

CHAPTER 5

PROJECT ALTERNATIVES

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INTRODUCTION

This Draft SEA provides a discussion of alternatives to the proposed project although not required under CEQA since no significant impacts have been found. Alternatives include measures for attaining the objectives of the proposed project and provide a means for evaluating the comparative merits of each alternative. A “No Project” alternative must also be evaluated. The range of alternatives must be sufficient to permit a reasoned choice, but need not include every conceivable project alternative. CEQA Guidelines §15126.6(a) specifically notes that the range of alternatives required in a CEQA document is governed by a ‘rule of reason’ and only necessitates that the CEQA document set forth those alternatives necessary to permit a reasoned choice. The key issue is whether the selection and discussion of alternatives fosters informed decision-making and meaningful public participation. A CEQA document need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative. SCAQMD Rule 110 does not impose any greater requirements for a discussion of project alternatives in an environmental assessment than is required for an EIR under CEQA.

ALTERNATIVES REJECTED AS INFEASIBLE

A CEQA document should identify any alternatives that were considered by the lead agency, but were rejected as infeasible during the Scoping process and explain the reasons underlying the lead agency’s determination (CEQA Guidelines §15126(d)(2)). The NOP/IS prepared for PAR 1113 included seven concepts that could possibly be further developed into project alternatives. Members of the Industry Working Group (see “Industry Working Group Meetings” discussion in Chapter 2 originally recommended most of these concepts. One of the concepts identified in the NOP/IS, product line averaging, has been incorporated as a component of PAR 1113. An alternative VOC content limit alternative has been further developed as Alternative B.

Upon further consideration and evaluation, some of the alternatives concepts originally identified by the Industry Working Group and included in the NOP/IS have been determined to be infeasible as the basis for a specific project alternative. These concepts and the rationale for rejecting them as infeasible are discussed in the following subsections.

Low Vapor Pressure (Low Volatility) Exemption

Under this alternative, VOC emission limits would be based on the volatility of affected coatings’ VOC compounds rather than the VOC content of the coating. Thus, under this alternative, VOC compounds with low vapor pressures may be exempted as a VOC from

the overall VOC content of the coating. This alternative has been rejected as infeasible as described in the following paragraphs.

Currently several solvents are used in consumer products and architectural coatings that are considered low volatility compounds, meaning that they have a vapor pressure of less than 0.1 mm of Hg at 20 degrees Celsius. Although CARB has included a low vapor pressure (LVP) exemption in their Consumer Products regulation, CARB staff indicates that the LVP exemption was placed into the proposed regulation because of specific additives found in consumer products, such as surfactants, paraffin's, and other heavier compounds that are typically washed away before they evaporate into the air. Furthermore, CARB has indicated that the LVP exemption was not intended to apply to solvents used in AIM coatings, since these solvents are intended to evaporate into the air. For that resin, CARB has not provided an LVP exemption in their aerosol paints rule.

USEPA also did not include an LVP exemption in the National AIM Rule and USEPA staff has communicated to the SCAQMD that they do not support an LVP exemption for the architectural coatings rule. USEPA staff concludes that any VOCs (non-exempt solvent species) that are included in the approved test method are considered to be part of the overall VOC content of the coating, and should not be exempted. Using the currently approved test method, testing of coatings containing some of the LVP solvents includes identifying some LVP solvents as VOCs. As a result, because a LVP exemption is not appropriate for paints, a low vapor pressure alternative is considered to be infeasible and, therefore, has not been included as a project alternative in this Draft SEA.

Performance-Based Standards

Members of the Industry Working Group also originally raised the concept for a performance-based rule provision or project alternative. Rather than establish lower VOC content requirements for specified categories of coatings, this alternative would establish emission standards based on performance standards such as emissions per area covered or coating durability.

This alternative was rejected as infeasible because no consensus could be reached on how to create a standard to cover the multitude of coating formulations with varying performance characteristics. For example, alkyd-based coating formulations for some applications currently have a life cycle of five to seven years, while urethane-based coating formulations for similar applications may have a life cycle of approximately 20 years. In this situation, the performance standard could be seven years, 20 years, or some time frame in-between these numbers. Agreement could not be reached concerning the appropriate standard for each type of coating technology. As a result, this alternative has been dropped from further consideration.

