, the proposed amendments are not expected to increase the probability of a hazardous material release. Local fire department and OSHA regulations coupled with standard operating practices ensure that conditions are in place to protect against hazard impacts. Therefore, no significant impacts on hazards are expected.

VII d. No impacts on hazardous material sites are anticipated from the proposed rule amendments that would apply to polyester resin operations. Some of the affected areas may be located on the hazardous materials sites list pursuant to Government Code Section 65962.5. However, the proposed rule amendments would have no affect on hazardous materials nor would the amendment create a significant hazard to the public or environment. Polyester resin operations already exist and are primarily located and operated within the confines of industrial and commercial facilities. The proposed rule amendments neither require, nor are likely to result in, activities that would affect existing site contamination. Therefore, no significant adverse impacts on hazards are expected.

VII e – f. No impacts on airports or airport land use plans are anticipated from the proposed rule amendments, which would apply to polyester resin operations. The existing equipment and operations are primarily located within the confines of existing industrial and commercial facilities. Once the proposed amendments are implemented, facilities would be expected to comply by using reformulated materials that limit monomer content. These changes are expected to be made within the confines of the existing facilities. No development outside of existing facilities is expected to be required by the proposed amendments to Regulation 8-50. Therefore, no significant adverse hazards impacts to an airport land use plan or to a private air strip are expected.

VII g. No significant impacts on emergency response plans are anticipated from the proposed rule amendments. The proposed amendments are not expected to affect or interfere with a user's ability to comply with all adopted emergency response plans and emergency evacuation plans because the proposed amendments are not expected to require construction of any major structures or features that

could impede the execution of emergency response or emergency evacuation plans. Additionally, 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.

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 cooperation with 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. Therefore, no significant adverse impacts on emergency response plans are expected.

VII h. No increase in hazards related to wildfires are anticipated from the proposed rule amendments. Polyester resin operations affected by the proposed amendments already exist and are primarily located and operate within the confines of existing industrial and commercial. The proposed amendments would not result in construction activities outside the boundaries of the existing facilities. No increase in exposure to wildfires will occur due to the proposed amendments to Regulation 8-50.

Based upon these considerations, no significant adverse hazards and hazardous materials impacts are expected from the implementation of the proposed rule amendments.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. 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 that 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 onsite 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 onsite or offsite?	☐	☐	☐	☑
e)	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?	☐	☐	☐	☑
f)	Otherwise substantially degrade water quality?	☐	☐	☐	☑
g)	Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☑
h)	Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☑
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?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and affected environment vary substantially throughout the area and include commercial, industrial, residential, agricultural, and open space uses.

Polyester resin operations affected by the proposed rule amendments are primarily located in industrial and commercial areas within the Bay Area. Reservoirs and drainage streams are located throughout the area and discharge into the Bays. Marshlands incised with numerous winding tidal channels containing brackish water are located throughout the Bay Area.

The Bay Area is located within the San Francisco Bay Area Hydrologic Basin. The primary regional groundwater water-bearing formations include the recent and Pleistocene (up to two million years old) alluvial deposits and the Pleistocene Huichica formation. Salinity within the unconfined alluvium appears to increase with depth to at least 300 feet. Water of the Huichica formation tends to be soft and relatively high in bicarbonate, although usable for domestic and irrigation needs.

Regulatory Background

The Federal Clean Water Act of 1972 primarily establishes regulations for pollutant discharges into surface waters in order to protect and maintain the quality and integrity of the nation's waters. This Act requires industries that discharge wastewater to municipal sewer systems to meet pretreatment standards. The regulations authorize the U.S. EPA to set the pretreatment standards. The regulations also allow the local treatment plants to set more stringent wastewater discharge requirements, if necessary, to meet local conditions.

The 1987 amendments to the Clean Water Act enabled the U.S. EPA to regulate, under the National Pollutant Discharge Elimination System (NPDES) program, discharges from industries and large municipal sewer systems. The U.S. EPA set initial permit application requirements in 1990. The State of California, through the State Water Resources Control Board (SWRCB), has authority to issue NPDES permits, which meet U.S. EPA requirements, to specified industries.

