

Initial Study/Negative Declaration for the
Amendments to Bay Area Air Quality
Management District Regulation 8, Rule 32:
Wood Products Coatings

Prepared for:

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109
Contact: Guy Gimlen
(415) 749-4734

Prepared By:

Environmental Audit, Inc.
1000-A Ortega Way
Placentia, CA 92870
Contact: Debra Bright Stevens
(714) 632-8521

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Chapter 1	
Introduction.....	1-1
Purpose of This Document.....	1-1
Scope of This Document.....	1-1
Impact Terminology.....	1-2
Organization of This Document.....	1-2
Chapter 2	
Description of the Proposed Rule	2-1
Background.....	2-1
Wood Products Coatings VOC Characteristics	2-3
Objectives	2-7
Proposed Amendments	2-8
Other Proposed Amendments	2-10
Affected Area.....	2-11
Chapter 3	
Environmental Checklist.....	3-1
Environmental Checklist Form.....	3-1
Environmental Factors Potentially Affected.....	3-2
Determination	3-2
I. Aesthetics.....	3-3
Setting	3-3
Regulatory Background	3-3
Discussion of Impacts.....	3-4
II. Agriculture Resources.....	3-5
Setting.....	3-5
Regulatory Background	3-5
Discussion of Impacts.....	3-6
III. Air Quality	3-7
Setting	3-7
Regulatory Background	3-15
Discussion of Impacts.....	3-16
IV. Biological Resources	3-21
Setting.....	3-21
Regulatory Background.....	3-22
Discussion of Impacts	3-22
V. Cultural Resources	3-23
Setting.....	3-23
Regulatory Background.....	3-23
Discussion of Impacts	3-24

VI. Geology and Soils	3-25
Setting.....	3-25
Regulatory Background.....	3-26
Discussion of Impacts	3-27
VII. Hazard and Hazardous Materials	3-28
Setting	3-29
Regulatory Background	3-30
Discussion of Impacts	3-31
VIII. Hydrology and Water Quality.....	3-35
Setting	3-36
Regulatory Background	3-36
Discussion of Impacts	3-37
IX. Land Use and Planning	3-39
Setting	3-39
Regulatory Background	3-39
Discussion of Impacts	3-39
X. Mineral Resources	3-40
Setting	3-40
Regulatory Background	3-40
Discussion of Impacts	3-40
XI. Noise	3-41
Setting	3-41
Regulatory Background	3-41
Discussion of Impacts	3-42
XII. Population and Housing	3-43
Setting	3-43
Regulatory Background	3-43
Discussion of Impacts	3-43
XIII. Public Services.....	3-45
Setting	3-45
Regulatory Background	3-45
Discussion of Impacts	3-45
XIV. Recreation	3-47
Setting	3-47
Regulatory Background	3-47
Discussion of Impacts	3-47
XV. Transportation and Traffic	3-48
Setting	3-48
Regulatory Background	3-49
Discussion of Impacts	3-49
XVI. Utilities and Service Systems.....	3-51
Setting	3-51
Regulatory Background	3-52
Discussion of Impacts	3-52

XVII. Mandatory Findings of Significance	3-54
Discussion of Impacts	3-54
Chapter 4	
References.....	4-1
FIGURES:	
Figure 1 – Bay Area Air Quality Management District.....	2-11
TABLES:	
Table 2-1 Proposed Wood Coating VOC Limits	2-10
Table 3-1 Federal and State Ambient Air Quality Standards.....	3-11
Table 3-2 Bay Area Air Pollution Summary - 2007	3-12
Table 3-3 Ten-Year Bay Area Air Quality Summary	3-13
Table 3-4 Summary of 2003 BAAQMD Ambient Air Toxics Monitoring Data.....	3-14
Table 3-5 Toxicity of Conventional and Replacement Solvents....	3-19
Table 3-6 Chemical Characteristic for Common Solvents.....	3-32

CHAPTER 1

INTRODUCTION

PURPOSE OF THIS DOCUMENT

This Negative Declaration assesses the environmental impacts of the proposed adoption of amendments to Regulation 8, Rule 32 (Regulation 8-32) – Wood Products Coatings by the Bay Area Air Quality Management District (BAAQMD or District). This assessment is required by the California Environmental Quality Act (CEQA) and in compliance 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 guidelines 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 8-3, 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 wood products coatings through limits contained in Regulation 8, Rule 32: Wood Products Coatings (Regulation 8-32). The District proposes these amendments to Regulation 8-32 to reduce emissions of VOCs by reducing the VOC content requirements for wood product coatings. The District committed to updating this regulation in Control Measure SS-5 in the District's 2005 Ozone Strategy.

Control of VOC emissions from wood products coatings is primarily the responsibility of the BAAQMD in the Bay Area. The proposed amendments to Regulation 8-32 would further limit the amount of VOCs that would be allowed in wood products coatings. The proposed amendments would result in a VOC emission reduction of 0.45 tons per day (tpd). Total emissions from all wood products coating, including solvents for surface preparation and cleanup are estimated to be about 1.48 tpd (BAAQMD, 2009).

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 8-32 regulates VOC emissions from the wood products manufacturing industry by setting standards for amount of VOC that can be used in the surface preparation, coatings application, and cleanup for the manufacture of wood products including furniture, bathroom vanities, kitchen cabinets, picture frames, outdoor speakers, architectural millwork, and other wood products.

The proposed rule amendments will reduce the amount of VOC allowed in various types of wood products coatings. District staff is proposing more stringent VOC standards because the performance of low-VOC solvent-based coatings (using exempt solvents) and water-borne wood coating products has improved considerably over the last ten years, and low-VOC products are now readily available that meet an increased number of wood products manufacturers' needs. District staff is proposing to lower VOC limits for sealers, fillers, wash-coats and stains.

Additionally, alternative standards based on a coating's VOC content relative to the amount of coating solids the coating contains are being considered. Coating solids are the binders, pigments, and resins that form the coating on the wood product after the VOCs have evaporated and the coating has dried. If a coating has greater solids content,

less coating may be required to coat a wood product and then fewer VOCs are emitted. In order to encourage manufacturers to use coatings with higher solids content, the proposed amendments provide two alternative compliance options: one based on the VOC content in the entire volume of the coating and one based on the VOC content per unit of coating solids. Wood products manufacturers are then able to choose whichever compliance option best suits their needs.

The proposed amendments also include several related provisions to improve the implementation and enforceability of the rule. These amendments include revisions to the way coatings are classified for purposes of VOC-content regulation, enhanced labeling requirements for wood products coatings, and editorial revisions to the rule language to make it easier for wood coatings users and the public to understand what is required. In addition, the Emission Averaging Procedure found in the Manual of Procedures, Volume 1, is proposed to be updated to be consistent with the proposed rule amendments.

Regulation 8-32, which was adopted in 1983, has evolved considerably since that time. Originally, low-VOC technology for wood coatings was not sufficiently developed to incorporate into the rule. The original rule focused on requiring transfer-efficient application equipment, requiring specified users to apply coating with airless spray, air-assisted airless spray, electrostatic air spray, low-pressure spray, or hand application methods.

VOC-content limits were incorporated into Regulation 8-32 in 1991. The limits were to be implemented in several stages, culminating in the lowest VOC limits to become effective in 1994 and 1996.

In 1994, the District extended the implementation dates for the latter phases of VOC reductions by one year to give the wood coating industry sufficient time to develop compliant coatings that would meet its requirements for adherence, clarity and appearance of finish, chemical and mar resistance, and coating system compatibility. In addition, the amendments included an adjustment to the VOC limit for sanding sealers because it became clear that the VOC limit scheduled for 1994 could not be achieved until 1997.

In 1996, the District amended Regulation 8-32 to establish achievable VOC limits for each of the three different classes of wood products, and a timetable for implementation based on progress that was being made in the development of lower VOC coatings. General wood product facilities have complied with current VOC limits since 1995. Furniture, custom cabinetry and custom architectural millwork facilities have complied with current VOC limits since 1996. The custom and contract furniture manufacturers have complied with current VOC limits since 1997.

Some solvents that had been used in wood coatings were approved as exempt from the VOC limits, based on their very low tendency to form ozone in the atmosphere. Acetone, an example of such a solvent, was exempted from the VOC calculation in late 1995.

Some coatings used acetone substitute lacquers. Other exempted solvents, like parachlorobenzotriflouride, were also used. The VOC limits that were proposed in 1996 accommodated solvent-borne materials consistent with the existing technology and with use of exempt solvents.

WOOD PRODUCTS COATINGS VOC CHARACTERISTICS

VOC Emissions from Wood Coating Operations

Regulation of emissions from coating operations focuses on the amount of VOC present in a coating. The VOC in the coating evaporates as the coating dries, causing VOC emissions into the atmosphere where they can form ozone. Coatings regulations therefore impose restrictions on the amount of VOC allowed in various types of coatings, most often stated as a limit on the number of grams of VOC allowed per liter of coating.