Reactivity-Based Alternative

This alternative would regulate coatings based upon the reactivity of the solvent used rather than establish VOC content requirements. A number of studies have been conducted in the field of atmospheric chemistry that conclude that many different types of VOCs are emitted into the atmosphere, each reacting at different rates. The architectural coatings industry has suggested that VOC control strategies taking reactivity into account can potentially achieve ozone reductions in a more cost-effective manner than strategies that reduce VOC mass emissions.

The use of reactivity as a regulatory tool has been debated at the local, state, and national level for over 20 years. Reactivity issues were thoroughly assessed during the VOC RECLAIM rule development process over a period of several years. The results were inconclusive.

The use of reactivity as a regulatory tool has been debated at the local, state, and national level for over 20 years. For example, CARB incorporated a reactivity-based control strategy into its California Clean Fuel/Low Emissions Vehicle regulations, where reactivity adjustment factors are employed to place regulations of exhaust emissions from vehicles using alternative fuels on an equal ozone impact basis. CARB is evaluating a similar strategy for consumer products and industrial emissions, and contracted with Dr. William Carter, University of California at Riverside, Center for Environmental Research and Technology, College of Engineering, for a two-year study to assess the reactivities of VOC species found in the consumer products emissions inventory. Dr. Carter, one of the principal researchers of reactivities of various VOC species, plans to further study VOC species, more specifically glycol ethers, esters, isopropyl alcohol, MEK, and an octanol, since these are typically found in either waterborne coatings, solvent-borne coatings, or both. These specific VOCs have been prioritized based on emissions inventory estimates, mechanistic uncertainties, and lack of information in the current reactivity data. Under the current models and ozone chamber studies, however, Dr. Carter has been unable to assess the reactivity of low volatility compounds, and has not succeeded in reducing the uncertainties of key VOC species used in AIM coatings. He did identify the state of science with respect to VOC reactivity and described areas where additional work is needed in order to reduce the uncertainty associated with different approaches to assessing reactivity.

Another factor to be considered in the reactivity based approach, and probably the most important, is an accurate speciation profile of waterborne and solvent-borne coatings. CARB, in its effort to get more detailed information about the speciation profiles, required speciation profiles of all coatings included in the 1998 CARB Survey. The results of the speciation data are still under evaluation, and could potentially be used for future reactivity-based architectural coatings control.

In addition to the uncertainties associated with speciation profiles for all coatings, the following uncertainty factors that must be addressed prior to any rule making based on reactivity:

- Ozone impacts of VOCs depend on the environment where the VOC is being emitted;
- The variability or uncertainty in the chemical composition of the VOC source being considered; and
- The complexity and uncertainties in the atmospheric processes by which emitted VOCs react to form ozone

Although the science of VOC reactivity has matured over the past few years, more comprehensive studies are still being conducted to resolve the uncertainties of reactivity data. The experts in the field, including Dr. Carter, have indicated the need to improve estimates of atmospheric ozone reactivity factors for selected major classes of compounds in the consumer product emissions inventory. They also feel the need to improve the quantification of the uncertainty ranges of atmospheric reactivity factors for the classes of species typically found in coatings. In the near future, with funding from USEPA and private sources, a new, state-of-the-art ozone chamber will be developed and used for future studies. It was agreed at a March 1, 2001 CARB meeting that first two compounds to be modeled in the ozone chamber would be texanol ester alcohol and mineral spirits because they were at the top of the usage list from CARB's surveys. Furthermore, the architectural coatings industry is funding additional studies to further understand the mechanistic and kinetic reactivities of different VOC species. The results of all the aforementioned research and studies will be invaluable in determining the extent to which a reactivity based approach can be relied on for regulating VOC emissions from the application of coatings and the use of solvents.

In its Report to Congress on a Study of Volatile Organic Compound Emissions from Consumer and Commercial Products (EPA-453/R-94-066-A), USEPA also supported the reactivity-based approach, but also stated, "Because of uncertainties, inconsistencies, and lack of reactivity data on individual compounds, ... a rigorous determination of the potential of consumer and commercial products to contribute to ozone nonattainment is not possible at this time ... If, in the future, sufficient information or new methodologies become available, the EPA may reevaluate this finding." As a result, EPA is regulating AIM coatings based upon VOC content and not reactivity.