The Porter-Cologne Water Quality Act is California's primary water quality control law, which implements the state's responsibilities under the Federal Clean Water Act but also establishes state wastewater discharge requirements. The Regional Water Quality Control Board (RWQCB) administers the state requirements as specified under the Porter-Cologne Water Quality Act, which include storm water discharge permits. The water quality in the Bay Area is under the jurisdiction of the San Francisco Bay RWQCB.

In response to the Federal Act, the State Water Resources Control Board (SWRCB) prepared two state-wide plans in 1991 and 1995 that address storm water runoff: the California Inland Surface Waters Plan and the California Enclosed Bays and Estuaries Plan, which have been updated in 2005 as the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. Enclosed bays are indentations along the coast that enclose an area of oceanic water within

distinct headlands or harbor works. San Francisco Bay, and its constituent parts, including Carquinez Strait and Suisun Bay, fall under this category.

The San Francisco Bay Basin Plan identifies the: (1) beneficial water uses that need to be protected; (2) the water quality objectives needed to protect the designated beneficial water uses; and (3) strategies and time schedules for achieving the water quality objectives. The beneficial uses of the Carquinez Strait that must be protected include water contact and non-contact recreation, navigation, ocean commercial and sport fishing, wildlife habitat, estuarine habitat, fish spawning and migration, industrial process and service supply, and preservation of rare and endangered species. The Carquinez Strait and Suisun Bay are included on the 1998 California list as impaired water bodies due to the presence of chlordane, copper, dichlorodiphenyltrichloroethane (DDT), diazinon, dieldrin, dioxin and furan compounds, mercury, nickel, polychlorinated biphenyls (PCBs), and selenium.

Discussion of Impacts

VIII a - f. No significant adverse impacts on hydrology/water quality resources are anticipated from the proposed amendments to Regulation 8-50, which would apply to polyester resin operations within the Bay Area. Lowering the monomer content of resins and the VOC content limit of cleaning products at affected facilities will have no direct or indirect impact on hydrology and water quality because the reformulation of the resins and cleaning products is not expected to change the current composite operation practices or alter the formulations to be more detrimental to water quality. Polyester resin operations are not large consumers of water or generators of wastewater discharge and the proposed amendments would not increase the amount of water used or wastewater generated at polyester resin operations. Cleaning solvents are generally used for cleanup purposes as opposed to water.

The SWRCB and nine RWQCBs are responsible for protecting surface and groundwater supplies in California, regulating waste disposal, and requiring cleanup of hazardous conditions (California Water §§13000 - 13999.16). In particular, the SWRCB establishes water-related policies and approves water quality control plans, which are implemented and enforced by the RWQCBs. These agencies also regulate discharges to State waters through federal NPDES permits. Discharges to publicly owned treatment works (POTW) are regulated through federal pretreatment requirements enforced by the POTWs. Polyester resin operations that generate wastewater would have existing wastewater discharge permits.

The proposed amendments to Regulation 8-50 are not expected to adversely impact water quality since no increase in water use or wastewater discharge is expected to be required. Water resources impacts are considered significant if they cause changes in the course of water movements or of drainage or surface runoff patterns; substantially degrade water quality; deplete water resources; significantly increase toxic inflow to public wastewater treatment facilities; or interfere with groundwater recharge efforts.

No major construction activities are expected due to the adoption of the proposed amendments to Regulation 8-50 so no increase in paved areas are expected. Further, no increase in storm water runoff is expected. The proposed amendments are not expected to require additional construction activities. No significant adverse hydrology and water quality impacts are anticipated from implementation of the proposed amendments.

VIII g – i. The polyester operations affected by the proposed rule amendments are located primarily within industrial and commercial areas of the BAAQMD. No major construction activities are expected due to the adoption of the proposed amendments to Regulation 8-50. Commercial and industrial areas, including polyester resin operations, are generally located to avoid flood zone areas and other areas subject to flooding. The proposed amendments are not expected to require additional construction activities, place any additional structures within 100-year flood zones, or other areas subject to flooding. Therefore, no significant adverse impacts due to flooding are expected.