Emissions occur when the solvents in the coating evaporate. The process steps may be done in single spray booth or in a series of booths, separated by flash-off areas and drying ovens. The flash-off area allows a solvent to rise to the surface of the coating before high temperature curing operations can occur. Typically it is during the flash-off and curing / drying phases that VOC is emitted to the atmosphere. It is reasonable to assume that all of the solvents used in the coating process eventually reach the atmosphere. About 20 percent of the manufacturers in the Bay Area currently use ovens or UV lighting for curing.

Coatings can require only one coat, or several coats, depending on the finished effect needed. Generally, multiple coatings are applied in the following order: stain, wash coat, filler, sealer, and top coat. Each coating typically contains both solids and liquid solvents. The solids portion contains pigments and resins (binders or film formers) and at times plasticizers. The solvent portion may include VOCs, exempt solvents, and water. Conventional (high VOC) coatings normally contain 70 – 80 percent solvent. Water-borne coatings are those that contain water as a solvent or diluent. Merely having water in a coating, however, does not ensure that the coating complies with applicable VOC regulations, as many water-borne coatings also contain VOCs. Coatings with “high solids” content (solids content greater than 60 percent) usually have a reduced VOC content. Exempt solvents are those organic compounds that do not play a significant role in forming ozone. Since they react negligibly with nitrogen oxides in the atmosphere to form ozone, they are desirable substitutes for organic compounds that do form ozone (provided they do not have other negative effects, such as toxicity or depletion of stratospheric ozone). The most prominent exempt solvents used in wood coatings are acetone, and parachlorobenzotriflouride. Each of these solvents has played a large role in developing low VOC wood coatings that work effectively to produce the desired wood finishes (although coatings that use acetone as a solvent substitute often require alterations to spray equipment to accommodate the rapid evaporation rate of highly volatile acetone).

Application techniques vary from airless and High Volume Low Pressure spray to hand wiped finishes. This variance in applications can have significant emissions ramifications. Coatings applied with compliant application equipment have higher transfer efficiency; consequently, less coating is wasted through overspray. Maximum transfer efficiency and, therefore, minimum emissions are achieved through hand application methods: brush, wipe, pour and drain or dip and drain. However, the high transfer efficiency is partially offset by solvent evaporations from open containers.

Organic compound emissions from surface preparation and cleanup are easily minimized by good housekeeping practices. Surface preparation of wood products is almost entirely by physical processes such as sanding, and rarely is an organic solvent used. Clean up can use a significant amount of the solvent that provides the base solvent in the coating, such as lacquer thinner. Good housekeeping practices include keeping solvent containers closed when not in use, and using closed solvent recirculation for tool and spray gun cleanup. Strippers are typically only used in furniture refinishing. Most strippers consist of methylene chloride as the active agent, which is toxic, but has been determined to have negligible photochemical reactivity by the U.S. EPA. Exposure to the toxicity of methylene chloride strippers is minimized by the use of gels which reduce evaporation. Nevertheless, refinishers using methylene chloride based strippers have to go through the District's risk assessment requirements before obtaining permits.

VOC Control Technologies

The following four major categories of control strategies can be used to reduce VOC emissions from wood coating operations:

- Low-solvent and water-borne reformulated coatings,
- Add-on control devices,
- Emerging technologies, and
- Improved work practices.

Reformulated Coatings

Nitrocellulose resin lacquer technology had provided the benchmark for expectations of many wood finishers over the last several decades. It was easily applied, inexpensive, and provided a beautiful finish. These lacquers also provided the advantage of always being resolvable in their original solvent, so minor "touch-up" repairs to the coating surface could be made easily. However, nitrocellulose resin lacquers were only soluble in large amounts of organic solvent. Reductions in wood coating VOC limits have driven development of alternatives like water-borne technology, and improvement in some solvent-borne technologies like high-solids urethanes and polyester resins. The primary focus for improvement of emissions from wood coatings continues to be development of low VOC coatings, including water-based coatings.

Low-solvent Reformulated Coatings: Low-solvent reformulated coatings that contain less solvent will reduce VOC emissions. Currently, low-VOC reformulated coating alternatives are available and can be used for general wood coating applications. The greater challenge is using these coatings for the more demanding applications like furniture and custom wood products manufacture, refinishing, and antiques.

Typically, wood finishes must pass a variety of tests to produce an acceptable finish. The first of these tests, and ultimately the most important, is appearance. Conventional nitrocellulose lacquer has unique refractive properties that give richly colored woods a “warm” appearance. Furniture manufacturing in the United States tends to favor this natural appearance. Water-borne finishes have traditionally suffered from an appearance often described as “plastic” due to the resin systems used. The finishing of fine furniture is different from finishing cabinetry because the desired appearance is different. Whereas in furniture, often the intent is to allow the natural beauty of the wood to be accentuated; cabinetry, particularly kitchen cabinetry, demands a finish that gives the appearance of a protective coat. Some cabinetry is finished to accentuate the natural beauty of the wood, while other finishes conceal the wood.

Secondary, but no less important consideration for wood coating, concerns the protective nature of the coating. Specifically, scratch or mar resistance, hot imprint resistance, and chemical resistance are of concern. Furniture is subject to scrapes and scratches from any object set on a desk, dresser, or coffee table. Whereas a deep scratch in any surface coating would be expected to need repair, furniture must be able to withstand minor scratches from everyday use. In addition, since wood is a relatively soft substrate, a coating must be able to have some flexibility. A coating that is overly hard or brittle will shatter from object impact, much like glass. A successful coating must flex slightly to “give” along with the underlying wood. Hot print resistance is the ability of a coating to resist “melting” or softening when a warm object such as a hot cup of coffee comes into contact with the surface. Otherwise, a hot coffee cup will stick to a table or desk. Hot print resistance is not a problem of solvent-borne coatings that chemically polymerize, such as urethanes, polyester resins, or conversion varnishes. Conventional nitrocellulose lacquers are also heat resistant. However, hot print resistance does tend to be a problem of coatings that form films by coalescence or fusion of adjacent particles as the volatile portion evaporates, which is typical of water-emulsified coatings. In addition, coatings must also be resistant to a variety of chemicals, particularly household chemicals such as vinegar (acetic acid), alcohol, water, oils, detergent, and ammonia. Products intended for home or office use must meet standardized or company specific tests, often using specific household products, such as hot coffee, cola, grape juice, tomato juice, mustard, lipstick, nail polish remover, and ethanol. In addition, a “lipids acid” test has been developed to mimic the effects of human skin oils. All coatings, including the traditional lacquers, show varying degrees of resistance to different chemicals, but many of the water-borne coatings have tended to be less resistant to household chemicals than solvent-borne coatings.

Low VOC coatings have been developed that can satisfy these requirements for many operations, although even where there are satisfactory low-VOC alternatives, adopting it is not as simple as just switching to a new coating supply. Often application processes and curing equipment need to be changed as well.

Water-Borne Reformulated Coatings: Coatings that use water instead of solvent as a medium have also been developed. These water-borne coatings are normally very low in VOC content. The overriding problem water-borne formulations face is the basic interaction between water and the wood. The absorptive nature of wood and the tendency of wood grain to swell when wet is the reason that water-borne technology for wood coatings has been slower to develop than for any other type of substrate. Swelling grain results in the necessity to sand a surface smooth, which in turn removes coating, resulting in the necessity of re-application, and, potentially, renewed swelling. This tends to be a much greater problem with “open grain” woods such as oak, walnut, and mahogany than with “closed grain” woods such as birch, cherry and maple. Partial solutions to this problem have been found in modification of application techniques, including humidity control, the use of heat lamps or drying ovens, and control of room air flow. Improvements in the water-borne coatings themselves have made excellent progress over the last several years in greatly reducing, and in some cases eliminating this problem.

BAAQMD staff discussed the use of coatings in the manufacture of wood products with several businesses and suppliers. Some use solvent-based coatings, and some use water-borne (very low-VOC) coatings. The conversion from solvent-based coatings to water-borne coatings involves more than simply changing the coating being applied. Water-borne coatings require the use of spray guns designed for spraying water-borne coatings, or existing spray guns must be retrofitted to include stainless steel or plastic parts to prevent rust. Application of water-borne coatings requires additional steps and new techniques. The cool and somewhat damp climate in the Bay Area during the winter months is not conducive to drying water-borne coatings, leading to longer drying times.

While there have been no “breakthrough” improvements in water-borne technology for wood coatings, incremental improvements have enabled several coatings manufacturers to develop water-borne coatings combined with application and drying techniques that meet the needs of most of their customers.