Based on the current state of information, there is insufficient evidence to conclude that waterborne coatings actually contain more reactive solvents than solvent-based coatings. As a result, the SCAQMD believes that a reactivity-based alternative is not a feasible alternative at this time because there is not enough data or other information available to support such an alternative because atmospheric science data available are incomplete. However, the SCAQMD does support continued research that would enhance the state of science in this field. To that end, PAR 1113 includes a provision that commits the Executive Officer to conduct a study to further assess the reactivity of architectural coatings.

Regional Deregulation

Areas in the district that do not have an ozone problem or contribute to the SCAQMD's ozone problem would be exempted from the VOC content requirements of the proposed amendments. This alternative was rejected as infeasible for the reasons specified in the following paragraphs.

A similar concept to regional deregulation (geographic shift control strategy) was considered as a project alternative to the 1997 AQMP. For this AQMP alternative, air quality modeling was performed to determine its viability. The results of the analysis indicated that the geographical shift alternative was difficult to model because the model is dependent on meteorological conditions. For example, depending on the meteorological conditions used, it was difficult to determine whether or not an excellence in one source receptor area (SRA) was due to the emissions sources in that SRA or the result of wind conditions in which emissions from an upwind SRA were transported to a second SRA, causing a violation in the second SRA.

As indicated in the preceding paragraph, ozone is a regional problem, not a localized problem, and is affected by high ambient NO_x concentrations. Although the district currently is in attainment with both the national and California ambient air quality standards for NO₂, ambient NO_x concentrations are sufficiently high that this alternative would not contribute appreciably towards attaining the national or California ambient air quality standards for ozone. For this reason and the reason cited in the preceding paragraph, the regional deregulation alternative is not considered to be a feasible alternative.

Seasonal Regulation

The low-VOC content limits proposed for various coatings in PAR 1113 would only be in effect during the “high ozone season” (i.e., typically the summer months). During the “low ozone season” (i.e., typically the winter months), coatings subject to the currently proposed amendments with higher VOC content limits could be used. A comment was made in one of the comment letters received on the NOP/IS that this alternative might not be feasible for coatings used “on large-scale, long-term new construction and maintenance projects – where the work of many trades is coordinated through a “critical path” schedule –“ and coatings used for low-volume touch-up and repair work.

Based on discussions with industry, staff has determined that this alternative is infeasible because it may be difficult for coatings distributors to manage architectural coating stocks to ensure that only compliant coatings are sold during the high ozone season. As a result, this alternative is rejected as infeasible due to this lack of enforceability.

DESCRIPTION OF ALTERNATIVES

The rationale for selecting and modifying specific components of the proposed amendments to generate feasible alternatives for analysis is based on CEQA's requirement to present "realistic" alternatives; that is, alternatives that can actually be implemented. The following alternatives were developed by identifying and modifying major components of PAR 1113. Specifically, the primary components of the proposed alternatives that have been modified are the interim compliance dates, the final compliance dates, and the range of exemptions. In general, the range of alternatives to PAR 1113 is relatively limited because the technology and data regarding alternative approaches is limited or not well understood as explained in the above "Alternatives Rejected as Infeasible" section. Further, the final VOC content limit requirements are driven by the VOC emission reductions identified in the 1997 AQMP control measure CTS-07, which are necessary if the district is to attain and maintain the state and national ambient air quality standards for ozone.

Table 5-1 identifies the major components of PAR 1113 and each of the project alternatives. All other components of PAR 1113 not identified in the following subsections or in Table 5-1 would also be included in the proposed project alternatives.

Alternative A - No Project

This alternative assumes that the proposed amendments to Rule 1113 will not be adopted. Existing Rule 1113 would remain in effect with no modifications. As a result, VOC emissions from architectural coatings would not be further reduced to meet 1997 AQMP goals.

Alternative B – Extended Final Compliance Alternative

Alternative B would extend the compliance date for final VOC content limits to January 1, 2008. The interim and the final VOC content limits for affected coatings would be identical to those proposed for PAR 1113.