VIII j. The polyester resin operations affected by the proposed rule amendments are primarily located within industrial and commercial areas of the BAAQMD. No major construction activities are expected due to the adoption of the proposed amendments to Regulation 8-50. The proposed amendments are not expected to place any additional structures within areas subject to inundation by seiche, tsunami or mudflow. Therefore, no significant adverse impacts on hydrology/water due to seiche, tsunami, or mudflow are expected.

Based upon these considerations, no significant adverse hydrology and water quality impacts are expected from the implementation of the proposed rule amendments.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
IX.	**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 a 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 plan or natural community conservation plan?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. The polyester resin operations affected by the proposed rule amendments are primarily located within industrial and commercial areas of the BAAQMD.

Regulatory Background

Land uses are generally protected and regulated by the City and/or County General Plans through land use and zoning requirements.

Discussion of Impacts

IX a-c. No provisions of the proposed amendments to Regulation 8-50 would directly affect applicable land use plans, zoning ordinances, habitat conservation, or natural community conservation plans. Polyester resin operations are expected to comply with Regulation 8-50 by reducing monomer content in materials, lowering the VOC limits of cleaning produces, and using non-atomizing spray guns. These changes are expected to occur within the confines of existing commercial and industrial facilities. No construction activities outside of the confines of existing facilities are expected to be required due to the adoption of the proposed amendments to Regulation 8-50, so no impacts on land use are expected. Polyester resin operations located in the District are not expected to need additional land to continue current operations or require rezoning to comply with the proposed rule amendments.

Based upon these considerations, no significant adverse impacts to land use are expected due to the proposed rule amendments.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
X.	**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?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and the affected environment vary greatly throughout the area. The polyester resin operations affected by the proposed rule amendments are located within industrial and commercial areas of the BAAQMD.

Regulatory Background

Mineral resources are generally protected and regulated by the City and/or County General Plans through land use and zoning requirements.

Discussion of Impacts

X a-b. The proposed rule amendments are not associated with any action that 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, or of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. The proposed amendments are designed to reduce emissions associated with polyester resin operations, and would not typically require mineral resources to reformulate compliant products. Therefore, no impacts on mineral resources are expected.

Based upon these considerations, significantly adverse impacts to mineral resources are not expected from the implementation of the proposed amendments to Regulation 8-50.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XI.	**NOISE.** Would the project:				
a)	Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☑
b)	Expose persons to or generate of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☑
c)	Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☑
d)	Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☑
e)	Be 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 and expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☑
f)	Be located within the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and the affected environment vary greatly throughout the area. The polyester resin operations affected by the proposed rule amendments are primarily located within industrial and commercial areas of the BAAQMD.

Regulatory Background

Noise issues related to construction and operational activities are addressed in local General Plan policies and local noise ordinance standards. The General Plan and noise ordinances generally establish allowable noise limits within different land uses including residential areas, other sensitive use areas (e.g., schools, churches, hospitals, and libraries), commercial areas, and industrial areas.

Discussion of Impacts

XI a-d. The polyester resin operations affected by the proposed rule amendments already exist and the District has no indication that they have not complied with existing relevant local community noise standards and ordinances. Polyester resin operations affected by the proposed rule amendments would be required to use resins with a lower monomer content, use cleaning products with lower VOC content, and use non-atomizing spray guns. The District has no indication that the rule amendments woud affect continuing compliance. No major construction activities would be required due to the adoption of the proposed amendments to Regulation 8-50 so that no noise impacts associated with the use of construction equipment and construction-related traffic are expected.