Add-On Abatement Devices

Add-on control devices are incorporated into a process to remove or destroy VOCs after the coating process occurs. There are three add-on control methods: thermal oxidation, catalytic oxidation, and adsorption. Although these add-on controls are effective at eliminating air pollution after it is emitted, the preventive approach of reformulating coatings to reduce VOC content is generally favored because it eliminates the pollution altogether rather than capturing it after the fact. In addition, most abatement devices are relatively costly compared to switching to low-VOC coatings. They also require

considerable amounts of energy to construct and operate, contributing to the generation of greenhouse gases.

- **Thermal oxidation:** Thermal oxidation involves incinerating VOCs to prevent them from being emitted. Incinerators are usually operated at a high temperature to efficiently destroy most VOC's found in the exhaust stream. Factors affecting incinerator performance are residence time in the combustion zone and incinerator temperature. Thermal oxidizers can achieve close to 100 percent VOC destruction for most VOC's. The major concern with thermal oxidation, in addition to capital cost, is that large amounts of fuel (usually natural gas) must be burned to destroy a dilute stream of VOC's, resulting in additional carbon dioxide from use of fuel, as well as the carbon dioxide generated from burning the VOC's. Carbon dioxide is a greenhouse gas, implicated in global warming.
- **Catalytic Oxidation:** Catalytic oxidation is similar to thermal oxidation, but it introduces a catalyst to dramatically increase the oxidation rate. The catalyst itself is not altered during the reaction. The increased reaction rate can greatly reduce the temperatures required, resulting in significant fuel savings. Catalytic units include higher installation costs and the possibility of catalyst poisoning by sulfur, metals, and phosphorous. Catalytic units can achieve in excess of 95 percent VOC destruction efficiency. Greenhouse gas emissions are less than with thermal oxidation, but still a concern with this control technology. There is one facility in the Bay Area that uses catalytic oxidation to reduce VOC emissions.
- **Adsorption:** Adsorption is a mass-transfer operation involving the conversion of VOC from a gas to a liquid or solid. The most common adsorption system uses activated carbon, which is effective in capturing most VOC's through physical adsorption. In addition, activated carbon can be regenerated by steam, nitrogen stripping, or by drawing a vacuum on the carbon. At minimum, two adsorption beds and a regeneration facility are required for an adsorption process. VOC removal efficiency can be as high as 95 percent using the absorption method. The concern with this control technology is the energy consumed in regenerating the activated carbon, as well as creating, transporting, and disposing of the activated carbon – all contributing to the concern about greenhouse gases.

OBJECTIVES

BAAQMD is proposing amendments to Wood Products Coatings meeting a commitment to update Regulation 8-32 in Control Measure SS-5 as part of the District's 2005 Ozone Strategy. The proposed amendments to Regulation 8-32 are aimed at further reducing VOC emissions in the Bay Area by reducing the VOC content requirements for wood products coatings. The Bay Area is a non-attainment area for the state one-hour ozone standard and federal eight-hour ozone standard. The proposed amendments are expected to result in a VOC emission reduction of 0.45 tpd, or approximately 30 percent of the 1.48 tpd inventory for this source category.

PROPOSED AMENDMENTS

More Stringent Limits for VOC Content

The main purpose of the amendments the District is considering is to reduce the amount of ozone formed as a result of VOC emissions from wood products coatings. The primary mechanism for achieving this goal would be to reduce the amount of VOCs allowed in various types of wood coatings, as several other air districts have done.

The proposed amendments would impose more restrictive VOC limits for wood products coatings. For most coating types, the proposed new limits are 275 g/l (2.3 lb/gal) for high-solids coatings, and 120 g/l (1.0 lb/gal) for low-solids coatings. This represents a significant reduction for most coatings. The current limits for most high-solids coatings are 500 or 550 g/l, double the proposed new limits; and the current limit for low-solids coatings is 480 g/l (4.0 lb/gal), four times the proposed new limit.

For three specific types of high-solids coatings where a 275 g/l limit would not be feasible, the District is proposing somewhat less stringent limits. First, for high-solids stains, the District is proposing a new limit of 350 g/l (2.9 lb/gal). High-solids stains generally require more VOCs to work effectively because solvent is required to provide penetration of the stain into the wood substrate. One air district in California has a VOC limit of 240 g/l, but California Air Resources Board (CARB), and every coating manufacturer, has indicated there are on-going implementation issues with these high solids stains. Second, furniture, custom cabinetry, and custom architectural millwork require more demanding finishes in both appearance and durability. Conversion varnish is a coating that uses a chemical reaction rather than evaporation to adhere to the wood and form a solid protective coating. Conversion varnish has the inherent advantage that it can serve as a sealer as well as a topcoat, so the sealing and topcoat steps are done together. The proposed conversion varnish VOC limit is 550 g/l (4.6 lb/gal) VOC when used as both a sealer and a topcoat. This 550 g/l conversion varnish limit provides manufacturers more flexibility for coating custom furniture, custom cabinetry, and custom architectural millwork. For general wood products, the conversion varnish VOC limit would remain at 275 g/l. Third, the proposed amendments for clear topcoats used on custom furniture leave the VOC limit at 550 g/l, instead of reducing it to the 275 g/l limit proposed for clear topcoats for other types of wood products. BAAQMD has found that it is not feasible at this time to require the use of lower-VOC clear topcoats for custom furniture because custom furniture must meet very high standards and demanding customer expectations.

These proposed new VOC-content limits are consistent with limits that have been successfully implemented in other California air districts. Coatings can be manufactured to meet these more restrictive VOC limits by using water or exempt solvents – primarily acetone and parachlorobenzotrifluoride – in place of regulated VOC-based solvents. For the furniture manufacturing industry, which requires very high quality finishes for its products, improvements in topcoats, pigmented coatings, sealers, and stains, coupled with the ability to use a higher VOC conversion varnish, will allow them to meet the

demanding requirements of customers while still complying with the more restrictive VOC limits.

Revised Regulatory Categorization of Coating Types

The District is also revising the terminology it uses to categorize the various types of coatings. BAAQMD is proposing alternate VOC limits (discussed below, in grams of VOC per gram of solid) to provide flexibility and continue to encourage development of new and innovative low VOC / high solids coatings. These alternate VOC limits require differentiating the broad category of sanding sealers into clear and pigmented sealers. These alternate VOC limits also require differentiating the broad category of pigmented coatings into pigmented topcoats and pigmented primers, sealers, and undercoats. The proposed categories are consistent with South Coast Air Quality Management District (SCAQMD) Rule 1136 that also provides the alternate VOC limits in grams of VOC per gram of solids.

In addition, conversion varnish is a type of coating that had not previously been uniquely identified. Conversion varnish is included as a specific identifiable coating because it can play an important role in reducing overall VOC emissions because it can serve as both a sealer and topcoat. Multi-colored coatings have also been uniquely identified. In the general category of low solids coatings, toner was added in with wash-coat to more fully characterize that category of low solids coatings. Definitions for conversion varnish and toner were included in the proposed Rule.

Alternative Compliance Option Based on Solids Content

The District is proposing alternative VOC standards based on the solids content of the coating rather than the overall volume of the coating. The ability to beautify and protect wood is dependent on the coating solids content (the resins and pigments that remain after the volatile portion evaporates). The higher the solids content, the less coating is needed to cover the wood. High solids content provides more layer of finished coating (called film build) in a gallon of coating and thereby reduces the total gallons of coating needed, which also reduces the total VOC emissions. BAAQMD is therefore proposing to add an alternative compliance option for high solids coatings in the form of VOC standards expressed as grams of VOC per gram of coating solids. This form of a standard will continue to encourage coating manufacturers to develop high-solids coatings that maximize coverage with minimum solvent evaporation.

To incorporate this alternate compliance option, the proposed amendments would allow coatings to comply with either of the alternative VOC limits, one expressed as grams (or pounds) of VOC per liter (or gallon) of coating, and one expressed as grams (or pounds) of VOC per gram (or pound) of coating solids. The proposed limits for each category of coatings are shown in Table 2-1. The proposed VOC limits are consistent with similar limits in SCAQMD Rule 1136, and will not create any unique requirements that could cause a disruption in the coatings industry.

Under these proposed limits, a coating would be in compliance if it meets either of the alternative limits. The proposed regulation would create a rebuttable presumption that a coating is in violation if there is evidence that the coating is over either one of the limits.

For low-solids coatings, the District is not proposing an alternative standard based on solids content at this time because low solids coatings, used to lightly tint, stain or prepare the surface for further coatings, do not have sufficient solids to create a meaningful standard.