TABLE 5-1
PAR 1113 AND PROJECT ALTERNATIVES¹

Coating Category	Alternative A – No Project	Proposed Amended Rule 1113		Alternative B – Extended Final Compliance		Alternative C – No Final IM/RP VOC Content Limit ¹	
	Current Limit (G/L)	Proposed Limit (G/L)	Compliance Dates	Proposed Limit (G/L)	Compliance Dates	Proposed Limit (G/L)	Compliance Dates
Bituminous Roof Coatings	300	250	01/01/03	250	01/01/03	250	01/01/03
Chemical Storage Tank	420	400	07/01/06	100	07/01/08	100	07/01/06
Essential Public Service Coating	420	340	01/01/03	340	01/01/03	340	01/01/03
		400	07/01/06	100	07/01/08	100	07/01/06
Floor Coatings	420	100	01/01/03	100	01/01/03	250	01/01/03
		50	07/01/06	50	01/01/08	50	07/01/06
Industrial Maintenance (IM) Coatings	420	250	01/01/03 04	250	01/01/03	250	01/01/04
		100	07/01/06	100	01/01/08		
High Temp. IM Coatings	No Limit	550	01/01/03	550	01/01/03	420	01/01/03
		420	07/01/06 01/01/03	420	07/01/06		
Non-Flat	250	150	01/01/03	150	01/01/03	150 250 ³	01/01/03
		50	07/01/06	50	01/01/08	50	07/01/06
Quick-Dry Enamel	400	250	01/01/03	250	01/01/03	250	01/01/03
		50	07/01/06	50	01/01/08	50	07/01/06
PSU	350	200	01/01/03	200	01/01/03	200	01/01/03
		100	07/01/06	100	01/01/08	100	07/01/06
Quick-Dry PSU	350 ²	200	01/01/03	200	01/01/03	200	01/01/03
		100	07/01/06	100	01/01/08	100	07/01/06
Recycled Flat and Nonflats	250	100	07/01/06	100	01/01/08	100	07/01/06
Rust Preventative	400	100	07/01/06	100	01/01/08	400	date of rule adoption
Specialty Primers	350	100	07/01/06	100	01/01/08	100 ⁴	07/01/06
Stains	350	250	01/01/03	250	01/01/03	250	01/01/03
Water-Proofing Wood Sealers	400	250	01/01/03	250	01/01/08	250	01/01/03

1) In Proposed Project and Alternative C, swimming pool repair coating would be lowered to 340 as of 01/01/03

2) Currently exempt if manufacturers report sales data

3) Higher interim limit for High Gloss Non-flats (defined as registering a gloss of 70 or above on a 60-degree meter)

- 4) For Alternative C, specialty primers includes those that block stains

Alternative C – No Final VOC Limit for IM or Rust Preventive Coatings

Alternative C would not further reduce the interim VOC content limit of 250 g/l or 400 g/l for IM and rust preventative (RP) coatings, respectively. IM coatings would not need to comply until January 1, 2004 and RP coatings would only have to comply with the current VOC content limit. Floor coatings and high gloss non-flats (registers a gloss of 70 or above on a 60-degree meter) would be allowed a higher interim limit of 250 g/l and the definition of specialty primers would include those primers that block stains (the final limits and compliance dates would stay the same as the proposed project). Swimming pool repair coating and high temperature IM coatings would be lowered to 340 g/l and 420 g/l, respectively. The other proposed changes in PAR 1113 would be maintained.

COMPARISON OF THE ALTERNATIVES

The Initial Study (see Appendix B) identified those environmental topics where the PAR 1113 could cause adverse environmental impacts. Further evaluation of these topics and other identified topics in Chapter 4 of this Draft SEA reveals that there are no significant impacts from the implementation of PAR 1113.

The following subsections briefly describe potential adverse environmental impacts that may be generated by each project alternative. Each environmental topic summary contains a brief description of the environmental impacts for each project alternative compared to impacts resulting from implementing the proposed amendments. Potential impacts for the environmental topics are quantified, where sufficient data are available. A comparison of the impacts for each of the environmental topics is summarized in Table 5-3 and the alternatives are ranked according to severity of potential adverse environmental impacts in Table 5-4.