Implementation of the proposed amendments is not expected to produce noise in excess of current operations at existing polyester resin operations. In general, the primary noise sources at existing facilities manufacturing polyester resin products are generated by vehicular traffic, spray equipment, and heavy equipment, such as fork lifts and trucks. It is expected that facilities affected by the proposed amendments to Regulation 8-50 will comply with all existing noise control laws or ordinances. Further, OSHA and Cal/OSHA have established noise standards to protect worker health. Additionally, compliance with amendments to Regulation 8-50 is not expected to create significant noise impacts as the use of resin with a lower monomer content and cleaning products with lower VOC content will not affect noise levels from existing operations. The use of non-atomizing spray guns are expected to have similar or lower noise levels than other types of application equipment. Therefore, no adverse significant impacts to noise are expected due to the proposed project.

XI. e-f. Though some of the facilities affected by the proposed project may be located at sites within an airport land use plan, or within two miles of a public airport, the proposed amendments to Rule 8-50 would not expose people residing or working in the project area to the same degree of excessive noise levels associated with airplanes. Compliance with amendments to Regulation 8-50 will not affect noise levels from polyester resin operations as facilities would continue to use the same or similar equipment. All noise producing equipment must comply with local noise ordinances and applicable OSHA or Cal/OSHA workplace noise reduction requirements. Based upon the above considerations, significant noise impacts are not expected from the implementation of the proposed project.

Based upon these considerations, significant noise impacts are not expected from the implementation of the proposed rule amendments.

		Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII.	**POPULATION AND HOUSING.** Would the project:				
a)	Induce substantial population growth in an area either directly (e.g., by proposing new homes and businesses) or indirectly (e.g. through extension of roads or other infrastructure)?	☐	☐	☐	☑
b)	Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑
c)	Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and the affected environment vary greatly throughout the area. The polyester resin operations affected by the proposed rule amendments are primarily located in industrial and commercial areas within the jurisdiction of the BAAQMD.

Regulatory Background

Population and housing growth and resources are generally protected and regulated by the City and/or County General Plans through land use and zoning requirements.

Discussion of Impacts

XII. a. No major construction activities are expected due to implementation of the proposed amendments. The minor facility modifications that may be required by the proposed amendments can be completed within the existing polyester resin facilities in the Bay Area. Further, it is not expected that the minor facility modifications, e.g., new spray guns, will require new employees at the affected facilities. Human population within the jurisdiction of the BAAQMD is anticipated to grow regardless of implementing the amendments to Regulation 8-50. As a result, the proposed project is not anticipated to generate any significant adverse effects, either direct or indirect, on population growth or population distribution in the Bay Area.

XII b-c. Because the proposed project would include minor modifications and/or changes at existing facilities located in the Bay Area, the proposed project 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 Bay Area.

Based upon these considerations, significant population and housing impacts are not expected from the implementation of the proposed rule amendments.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. PUBLIC SERVICES. Would the project:				
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental 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:				
Fire protection?	☐	☐	☐	☑
Police protection?	☐	☐	☐	☑
Schools?	☐	☐	☐	☑
Parks?	☐	☐	☐	☑
Other public facilities?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and the affected environment vary greatly throughout the area. The polyester resin operations affected by the proposed rule amendments are located throughout the area within the jurisdiction of the BAAQMD, primarily in industrial and commercial areas.

Given the large area covered by the BAAQMD, public services are provided by a wide variety of local agencies. Fire protection and police protection/law enforcement services within the BAAQMD are provided by various districts, organizations, and agencies. There are several school districts, private schools, and park departments within the BAAQMD. Public facilities within the BAAQMD are managed by different county, city, and special-use districts.

Regulatory Background

City and/or County General Plans usually contain goals and policies to assure adequate public services are maintained within the local jurisdiction.

Discussion of Impacts

XIII a. The proposed amendments will require the use of resin with a lower monomer content, cleaning products with lower VOC content, and non-atomizing spray guns, but all modifications would occur

within the confines of the existing facilities. The proposed amendments would not impact existing security and, therefore, are not expected to impact police services or require additional police protection.