TABLE 2-1

Proposed Wood Coating VOC Limits

Coating Category	Current VOC Limits	Proposed VOC Limits		
		General Wood Products	Furniture, Custom Cabinets and Millwork	Custom Furniture
High Solids	g/l (lb/gal)	g/l (lb/gal) or [g/g]	g/l (lb/gal) or [g/g]	g/l (lb/gal) or [g/g]
Clear Sealer	-	275 (2.3) or [0.36]	275 (2.3) or [0.36]	275 (2.3) or [0.36]
Clear Topcoat	275 (2.3)	275 (2.3) or [0.35]	275 (2.3) or [0.35]	550 (4.6) or [0.36]
Single Application Conversion Varnish*	-	Considered a sealer or topcoat	550 (4.6) or [0.36]*	Considered a sealer or topcoat
Sanding Sealer	550 (4.6)	See clear or pigmented sealers	See clear or pigmented sealers	See clear or pigmented sealers
Pigmented Coating	275 (2.3)	See clear or pigmented topcoats	See clear or pigmented topcoats	See clear or pigmented topcoats
Pigmented Primer, Sealer, and Undercoater	-	275 (2.3) or [0.21]	275 (2.3) or [0.21]	275 (2.3) or [0.21]
Pigmented Topcoat	-	275 (2.3) or [0.25]	275 (2.3) or [0.25]	275 (2.3) or [0.25]
Multicolored Coating	-	-	275 (2.3) or [0.33]	275 (2.3) or [0.33]
High Solids Stain	700 (5.8)	350 (2.9) or [0.42]	350 (2.9) or [0.42]	275 (2.9) or [0.42]
Filler	500 (4.2)	275 (2.3) or [0.18]	275 (2.3) or [0.18]	275 (2.3) or [0.18]
Low Solids	g/l (lb/gal)	g/l (lb/gal)	g/l (lb/gal)	g/l (lb/gal)
Low Solids Stain	480 (4.0)	120 (1.0)	120 (1.0)	120 (1.0)
Toner and Wash-coat	480 (4.0)	120 (1.0)	120 (1.0)	120 (1.0)

- * When used as sealer and topcoat in one coating application
 - g/l = grams of VOC per liter of coating
 - lb/gal = pounds of VOC per gallon of coating
 - g/g = grams of VOC per gram of solids in coating

OTHER PROPOSED AMENDMENTS

Enhanced Labeling Requirements

Effective July 1, 2010, the proposed amendments would require manufacturers and re-packagers of wood coatings and components to label all containers with the coating VOC content. Any product in the distribution system manufactured before July 1, 2010 may

continue to be sold within the District in spite of not meeting the labeling requirements, but the user must meet the new VOC limits for the coating, as applied after manufacturer thinning recommendations. In addition, each manufacturer shall provide product data sheets (or an equivalent medium) for their wood coatings, and solvents subject to this rule, with sufficient information to determine compliance with the rule. This information shall include VOC content of each coating and solvent in grams per liter (or pounds per gallon), VOC content in grams per gram (or pounds per pound) of coating solids for high solids coatings, and thinning recommendations and VOC content of the coating after thinning.

Cleanup of Spray Equipment

A proposed amendment establishes new requirements for cleanup of spray equipment and coating supply lines. Facilities must use solvent with less than 25 grams VOC per liter; or use special practices to clean spray guns that minimize solvent evaporation or have a spray gun washer that meets the requirements of Regulation 8, Rule 16.

Emissions Averaging Procedure

BAAQMD proposes revisions to the existing Manual of Procedures, Volume 1, Procedure 6, to incorporate the revised categories of wood coatings and incorporate U.S. EPA policies related to emissions averaging.

Exemptions

BAAQMD reviewed the existing exemptions in the rule, and proposes to maintain them without any significant revisions.

Other Minor Changes

In addition to the substantive revisions outlined above, BAAQMD is proposing certain minor editorial changes to the language of the rule and to the way in which the various regulatory provisions are organized within the rule's overall structure. These include minor language changes to make provisions grammatically consistent; updating SIC codes to NAICS codes; removal of redundant language such as in the phrase "custom or contract furniture" (as all contract furniture is custom); moving the provisions establishing the 120 g/l threshold for "high-solids" coatings to stand-alone definitions of "high solids" and "low solids" coatings; and removing redundant language in the definition of Volatile Organic Compounds" regarding whether VOC-content standards should be applied by including or excluding water and exempt compounds.

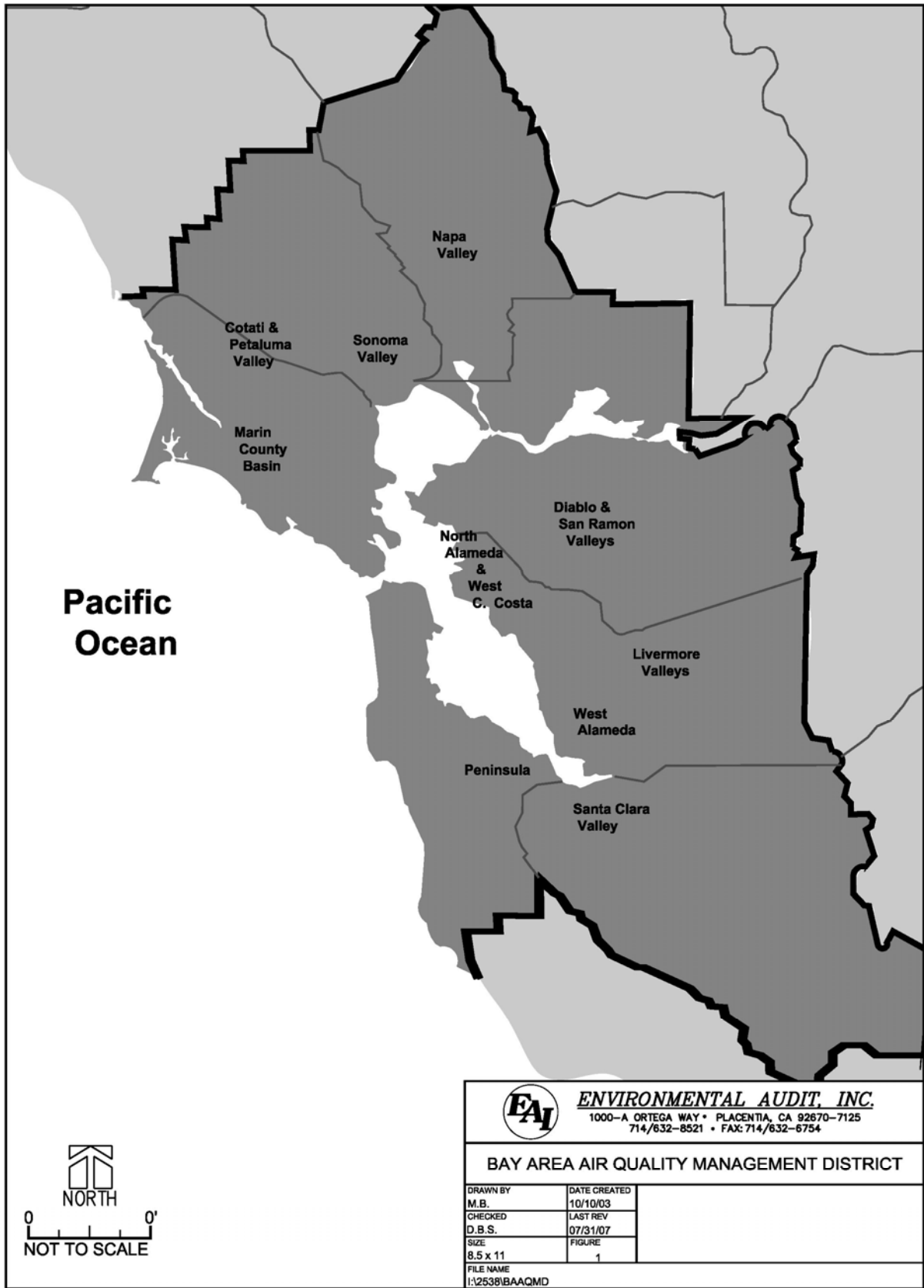
AFFECTED AREA

The proposed rule amendments would apply to facilities 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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CHAPTER 3

ENVIRONMENTAL CHECKLIST

ENVIRONMENTAL CHECKLIST FORM

- 1. Project Title: Bay Area Air Quality Management District (BAAQMD) Proposed Amendments to Wood Products Coatings Regulations.
- 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: Guy Gimlen, Air Quality Engineer
415-749-4734 or ggimlen@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 any person who supplies, sells, offers for sale, or manufactures any coating for wood products used within the District, as well as any person who applies or solicits the application of any wood products coating within the District.
- 7. Zoning The rule amendments apply to wood products coatings used or produced within the jurisdiction of the BAAQMD. Wood products coatings are used in all zoning areas throughout the Bay Area, but primarily in industrial and commercial 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.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Land Use/Planning |
| <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise | <input type="checkbox"/> Population/Housing |
| <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 wood products coatings which are applied to general wood products such as cabinets, vanities, shutters, containers, frames, tools and ladders made of solid wood, wood composition, or wood material. Additional wood products include wood furniture, custom cabinetry, custom furniture, and custom millwork. The amendments to Regulation 8-32 limits VOC emissions from wood coating operations by restricting the amount of VOC in the coatings used in such operations, as well as requiring work practices that minimize the amount of coatings needed to coat such products. Scenic highways or corridors are located in areas affected by the proposed amendments within the District. The wood products coatings and operations affected by the proposed rule amendments are located throughout the area within the jurisdiction of the BAAQMD.