Air Quality

Alternative A - No Project

This alternative assumes that the proposed amendments to Rule 1113 will not be adopted. Existing Rule 1113 would remain in effect with no modifications. As a result, approximately 20 tons per day of VOC emissions from architectural coatings would not be further reduced to meet 1997 AQMP goals, thus, jeopardizing the district's ability to meet and maintain federal and state ozone standards by the year 2010.

Alternative B – Extended Compliance

Alternative B would extend the final VOC content limits to January 1, 2008. The final VOC content limits for affected coatings would be identical to those proposed for PAR 1113. As shown in Table 5-2, assuming no sell through, this alternative would result in

estimated daily VOC emission reductions by the year 2010 of 21.8 tons per day. During the interim years, Alternative B, ~~similar to the proposed project~~, would allow a higher VOC content limit for essential public service coatings, which will result in an estimated 27 pounds per day of foregone emission reductions. This alternative would ultimately achieve the same VOC emission reductions as PAR 1113. However, the VOC emission reductions would be achieved two years later for the final year. Thus, missing some of the 1997 AQMP targets for VOC emission reductions.

Alternative C – No Final IM or RP VOC Content Limit

This alternative would omit the proposed final VOC content limits for IM and RP coatings. Alternative C would allow the interim VOC content for IM and RP coatings to remain at 250 g/l and 400 g/l, respectively, and increase the interim limit for floor coatings and high gloss nonflats to 250 g/l. Thus, the emission reductions are lower due to higher interim limits for floor coatings and high gloss nonflats. The emission reductions from the high temperature IM coatings are minimal. Due to the small amount used, the emission reductions from swimming pool repair coating are considered negligible. All other proposed VOC content limit changes in PAR 1113 would be maintained. As shown in Table 5-2, assuming no sell through, this alternative would result in estimated daily VOC emission reductions by the year 2010 of 18.25 tons per day. This alternative would ultimately achieve 3.55 tons per day less VOC emission reductions than the proposed project because the final VOC content limits for IM and RP coatings is never reached. However, this loss of 3.55 tons per day less VOC emission reductions would have to be made up in other VOC emission sources, which may not be feasible for some VOC sources.

Emission Reductions from PAR 1113 and Alternatives

It should be noted that all of the alternatives, except Alternative A, will reduce VOC emissions from affected AIM coating categories. Table 5-2 highlights the estimated emission reductions from PAR 1113 and each project alternative.

TABLE 5-2
Comparison VOC Emission Reductions
From PAR 1113 and the Project Alternatives (pounds per day)

Year Reductions Achieved	PAR 1113	Alternative A (No Project)	Alternative B (Extended Final Compliance)	Alternative C (No Final IM//RP VOC Content Limit)
2003	19,593	0	19,593	11,780
2004	↓	0	↓	11,780 + 5,800
2006	23,980+19,593+27	0	↓	18,893 + 11,780 + 5,800 + 27
2008	↓	0	23,980+19,593+27	↓
2010+	↓	0	↓	↓
TOTAL*	43,600 43,573	0	43,600	36,500
Tons/Day	21.8	0	21.8	18.25

* Assumed 365 operational days per year

↓ = Same amount of VOC emission reduction obtained as previous years.

Water Resources

Water Demand

Alternative A assumes that PAR 1113 will not be adopted. The water demand impacts associated with the use of current coatings would remain constant under the No Project Alternative. As a result of not implementing the proposed VOC content limits, which are anticipated to be met predominately through water-borne technology, this alternative would have less water demand impacts compared to the proposed project. Thus, Alternative A would not create any new or additional water demand impacts.

Alternative B would extend the final VOC content limits to January 1, 2008. Therefore, the water demand impacts will be slightly greater than PAR 1113, but not significant. Since the affected coating categories will be reformulated with the same water-borne technology to meet the interim and final VOC content limits, this alternative would result in similar insignificant water demand impacts as the proposed project.