The proposed amendments to Regulation 8-50 are not expected to require new or additional fire fighting resources. It is more likely that the proposed amendments will result in the use of less hazardous and flammable materials (less monomer in resins and reduced VOC content in cleaning products) compared to current materials (resins and cleaning materials), resulting in a reduction in the need for fire fighting services. Fire protection services are generally provided by city and county fire departments with some cities contracting with the county for services. Local fire departments function as the first responding emergency team in the event of a fire or release of hazardous materials. Additionally, resin and cleaning materials compliant with the proposed amendments to Regulation 8-50 are not expected to cause significant adverse human health impacts, so accidental release scenarios would be expected to pose a lower risk to the public and less need for emergency responders. Therefore, the proposed amendments are not expected to significantly increase the need or demand for additional fire protection services above current levels.

As noted in the "Population and Housing" discussion above, the proposed project is not expected to induce population growth in any way because the existing polyester resin operations (e.g., workforce) are expected to be sufficient to accommodate any modifications or conversions that may be necessary at affected facilities and the use of reformulated resins and cleaning products is not expected to require additional employees. Therefore, there will be no increase in local population and thus no impacts are expected to local schools or parks.

Based upon these considerations, significant public services impacts are not expected from the implementation of the proposed rule amendments.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. RECREATION. Would the project:					
a)	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)	Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that there are numerous areas for recreational activities. The polyester resin operations affected by the proposed rule amendments are primarily located in industrial and commercial areas throughout the BAAQMD.

Regulatory Background

Recreational areas are generally protected and regulated by the City and/or County General Plans at the local level through land use and zoning requirements. Some parks and recreation areas are designated and protected by state and federal regulations.

Discussion of Impacts

XIV a-b. As discussed under "Land Use" above, there are no provisions of the proposed project that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments; no land use or planning requirements will be altered by the proposed amendments to Regulation 8-50 and no increase in population is expected. Further, the proposed amendments would not increase the use of existing neighborhood and regional parks or other recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment because the proposed project is not expected to induce population growth. Therefore, no significant adverse impacts to recreational facilities are expected.

Based upon these considerations, significant recreation impacts are not expected from the implementation of the proposed rule amendments.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. TRANSPORTATION/TRAFFIC. Would the project:					
a)	Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	☐	☐	☐	☑
b)	Cause, either individually or cumulatively, exceedance of a level-of-service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☑
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☑
d)	Substantially increase hazards because of 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)?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles). Transportation systems located within the Bay Area include railroads, airports, waterways, and highways. The Port of Oakland and three international airports in the area serve as hubs for commerce and transportation. The transportation infrastructure for vehicles and trucks in the Bay Area ranges from single lane roadways to multi-lane interstate highways. The Bay Area contains over 19,600 miles of local streets and roads, and over 1,400 miles of state highways. In addition, there are over 9,040 transit route miles of services including rapid rail, light rail, commuter, diesel and electric buses, cable cars, and ferries. The Bay Area also has an extensive local system of bicycle routes and pedestrian paths and sidewalks.

The region is served by numerous interstate and U.S. freeways. On the west side of San Francisco Bay, Interstate 280 and U.S. 101 run north-south. U.S. 101 continues north of San Francisco into Marin County. Interstates 880 and 660 run north-south on the east side of the Bay. Interstate 80 starts in San Francisco, crosses the Bay Bridge, and runs northeast toward Sacramento. Interstate 80 is a six-lane north-south freeway which connects Contra Costa County to Solano County via the Carquinez Bridge. State Routes 29 and 84, both highways that allow at-grade crossings in certain parts of the region, become freeways that run east-west, and cross the Bay. Interstate 580 starts in San Rafael, crosses the Richmond-San Rafael Bridge, joins with Interstate 80, runs through Oakland, and then runs eastward toward Livermore. From the Benicia-Martinez Bridge, Interstate 680 extends north to Interstate 80 in Cordelia. Caltrans constructed a second freeway bridge adjacent and east of the existing Benicia-Martinez Bridge. The new bridge consists of five northbound traffic lanes. The existing bridge was re-striped to accommodate four lanes for southbound traffic. Interstate 780 is a four lane, east-west freeway extending from the Benicia-Martinez Bridge west to I-80 in Vallejo.