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 8-32 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 wood products coatings operations, or stockpiling of additional materials or products outside of existing facilities, are expected. The explanation for this is that the proposed amendments to Regulation 8-32 are not expected to produce any physical changes as the amendments are only expected to alter the formulation of specific wood products coatings and would further reduce VOC emissions from the use of wood products coatings in the Bay Area. Therefore, 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. Once implemented, the proposed amendments would not require equipment that would be visible as the amendments primarily impose further limits the amount of VOC's that can be used in wood product coatings. Compliance with the proposed rule amendments are expected through the use of reformulated products since products that comply with the 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, although 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 8-32 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 8-32.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) | Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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 wood products coating categories and operations affected by the proposed rule amendments are located throughout the area within the jurisdiction 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 8-32 would further reduce VOC emissions from wood products coatings used and sold 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. Coatings are expected to be reformulated to comply with the proposed regulations as compliant coatings have already been manufactured in other air districts in California, so no construction activities are expected. 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
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Diminish an existing air quality rule or future compliance requirement resulting in a significant increase in air pollutant(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 (NO₂), particulate matter less than 10 microns in diameter (PM₁₀), particulate matter less than 2.5 microns in diameter (PM_{2.5}), sulfur dioxide (SO₂), 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 effects on health are summarized in Table 3-1. The BAAQMD monitors levels of various criteria pollutants at 25 monitoring stations. The 2007 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 (NO_x), and SO₂. The Air District is not considered to be in attainment with the State PM₁₀ and PM_{2.5} standards.

The 2007 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, NO₂, and SO₂. The federal 8-hour ozone standard was exceeded one day in the District in 2007, while the state standard was exceeded on nine days. The Bay Area is designated as a non-attainment area for the California 1-hour ozone standard. The State 1-hour ozone standard was exceeded on 4 days in 2007 in the District, most frequently in the Eastern District (Livermore) (see Table 3-2).

All monitoring stations were in compliance with the federal PM₁₀ standards. The California PM₁₀ standards were exceeded on four days in 2007, most frequently in San Jose. The Air District exceeded the federal PM_{2.5} standard on 14 days, most frequently in San Jose, in 2007 (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 µg/m ³ , annarithmic mean > 50 µg/m ³ , 24-hr average>	50 µg/m ³ , annual arithmetic mean > 150 µg/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 µg/m ³ , annual arithmetic mean>	15 µg/m ³ , annual arithmetic mean> 35 µg/m ³ , 24-hour average>	Decreased lung function from exposures and exacerbation of symptoms in sensitive patients with respiratory disease; elderly; children.
Sulfates	25 µg/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 µg/m ³ , 30-day avg. >=	1.5 µg/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 - 2007**

MONITORING STATIONS	OZONE						CARBON MONOXIDE			NITROGEN DIOXIDE			SULFUR DIOXIDE			PM ₁₀				PM _{2.5}					
	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 Days	Cal Days	Max 24-hr	Nat Days	3-Yr Avg	Ann Avg	3-Yr Avg	
North Counties	(ppb)						(ppm)			(ppb)			(ppb)			(µg/m ³)				(µg/m ³)					
Napa	74	0	61	0	0	57	3.2	2.0	0	53	10	0	-	-	-	21.4	50	0	0	-	-	-	-	-	-
San Rafael	72	0	57	0	0	48	2.8	1.3	0	57	14	0	-	-	-	17.5	56	0	1	-	-	-	-	-	-
Santa Rosa	71	0	59	0	0	47	2.6	1.7	0	46	11	0	-	-	-	17.1	37	0	0	32.0	0	30.4	7.6	8.1	
Vallejo	78	0	66	0	0	54	3.3	2.7	0	58	11	0	4	1.2	0	19.0	52	0	2	40.8	4	36.2	9.8	9.8	
Coast/Central Bay																									
Richmond	-	-	-	-	-	-	-	-	-	-	-	-	7	1.6	0	-	-	-	-	-	-	-	-	-	-
San Francisco	60	0	49	0	0	45	2.5	1.6	0	69	16	0	6	1.5	0	21.9	70	0	2	45.2	5	29.3	8.7	9.3	
San Pablo	74	0	51	0	0	47	2.4	1.2	0	52	12	0	5	1.6	0	20.6	57	0	2	-	-	-	-	-	-
Eastern District																									
Benicia*	83	0	71	0	1	*	1.1	0.6	0	39	*	0	7*	*	0	*	31	0	0	-	-	-	-	-	-
Bethel Island	93	0	78	0	4	73	1.1	0.8	0	48	8	0	5	1.5	0	18.8	49	0	0	-	-	-	-	-	-
Concord	105	1	81	0	4	73	2.2	1.4	0	49	11	0	5	1.3	0	16.8	52	0	2	46.2	7	34.0	8.4	8.9	
Crockett	-	-	-	-	-	-	-	-	-	-	-	-	8	9	2.0	0	-	-	-	-	-	-	-	-	-
Fairfield	89	0	67	0	0	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Livermore	120	2	91	1	3	77	3.3	1.8	0	52	13	0	-	-	-	19.8	75	0	2	54.9	3	34.8	9.0	9.3	
Martinez	-	-	-	-	-	-	-	-	-	-	-	-	8	1.7	0	-	-	-	-	-	-	-	-	-	-
Pittsburg	100	1	74	0	2	70	2.8	1.5	0	51	10	0	7	2.2	0	19.4	59	0	4	-	-	-	-	-	-
South Central Bay																									
Fremont	79	0	68	0	0	58	2.5	1.6	0	58	14	0	-	-	-	19.6	61	0	1	51.2	2	30.4	8.7	9.4	
Hayward*	75	0	65	0	0	*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redwood City	77	0	69	0	0	51	5.5	2.3	0	57	13	0	-	-	-	19.6	56	0	1	45.4	1	31.0	8.3	8.9	
San Leandro	71	0	54	0	0	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Santa Clara Valley																									
Gilroy*	91	0	70	0	0	70	-	-	-	-	-	-	-	-	-	-	-	-	-	21.5	0	*	*	*	
Los Gatos	84	0	65	0	0	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
San Jose Central	83	0	68	0	0	61	3.5	2.7	0	65	17	0	-	-	-	22.0	69	0	3	57.5	9	38.3	10.7	11.1	
San Jose, Tully Rd*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25.6	78	0	3	-	-	-	-	-	-
San Martin	96	1	73	0	4	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunnyvale	77	0	68	0	0	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Days over Standard		4		1	9				0			0			0			0	4		14				

(ppm) = parts per million, (pphm) = parts per hundred million, (ppb) = parts per billion, µg/m³ = micrograms per cubic meter
 * PM2.5 monitoring began at Gilroy on March 1, 2007. Since only three complete quarters of data for 2007 are available, annual statistics are not provided for PM2.5.
 * The Benicia site was opened on April 1 2007. Since only three complete quarters of data for 2007 are available, annual statistics are not provided for this site.
 * The San Jose-Tully site was closed on December 31, 2007.
 * The Hayward station was closed part of 2005 due to construction on site. Therefore, three-year average ozone statistics are not available.

TABLE 3-3
Ten-Year Bay Area Air Quality Summary
 Days over standards

YEAR	OZONE			CARBON MONOXIDE				NO _x	SULFUR DIOXIDE		PM10		PM2.5
	1-Hr		8-Hr	1-Hr		8-Hr		1-Hr	24-Hr		24-Hr*		24-Hr**
	Nat	Cal	Nat	Nat	Cal	Nat	Cal	Cal	Nat	Cal	Nat	Cal	Nat
1998	8	29	16	0	0	0	0	0	0	0	0	5	-
1999	3	2	9	0	0	0	0	0	0	0	0	12	-
2000	3	12	4	0	0	0	0	0	0	0	0	7	1
2001	1	15	7	0	0	0	0	0	0	0	0	10	5
2002	2	16	7	0	0	0	0	0	0	0	0	6	5
2003	1	19	7	0	0	0	0	0	0	0	0	6	0
2004	0	7	0	0	0	0	0	0	0	0	0	7	1
2005	0	9	1	0	0	0	0	0	0	0	0	6	0
2006	0	18	12	0	0	0	0	0	0	0	0	15	10
2007	1	4	9	0	0	0	0	0	0	0	0	4	14

* PM10 is sampled every sixth day – actual days over standard can be estimated to be six times the numbers listed.
 ** On Dec. 17, 2006, U.S. EPA revised the PM10 standard from 65 to 35 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. A number of VOCs currently used in coating and solvent formulations have also been identified as TACs, such as ethylene-based glycol ethers, trichloroethylene (TCE), and toluene.