Alternative C would omit the proposed final VOC content limits for IM and RP coatings. This alternative would allow the interim VOC content for IM and RP coatings to remain at 250 g/l and 400 g/l, respectively. As a result of having a higher interim VOC content limit of 250 g/l for floor coatings and not implementing the proposed final VOC content limit for IM and RP coatings of 100 g/l, which is anticipated to be met through water-borne technology, Alternative C would have insignificant water demand impacts, which would be slightly less than water demand impacts resulting from PAR 1113.

Water Quality

Alternative A assumes that PAR 1113 will not be adopted. No change in the current quantities of coatings entering the sewer systems, storm drainage systems, or groundwater within the district should occur under the No Project Alternative because current practices are expected to be maintained. Thus, Alternative A would not create any new or additional water quality impacts.

Alternative B would extend the final VOC content limits to January 1, 2008. However, the same low-VOC technology used to meet the PAR 1113 final VOC content limits will be used to meet the later Alternative B final VOC content limits. Therefore, Alternative B would result in similar insignificant water quality impacts (e.g., wastewater, storm water, and groundwater) as the proposed project.

Alternative C would omit the proposed final VOC content limits for IM and RP coatings. The interim VOC content limits for floor coatings and high gloss non-flats of 250 g/l, IM of 250 g/l and RP of 400 g/l, which can be met by both solvent-borne and water-borne technology, would remain in place after the year 2003. Thus, the further use of water-borne technology to meet the lower VOC content limits of PAR 1113 for these coating categories is not required. Since there will be no incremental increase in the use of water-borne technology for these coatings at the final compliance deadline, the generation of wastewater from the clean up of water-borne technology will not occur. Therefore, water quality impacts associated with Alternative C would be less than those associated with implementation of PAR 1113 and, therefore, insignificant.

Public Services

Public Facility Maintenance

The No Project Alternative would not require any changes to coating application practices done for maintenance purposes at public facilities. Thus, Alternative A would not create any new or additional public service impacts.

Alternative B would extend the final VOC content limits to January 1, 2008. However, the same low-VOC technology used to meet the PAR 1113 interim and VOC content limits will be used to meet the later Alternative B interim and final VOC content limits. Therefore, Alternative B would result in similar insignificant public services impacts (e.g., maintenance at public facilities) as the proposed project.

Alternative C would omit the proposed final VOC content limits for IM and RP coatings. The interim VOC content limits for floor coatings and high gloss non-flats of 250 g/l, IM of 250 g/l and RP of 400 g/l, which can be met by both solvent-borne and water-borne technology, would remain in place after the year 2003. As a result, end-users will be allowed to use RP coatings with a higher VOC content based on alkyd or acrylic

technology, which currently perform satisfactorily at a VOC content of 400 g/l¹. Therefore, the public services impacts associated with Alternative C are less than those associated with implementation of PAR 1113.

Fire Departments

The No Project Alternative will not change the current impacts on fire departments. The current Rule 1113 VOC content limits would allow the continued use of coatings that contain flammable solvents such as toluene, xylene, MEK, mineral spirits, and others. To comply with the interim and final VOC content limits in PAR 1113, it is expected that coating formulators will use predominantly water-borne technology containing less flammable solvents. Therefore, the continued use of flammable solvents such as toluene, xylene, MEK, and mineral spirits would maintain the current level of impacts to fire department responding to flammable coating incidents compared to a slight reduction in impacts to fire departments expected from the implementation of the proposed project.

Alternative B would extend the final VOC content limits to January 1, 2008. However, the same replacement and coalescing solvents used to meet the PAR 1113 final VOC content limits would be used to meet the Alternative B final VOC content limits. Therefore, Alternative B would result in similar insignificant public services impacts (e.g., fire departments) as PAR 1113.

Alternative C would omit the proposed final VOC content limits for IM and RP coatings. The interim VOC content limits for floor coatings and high gloss non-flats of 250 g/l, IM of 250 g/l and RP of 400 g/l, which can be met by both solvent-borne and water-borne technology, would remain in place after the year 2003. Since under Alternative C IM and RP coatings will not be required to meet the final VOC content limits of PAR 1113, formulators will not be required to reformulate solvent-borne technology containing more flammable solvents, with water-borne technology containing less flammable solvents (e.g., diisocyanates, texanol, propylene glycol, and ethylene glycol). Therefore, Alternative C not generate significant adverse impacts to fire departments, although the beneficial effects of this alternative would be less than those expected from the implementation of PAR 1113.