Regulatory Background

Transportation planning is usually conducted at the state and county level. Planning for interstate highways is generally done by the California Department of Transportation.

Most local counties maintain a transportation agency that has the duties of transportation planning and administration of improvement projects within the county and implements the Transportation Improvement and Growth Management Program, and the congestion management plans (CMPs). The CMP identifies a system of state highways and regionally significant principal arterials and specifies level of service standards for those roadways. The Metropolitan Transportation Commission is the main transportation planning agency in the Bay Area.

Discussion of Impacts

XV a-b. Since no major construction activities are expected as a result of implementing the proposed amendments to Regulation 8-50, no increase in construction-related traffic is expected.

Polyester resin operations are not expected to increase or decrease the amount of resin or cleaning materials used as a result of the proposed rule amendments. Therefore, the number of trucks needed to deliver the materials to the affected facilities should not significantly change from the current number of delivery trucks, and the number of trucks required to distribute products should not change. No additional delivery or disposal trucks are expected to be required due to the proposed rule amendments. The work force at each affected facility is not expected to increase as a result of the proposed amendments. Thus, the traffic impacts associated with the proposed rule amendments are expected to be less than significant.

XV c. Though some of the polyester resin operations that will be affected by the proposed amendments may be 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, actions that would be taken to comply with the proposed amendments are not expected to influence or affect air traffic patterns. Further, the reformulation to lower monomer resins and lower VOC content cleaning materials would not be expected to involve air traffic or affect navigable air space in any way. Thus, the proposed amendments would not result in a

change in air traffic patterns including an increase in traffic levels or a change in location that results in substantial safety risks.

XV d - e. The location of each affected facility is expected to be consistent with surrounding land uses and traffic/circulation in the surrounding areas of the affected polyester resin operations. Thus, the proposed amendments are not expected to increase traffic hazards or create incompatible uses at or adjacent to the polyester resin facilities. Since no major construction activities are expected due to the proposed amendments, no increase in construction traffic is expected. The proposed amendments are not expected to require a modification to circulation, thus, no long-term impacts on the traffic circulation system are expected to occur. The proposed amendments do not involve construction of any roadways, so no increase in traffic hazards is expected. Emergency access at each affected facility is not expected to be impacted by the proposed amendments since no major construction activities are required. Further, each affected facility is expected to continue to maintain their existing emergency access and procedures, and emergency access would not be impacted by the proposed rule amendments.

XV f. Since no major construction activities are required due to adoption of the proposed amendments, no significant impact on parking for construction workers is expected. Further, no additional parking is expected to be needed after adoption of the proposed rule amendments because no increase in employees at polyester resin facilities is expected. Therefore, the proposed rule amendments will not result in significant adverse impacts on parking.

XV g. Operational activities resulting from the proposed amendments are not expected to conflict with policies supporting alternative transportation since the proposed amendments do not involve or affect alternative transportation modes (e.g. bicycles or buses).

Based upon these considerations, significant transportation/traffic impacts are not expected from the implementation of the proposed rule amendments.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
XVI. UTILITIES AND SERVICE SYSTEMS. Would the project:					
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☑
b)	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?	☐	☐	☐	☑
c)	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?	☐	☐	☐	☑
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements needed?	☐	☐	☐	☑
e)	Result 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?	☐	☐	☐	☑
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☑
g)	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and the affected environment vary greatly throughout the area.

Given the large area covered by the BAAQMD, public utilities are provided by a wide variety of local agencies. The most affected facilities have wastewater and storm water treatment facilities and discharge treated wastewater under the requirements of NPDES permits.

Water is supplied to affected facilities by several water purveyors in the Bay Area. Solid waste is handled through a variety of municipalities, through recycling activities and at disposal sites.