Two particular TACs used in some consumer products, methylene chloride and perchloroethylene, are specifically exempted from the VOC definition because of their very low ozone-forming capabilities. As a result, some manufacturers may choose to use methylene chloride or perchloroethylene in the reformulations to reduce the VOC content in meeting future limits. Product liability and regulations such as California’s Proposition 65 are expected to minimize the use of toxic materials because manufacturers would have to provide public notices if any Proposition 65 listed-material is used.

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.

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.

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.

Discussion of Impacts

III a. The objectives of the proposed rule amendments are to lower the VOC content limit in wood product coatings used and produced in the Bay Area. The proposed amendments would reduce VOC emissions from facilities that manufacture and use wood products coatings 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 8-32 would implement Control Measure SS-5 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 8-32 are expected to reduce VOC emissions from wood coatings. There are approximately 200 businesses permitted in the District that use a significant

amount of wood products coatings. Total existing emissions from wood coating operations are estimated to be 1.48 tpd.

The proposed amendments to Rule 8-32 are expected to result in a 30 percent reduction in emissions so that VOC emissions from wood coatings are expected to be a total of 1.03 tons per day (a reduction of 0.45 tpd or 30 percent). The largest emission reductions are expected from the proposed reduction of VOC content in sanding sealers. The proposed amendments require both clear and pigmented sealers to reduce VOC content from 550 grams per liter to 275 grams per liter for all wood product types. Sealers represent about 40 percent of the wood coatings sold in the Bay Area. In addition, use of lower VOC topcoats or conversion varnish for furniture, custom cabinets, and custom architectural millwork also make a significant reduction in VOC emissions. Additional VOC reductions are expected from reducing the VOC content of stains and fillers.

The proposed amendments are not expected to require substantial changes or any major construction activities at affected facilities. Coating manufacturers would be able to lower the VOC content limit in wood product coatings with existing equipment and facilities. Since the affected facilities would be able to implement the amendments to Regulation 8-32 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 facilities that manufacture wood coatings. A new wood coating manufacturing facility would likely be required to undergo a siting review and approval by the local cities or counties (with or without the proposed rule amendments).

To obtain further VOC emissions from coating products it is expected that coatings would be reformulated with water-based or exempt compound formulations (e.g., acetone). During the development of CARB's Suggested Control Measure for Architectural Coatings, industry comments raised concerns regarding a number of issues associated with the use of lower VOC content limits for coating products including: (1) the use of lower VOC coatings will result in a thicker film coating; (2) the use of lower VOC coatings will result in excessive thinning of the coating; (3) the use of lower VOC coatings requires the use of additional primer for proper adhesion to the substrate; (4) lower VOC coatings will require the use of more coats; (5) the use of lower VOC coatings will require more frequent recoating, touch-up and repair work; (6) the use of lower VOC coatings will result in product substitution by end-users; and (7) the use of lower-VOC coatings may result in coatings with higher reactivity (CARB, 2007). These issues have been studied by the U.S. EPA, CARB, and SCAQMD as part of rulemaking activities (Federal Register, CARB 2007, SCAQMD 1999).

CARB staff evaluated manufacturers' product data sheets and available testing data for low VOC coatings. CARB concluded that these coatings had substrate preparation, coverage rates, and performance similar to their higher VOC counterparts without the need for excessive thinning (CARB, 2007). The same is expected to be true for wood products coatings. In addition, compliant wood products coatings are currently used in other air districts in California.

Based on the preceding analysis of potential secondary air quality impacts from implementing future architectural coatings rules, it is concluded that the overall air quality effects will be a VOC emission

reduction. Therefore, based on the significance criteria, impacts associated with the use of lower VOC coatings will be less than significant.

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 (CO₂). 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). CO₂ is not commonly used in wood coatings production. The reformulation of wood products coatings is not expected to require the combustion of additional fuel nor increase the generation of GHG emissions. No increase in the use or production of wood coatings is expected due the proposed amendments to Regulation 8-32. One option to comply with the proposed amendments is to use abatement equipment rather than reduced VOC coatings. The use of abatement equipment, particularly incineration, would cause a slight increase in GHG. Because VOC limits consistent with the proposal have already been implemented in other air districts such as the South Coast, lower VOC coatings are available, so it is not expected that facilities will opt to comply by installing abatement equipment. 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. Most facilities are expected to comply with the proposed amendments to Regulation 8-32 by lowering the VOC content in coatings manufactured and used in the Bay Area. A number of VOCs currently used in coating and solvent formulations have also been identified as TACs, such as ethylene-based glycol ethers, TCE, and toluene. When a product is reformulated to meet new VOC limits, however, a manufacturer could use a chemical, not used before, that may be a TAC. The proposed amendments to Regulation 8-32 do not provide exemptions to compounds that are TACs so there is no incentive to use TACs.

Conventional solvents include chemicals such as toluene, xylene, methyl alcohol, Stoddard Solvent, methyl ethyl ketone (MEK), isopropyl alcohol, ethylene glycol monobutyl ether (EGBE), ethylene glycol monomethyl ether (EGME), and ethylene glycol monoethyl ether (EGEE). The coatings and solvents being reformulated to comply with the proposed amendments are such chemicals as acetone, parachlorobenzotrifluoride (PBCTF), propylene glycol monomethyl ethers, di-propylene glycol monomethyl ethers (DPM), 3-ethoxypropanoic acid (an ethyl ester), and isopropyl alcohol, as well as water. Table 3-5 provides a summary of toxicity data associated with conventional coatings and products commonly used in reformulated coatings and surface preparation and cleaning solvents.

**TABLE 3-5
Toxicity of Conventional and Replacement Solvents**

Conventional Solvents				
Solvents	TLV (ACGIH) (ppm)	PEL (OSHA) (ppm)	STEL ⁽²⁾ (ACGIH) (ppm)	IDLH (NIOSH) (ppm)
Toluene	50	200		500
Xylene	100	100	150	900
MEK	200	200	300	3000
Stoddard Solvent	100	500	Not Available	3448
Ethyl Alcohol	1000	1000	Not Available	3300 ⁽³⁾
Methyl Alcohol	200	200	250	6000 ⁽³⁾
Isopropyl Alcohol	400	400	500	2000 ⁽³⁾
EGBE	25	50	Not Available	700
EGEE	5	200	Not Available	500
EGME	5	25	Not Available	200
Replacement Solvents				
Acetone	750	1000	1000	2500 ⁽³⁾
Texanol	Not Established	Not Established	Not Established	Not Established
Di-Propylene Glycol	Not Established	Not Established	Not Established	Not Established
Propylene Glycol	3.21 ⁽¹⁾	Not Established	Not Established	Not Established
Ethylene Glycol	39	Not Established	Not Available	Not Established
PCBTF	25 ⁽⁴⁾	Not Established	Not Established	Not Established
1,1,1-trichloroethane	350	350	450	700
Methylene Chloride	50	500	Not Available	2300
n-Butyl Acetate	150	150	200	1700 ⁽³⁾
t-Butyl Acetate	200	200	Not Available	1500 ⁽³⁾
Isobutyl Acetate	150	200	250	1300 ⁽³⁾
Methyl Acetate	200	200	250	3100 ⁽³⁾
TDI	0.005	0.02	0.02	2.5
HDI	0.005 ⁽⁴⁾	Not Established	Not Established	Not Established
MDI	0.005	0.02	0.02	7.33

(1) 2007 AIHA Workplace Environmental Exposure Level; (2) STEL = short-term exposure limit (usually 15 minutes); and (3) Based on 10 percent of the lower explosive limit.

In general, replacement solvents for reformulated products are for the most part common chemicals used in a wide variety of industrial and consumer applications. Their widespread use indicates that users have the ability to use these compounds in a safe manner. Current coating formulations contain materials that are as toxic as, or more toxic than, formulations expected to be used to comply with proposed amendments to Regulation 8-32. Thus, the possible increased use of potentially toxic materials in reformulated solvents/coatings are expected to be balanced by a concurrent decrease in the use of materials in currently used products that are typically more toxic, so TAC impacts would not be expected to increase compared to existing conditions. According to the studies conducted by CARB, it was concluded that the general public and coating applicators would not be exposed to either long-term or short-term health risk due to the application of compliant coatings (CARB, 2007). It is expected that

future compliant materials will contain less hazardous materials (or will contain non-hazardous materials) as compared to previous solvent-borne coatings, resulting in an environmental benefit because the reformulated coatings and solvents are less toxic than previous solvent-borne coatings and solvents. Therefore, the proposed amendments to Regulation 8-32 are not expected to result in an increase in toxic air contaminants.

III e. The proposed amendments are not expected to result in an increase in odors. The proposed amendments to Regulation 8-32 are expected to reduce VOC emissions from the coating of wood products. The use of coatings with lower VOC limits are 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflicting with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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.?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 wood products coatings. 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 wood products coatings are used 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 8-32 would further reduce the VOC content of wood products coatings, primarily through reformulation. The amendments to Regulation 8-32 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside a formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 wood products coatings and applications affected by the proposed rule amendments to Regulation 8-32 are located throughout the area within the jurisdiction of the BAAQMD.

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 wood products coatings. There are existing laws designed to protect and mitigate potential impacts to cultural resources. Amendments to Regulation 8-32 are not expected to affect archeological or cultural sites because reformulation of wood products coatings would not require any construction activities. Existing facilities 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 8-32. As a result, no significant adverse impacts to cultural resources are expected due to the proposed amendments to Regulation 8-32.

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:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• 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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Strong seismic groundshaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 wood products coatings and 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. Wood products coatings are applied to new and existing wood products. No major construction activities would be required as a result of adopting the proposed amendments to Regulation 8-32, as the proposed amendments affect coating formulators, sellers, and users, and have no effects on geophysical formations in the District as no new structures would need to be constructed. Coating activities and operations would not change from current practices, i.e., people will not be exposed to adverse geological effects greater than what currently exists. Wood coating products manufacturer's may have to modify individual processes and procedures and may require new equipment to ensure it continues to meet the quality standards for its specific products using lower VOC coatings. Facilities may have to adjust spray techniques, drying techniques, and other internal procedures to accommodate the characteristic of lower VOC and water-borne coatings, but major construction activities are not expected. No significant adverse impacts from seismic hazards are expected since no new major development is required to implement the proposed amendments to Regulation 8-32.

VII b. The proposed amendments to Regulation 8-32 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, the lowering of VOC content limits of affected wood products coatings would not result in substantial soil erosion or the loss of topsoil as no major construction activities would be required.

VII c – e. The proposed amendments to Regulation 8-32 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 8-32.

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Setting

The affected coating manufacturing 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 includes 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 8-32 will lead to a reduction in VOC emissions from wood product coatings. Most affected facilities are expected to comply with the proposed amendments to Regulation 8-32 by reducing the VOC content limit of coatings. There are no provisions in the proposed amendments that would increase the total amount of coatings currently used by affected facilities. The use of new formulations of coatings may alter chemical constituents of the solvents used in these operations. CARB concluded in the SCM for architectural coatings that coating manufacturers will continue the trend of using less hazardous solvents in compliant coatings. It is expected that this will continue to be the trend with wood products coatings as well and future compliant coatings will contain less hazardous materials, or non-hazardous materials, compared to conventional coatings, resulting in a net benefit regarding hazards (CARB, 2006).

Wood coating operations are not expected to change from current practice and, thus, the amount of solvents used or transported is not expected to increase. In fact, the use of water-borne formulations will result in a decrease in solvent use and transport. Therefore, 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.

It is assumed that coatings would be reformulated as water-based or with solvents such as parachlorobenzotrifluoride (PCBTF) or acetone. There are two hazards to be considered when evaluating hazard impacts from reformulating coatings and solvents; flammability and ignitions/explosions. Reformulation with water-based coatings would reduce the risk of flammability, since solvents are not typically included as part of the formulation of these coatings. TBAC and acetone have the same flammability rating as the conventional solvents that would be replaced (toluene, xylene, MEK) (see Table 3-6). The National Fire Protection Association (NFPA) Flammability Classification for PCBTF is the lowest of the solvents evaluated (1 = combustible if heated versus 3 = warning: flammable liquid flash point below 100 degrees Fahrenheit (F)). Consequently, no increase in flammability due to reformulation is expected.

The auto-ignition temperature of a substance is the temperature at or above which a material will spontaneously ignite (catch fire) without an external source of ignition, such as a spark or flame. Flash point is the lowest temperature at which a liquid would have a concentration in the air near the liquid surface which could be ignitable by an external source of ignition (spark or flame). The lower the flash point, the easier it is to ignite the material. PCBTF has characteristics that are similar to the solvents likely to be replaced; however, PCBTF's auto-ignition temperature is lower. While the auto-ignition temperature for PCBTF is the lowest of the solvents presented it is still 194 degrees F and the flashpoint temperature of 109 degrees F is higher than both the replacement solvents evaluated (CARB, 2006).

TABLE 3-6

Chemical Characteristics for Common Solvents

Chemical Compounds	M.W.	Boiling Point (F)	Flashpoint (F)	Vapor Pressure (mmHg @ 68 F)	Lower Explosive Limit (% by Vol.)	Flammability Classification (NFPA)*
Traditional/Conventional Solvents						
Toluene	92	231	40	22	1.3	3
Xylene	106	292	90	7	1.1	3
MEK	72	175	21	70	2.0	3
Isopropanol	60	180	53	33	2.0	3
Butyl Acetate	116	260	72	10	1.7	3
Isobutyl Alcohol	74	226	82	9	1.2	3
Stoddard Solvent	144	302-324	140	2	0.8	2
Petroleum Distillates (Naphtha)	100	314-387	105	40	1.0	4
EGBE	118	340	141	0.6	1.1	2
EGME	76	256	107	6	2.5	2
EGEE	90	275	120	4	1.8	2
Replacement Solvents						
Acetone	58	133	1.4	180	2.6	3
Di-Propyl Glycol	134	451	279	30	1	1
Propylene Glycol	76	370	210	0.1	2.6	1
Ethylene Glycol	227	388	232	0.06	3.2	1
Texanol	216	471	248	0.1	0.62	1
Oxsol 100	181	282	109	5	0.90	1

Source: SCAQMD, 2005

*National Fire Protection Association. 0 = minimal; 1 = slight; 2 = moderate; 3 = serious; 4 = severe

Acetone, the solvent with the highest flammability rating, has characteristics that are similar to the conventional solvents it would likely replace; however, the flash point temperature is the lowest compared to all solvents evaluated. Acetone vapors will not cause an explosion unless the vapor concentration exceeds 26,000 ppm. In contrast, toluene vapors can cause an explosion at 12,000 ppm; the concentration of MEK that could cause an explosion is 14,000 ppm; and the concentration of xylene vapors that could cause an explosion is even lower at 10,000 ppm. Under operating guidelines of working with flammable materials in well-ventilated areas, as prescribed by the fire department codes, it would be difficult to achieve concentrated streams of such vapors. Therefore, reformulation is not expected to increase, and may actually reduce, ignition or explosion hazards.

The following safety practices and application techniques are recommended by the National Association of Corrosion Engineers (NACE) and the Society for Protective Coatings during the application of coatings and solvents including future compliant coatings and surface preparation and cleaning solvents.

- **Worker Isolation** – Areas where coatings with hazardous materials are applied should be restricted to essential workers. If feasible, these workers should avoid direct contact with hazardous materials by using automated equipment or an area with plenty of ventilation.
- **Protective Clothing and Equipment** – When there is the potential for hazardous material exposure, workers should be provided with and required to use appropriate personal protective clothing and equipment such as coveralls, footwear, chemical-resistant gloves and goggles, full faceshields, and suitable respiratory equipment.
- **Respiratory Protection** – Only the most protective respirators should be used for situations involving exposures to hazardous materials because they have poor warning properties, are potent sensitizers, or may be carcinogenic. Any respiratory protection program must, at a minimum, meet the requirements of the OSHA respiratory protection standard [29 CFR 1910.134]. Respirators must be certified by NIOSH and MSHA according to 30 CFR or by NIOSH (effective July 19, 1995) according to 42 CFR 84.
- **Worker and Employer Education** – Worker education is vital to a good occupational safety and health program. OSHA requires that workers be informed about hazardous materials they work with, potential hazards of those materials, training to minimize hazards, potential health effects of exposure, and methods to prevent exposure.

The fire departments regulate spray application of flammable or combustible liquids. They require no open flame, spark-producing equipment, or exposed surfaces exceeding the ignition temperature of the material being sprayed within the area. For open spraying, no spark-producing equipment or open flame shall be within 20 feet horizontally and 10 feet vertically of the spray area. Anyone not complying with the guidelines would be in violation of the current fire codes. The fire departments limit residential storage of flammable liquids to five gallons and recommends storage in a cool place. If the flammable coating container will be exposed to direct sunlight or heat, storage in cool water is recommended. Finally, all metal containers involving the transfer of five gallons or more should be grounded and bonded.

Thus, applicators are not expected to require additional training regarding the proper handling or application of compliant coatings containing hazardous materials which will further reduce the applicator's exposure because these safety measures tend to be established in existing affected facilities.