There are no hazardous waste disposal sites within the jurisdiction of the BAAQMD. Hazardous waste generated at polyester resin operations, which is not recycled off-site, is required to be disposed of at a licensed hazardous waste disposal facility. Two such facilities are the Chemical Waste Management Inc. (CWMI) Kettleman Hills facility in Kings County, and the Safety-Kleen facility in Buttonwillow (Kern County). Hazardous waste can also be transported to permitted facilities outside of California. The nearest out-of-state landfills are U.S. Ecology, Inc., located in Beatty, Nevada; USPCI, Inc., in Murray, Utah; and Envirosafe Services of Idaho, Inc., in Mountain Home, Idaho. Incineration is provided at the following out-of-state facilities: Aptus, located in Aragonite, Utah and Coffeyville, Kansas; Rollins Environmental Services, Inc., located in Deer Park, Texas and Baton Rouge, Louisiana; Chemical Waste Management, Inc., in Port Arthur, Texas; and Waste Research & Reclamation Co., Eau Claire, Wisconsin.

Regulatory Background

City and/or County General Plans usually contain goals and policies to assure adequate utilities and service systems are maintained within the local jurisdiction.

Discussion of Impacts

XVI a, b, d and e. The operations affected by the proposed rule amendments already exist and are located within the confines of existing polyester resin facilities. The proposed rule amendments are not expected to generate additional wastewater at the affected facilities and no significant impact on water use, wastewater generation, and water quality are expected. See Section VIIIa for further discussion on wastewater impacts.

XVI c. The affected facilities are expected to comply with the proposed amendments by lowering the monomer content in resins and the VOC content in cleaning products, and using non-atomizing spray guns. No major construction activities at the existing facilities would be required as a result of adopting the proposed amendments. Any facility modifications would be expected to occur within the confines of existing facilities. Therefore, the proposed amendments are not expected to alter the existing drainage or require the construction of new storm water drainage facilities. Nor are the proposed amendments expected to create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff. Therefore, no significant adverse impacts on storm drainage facilities are expected.

XVI f and g. The proposed rule amendments would not affect the ability of existing facilities to comply with federal, state, and local statutes and regulations related to solid waste. Polyester resin operations are not expected to change as a result of the proposed amendments to Regulation 8-50. The volume of wastes generated by the affected facilities are also not expected to increase as a result of the proposed amendments. As a result, no new solid or hazardous waste will be generated due to the lowering of the monomer content of resins and VOC content of cleaning solvents, or using non-atomizing spray guns in polyester resin operations. The increased use of water-based coatings could have a beneficial impact on

hazardous waste facilities by decreasing the amount of hazardous materials used and disposed of in the manufacturing process. For example, the use of non-atomizing spray guns is expected to reduce the amount of overspray and potentially reduce the amount of waste generated. Therefore, no significant adverse solid waste impacts are expected.

Based upon these considerations no significant adverse utilities and service systems impacts are expected from the implementation of the proposed rule amendments.

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

Discussion of Impacts

XVII a. The proposed rule amendments do not 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, as discussed in the previous sections of the CEQA checklist. The proposed rule amendments are expected to result in VOC and TAC emission reductions from polyester resin operations, thus providing a beneficial air quality impact and related health effects. As discussed in Section IV, Biological Resources and Section V, Cultural Resources, no significant adverse impacts are expected to biological or cultural resources.

XVII b-c. The proposed amendments are expected to result in emission reductions of VOCs from affected polyester resin operations, thus providing a beneficial air quality impact, improvement in air quality, and reduced health impacts due to reduce exposure to VOC and TAC emissions, and ultimately reduced ozone concentrations. The proposed rule amendments are part of a long-term plan to reduce the potential health impacts associated with exposure to ozone. The proposed rule amendments do not have adverse environmental impacts that are limited individually, but cumulatively considerable when considered in conjunction with other regulatory control projects. The proposed rule amendments are not expected to have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly. In fact, the proposed rule amendments are expected to provide beneficial health impacts by reducing VOC emissions, the formation of ozone, and reducing human exposure to

ozone in the Bay Area. No significant adverse environmental impacts are expected due to implementation of the proposed rule amendments.

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CHAPTER 4

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