Based upon all of the above considerations, hazard impacts are expected to be less than significant. It is expected that the lower VOC content coatings will contain less hazardous materials, or non-hazardous materials, as compared to conventional coatings, resulting in a net benefit regarding hazards. Reformulation with water-based coatings would reduce the risk of flammability, since solvents are not typically included as part of the formulation of these coatings and replacement solvents, like acetone, have the same flammability rating as the conventional solvents that would be replaced (toluene, xylene, MEK). Replacement solvents generally have auto-ignition temperature and flash point temperature characteristics that are similar or better than conventional solvents. Reformulation is not expected to increase, and may actually reduce, flammability, ignition and explosion hazards. 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 wood products coatings manufacturers. 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. Wood products coatings manufacturing facilities 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 wood products coatings manufacturers. 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 lowering the VOC content limit in applicable coatings. 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 8-32. Therefore, no significant adverse impacts on an airport land use plan or on a private air strip are expected.

VII g. No significant impacts on emergency response plans are anticipated from the proposed rule amendments. Reducing the VOC content of affected coatings is 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. The coating manufacturers 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 8-32.

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
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VIII. HYDROLOGY AND WATER QUALITY.

Would the project:

a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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.

The wood products coatings and operations affected by the proposed rule amendments are located throughout 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. It 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 which 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 8-32, which would apply to wood products coatings manufacturing facilities and coating applicators throughout the Bay Area. Lowering the VOC content limit of certain wood products coatings at affected facilities will have no direct or indirect impact on hydrology and water quality because the reformulation of the coatings is not expected to change the current wood products coatings operation practices or alter the coating formulations to be more detrimental to water quality.

It is reasonable to assume that additional water will be used for the manufacture of wood products coatings as one of the impacts of the proposed amendments to Regulation 8-32 could be the increased production of water-based coatings. CARB estimated the increased water demand in the Bay Area associated with its proposed architectural coatings Suggested Control Measure would be about 6.28 million gallons per year by 2010 or about 17,206 gallons per day (CARB, 2000). The primary objective of CARB's control measure was to set VOC limits and other requirements that are feasible (based on current technology) and that will achieve significant emission reductions in VOC emissions from architectural coatings. Larger quantities of architectural coatings are used in the Bay Area than wood products coatings as the use of architectural coatings is more wide spread. For the purposes of this analysis, wood products coatings are assumed to be about 10 percent of the use of architectural coatings, so the manufacture of wood products coatings is estimated to require about 628,000 gallons of water per year or about 1,700 gallons per day in the Bay Area. Using this estimate for water demand is expected to be conservative because many of the manufacturer's of wood coatings have already reformulated some of the coatings because of existing rules and regulations in other parts of the state. This potential increase in water demand is within the capacity of water supplied from various sources in the Bay Area (estimated water demand of about 1,880 billion gallons per year in 2010) (CARB, 2000) and is not considered significant compared with current and projected future demand and supply. While there are projected drought-year shortages in some regions of California, these shortages would occur regardless of the proposed rule amendments.

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.

The proposed amendments to Regulation 8-32 are not expected to adversely impact water quality since the use of less toxic exempt solvents is expected to result in equivalent or lesser water quality impacts than currently used solvents. 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 significant adverse impacts are anticipated from implementation of the proposed amendments.

The amendments to Regulation 8-32 are not expected to adversely impact water quality because the use of exempt solvents is expected to result in equivalent or lesser water quality impacts than currently used solvents due to the compliant solvents being less toxic. Further, because a certain portion of currently available compliant coatings are already based on water-borne technology, no additional water quality impacts from future compliant waterborne coatings are expected because these coatings are also expected to be waterborne, but make up the same proportion of water-borne coatings as are currently used prior to the amendments. Finally, the amendments to Regulation 8-32 are not expected to promote the use of compliant coatings formulated with hazardous solvents that could create water quality impacts.

VIII g – i. The wood products coatings manufacturing operations and applicators affected by the proposed rule amendments are located throughout the area within the jurisdiction of the BAAQMD. No major construction activities are expected due to the adoption of the proposed amendments to Regulation 8-32. Coatings manufacturers 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 wood products coatings manufacturing operations and applicators affected by the proposed rule amendments are located throughout the area within the jurisdiction of the BAAQMD. No major construction activities are expected due to the adoption of the proposed amendments to Regulation 8-32. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 wood products coatings and operations affected by the proposed rule amendments are located throughout the area within the jurisdiction 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 8-32 would directly affect applicable land use plans, zoning ordinances, habitat conservation, or natural community conservation plans. Wood products coatings operations are expected to comply with Regulation 8-32 by reducing VOC content in coatings. These changes are expected to occur within the confines of existing 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 8-32, so no impacts on land use are expected. Wood products coatings 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 wood products coatings and operations affected by the proposed rule amendments are located throughout the area within the jurisdiction 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 lower VOC content in wood products coatings, 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 not expected from the implementation of the proposed amendments to Regulation 8-32.

	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Expose persons to or generate of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be located within the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 wood products coatings and operations affected by the proposed rule amendments are located throughout the area within the jurisdiction of the BAAQMD.

Regulatory Background

Noise issues related to construction and operation 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 wood products coatings and operations affected by the proposed rule amendments already exist and it is expected that while wood products coatings operations are not noise intensive, coatings manufacturers would comply with existing relevant local community noise standards and ordinances. Wood products coatings formulators and coating contractors affected by the proposed rule amendments would be required to use coatings reformulated with lower VOC content. No major construction activities would be required due to the adoption of the proposed amendments to Regulation 8-32 so that no noise impacts associated with the use of construction equipment and construction-related traffic is expected.

Noise from the proposed amendments is not expected to produce noise in excess of current operations at facilities that manufacture wood products coatings. In general, the primary noise sources at existing facilities that manufacture wood products coatings 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 8-32 will comply with all existing noise control laws or ordinances. Further, the OSHA and Cal/OSHA have established noise standards to protect worker health. Additionally, compliance with amendments to Regulation 8-32 is not expected to create significant noise impacts as lowering VOC content in wood products coatings will not affect noise levels from coating operations or applications as contractors would continue to use the same or similar 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 lowering of VOC content in certain wood products coatings 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 8-32 will not affect noise levels from coatings manufacturing or applications as manufacturers 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 wood products coatings and operations affected by the proposed rule amendments are located throughout the area 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 the proposed amendments. The minor facility modifications that may be required by the proposed amendments can be completed within the existing coatings manufacturing facilities in the Bay Area. Further, it is not expected that the minor facility modifications 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 8-32. 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
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 wood products coatings and operations affected by the proposed rule amendments are located throughout the area within the jurisdiction of the BAAQMD.

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 lowering of VOC content in certain wood products coatings, but all modifications would occur within the confines of the existing wood products coatings

manufacturers. The proposed amendments would not impact existing security and, therefore, are not expected to impact police services or require additional police protection.

Reformulation of coatings is not expected to require new or additional fire fighting resources. It is more likely that compliant coatings will be reformulated with less hazardous materials compared to current coatings, 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, coating materials compliant with the proposed amendments to Regulation 8-32 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 coatings manufacturers (e.g., workforce) are expected to be sufficient to accommodate any modifications or conversions that may be necessary at affected facilities and the reformulation of coatings 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.?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 wood products coatings and operations affected by the proposed rule amendments are located throughout the area within the jurisdiction of 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 8-32 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 on recreation 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
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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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Substantially increase hazards because of a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Result in inadequate emergency access? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Result in inadequate parking capacity? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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 multilane 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 restriped 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 8-32, no increase in construction-related traffic is expected.

Wood products coatings manufacturers are not expected to increase or decrease the amount of coatings they produce, and coating contractors are not expected to change the amount of coatings they apply, as a result of the proposed rule amendments. Therefore, the number of trucks needed to deliver the materials to produce lower VOC content coatings should not significantly change from the current number of delivery trucks, and the number of trucks required to distribute reformulated coating 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 wood products coatings manufacturers 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 VOC content coatings 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 coatings manufacturing facilities. Thus, the proposed amendments are not expected to increase traffic hazards or create incompatible uses at or adjacent to the affected coatings manufacturing 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 wood products coatings manufacturing 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 wood products coatings manufacturing 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
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XVI. UTILITIES AND SERVICE SYSTEMS.

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 area wood products coatings manufacturers, 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 King's 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 primarily located within the confines of existing wood products coatings manufacturing facilities. The proposed rule amendments are not expected to generate additional wastewater at the affected facilities. 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 VOC content in certain wood products coatings. 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 the 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. Coating operations are not expected to change as a result of the proposed amendments to Regulation 8-32. The volume of coatings and coating wastes 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 VOC content limit in certain wood products coatings. 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. Therefore, potential adverse solid waste impacts are considered to be less than significant.

	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 emission reductions from wood products coatings, 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 facilities and applications, thus providing a beneficial air quality impact, improvement in air quality, and reduced health impacts due to reduce exposure to VOC emissions. 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 VOCs 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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