¹ Since this alternative maintains all of the other rule requirements of PAR 1113, IM coatings would be prohibited for use at public facilities.

Transportation / Circulation

The No Project Alternative would not require any changes to existing coating manufacturing processes or coating application practices. The volume of traffic or traffic circulation patterns associated with the manufacturing, distribution, and use of AIM coatings would not change under Alternative A. Thus, Alternative A would not affect existing patterns of transportation/circulation in any way.

Alternative B would extend the final VOC content limits to January 1, 2008. However, the same replacement and coalescing solvents used to meet the PAR 1113 final VOC content limits would be used to meet the Alternative B final VOC content limits. Therefore, Alternative B would result in similar insignificant transportation/circulation impacts as the proposed project.

Alternative C would omit the proposed final VOC content limits for IM and RP coatings. The interim VOC content limits for floor coatings and high gloss non-flats of 250 g/l, IM of 250 g/l and RP of 400 g/l would remain in place after the year 2003. Since under Alternative C IM and RP coatings will not be required to meet the final VOC content limits of PAR 1113, formulators will not be required to further reformulate these coatings with water-borne technology. Thus, any potential additional trips associated with the disposal of reformulated low-VOC water-borne IM and RP coatings due to freeze-thaw, shelf-life, or pot life problems will be less than PAR 1113. Therefore, Alternative C would result in slightly less transportation/circulation impacts than would be expected from the implementation of PAR 1113

Solid / Hazardous Waste

The No Project Alternative would not require any changes to existing coating manufacturing processes or coating application practices. The volume of solid/hazardous waste generated from the manufacturing, distribution, and use of AIM coatings would not change under Alternative A. Thus, Alternative A would not create any new or additional solid/hazardous waste impacts.

Alternative B would extend the final VOC content limits to January 1, 2008. However, the same replacement and coalescing solvents used to meet the PAR 1113 final VOC content limits would be used to meet the Alternative B final VOC content limits. Therefore, Alternative B would result in similar insignificant solid/hazardous waste impacts as PAR 1113.

Alternative C would omit the proposed final VOC content limits for IM and RP coatings. The interim VOC content limits for floor coatings and high gloss non-flats of 250 g/l, IM of 250 g/l and RP of 400 g/l would remain in place after the year 2003. Since under Alternative C IM and RP coatings will not be required to meet the final VOC content limits of PAR 1113, formulators will not be required to further reformulate these coatings

with water-borne technology. Thus, any potential additional coatings landfilled as a result freeze-thaw, shelf life, or pot life problems associated with the use of reformulated low-VOC water-borne IM and RP coatings will be less than PAR 1113. Therefore, Alternative C would result in slightly less solid/hazardous waste impacts than would be expected from the implementation of PAR 1113

Hazards

The No Project Alternative will not change the current hazards impacts. The current Rule 1113 VOC content limits would allow the continued use of coatings that contain toxics such as toluene, xylene, MEK, EGBE, and others. The continued use of these toxic and flammable solvents when balanced against the use of toxic solvents such as TDI, MDI, HDI, which are less flammable, to meet the interim and final VOC content limits of PAR 1113 would maintain any existing hazards associated with currently available high VOC coatings.

Alternative B would extend the final VOC content limits to January 1, 2008. However, the same replacement and coalescing solvents used to meet the PAR 1113 final VOC content limits would be used to meet the Alternative B final VOC content limits. Therefore, Alternative B would result in similar insignificant hazards impacts as the proposed project.

Alternative C would omit the proposed final VOC content limits for IM and RP coatings. The interim VOC content limits for floor coatings and high gloss non-flats of 250 g/l, IM of 250 g/l and RP of 400 g/l, which can be met by both solvent-borne and water-borne technology, would remain in place after the year 2003. Coating formulators would not be required under this alternative to further reformulate with water-borne technology to meet the interim VOC content limits for floor coatings and final VOC content limits in PAR 1113 for IM and RP coatings. In the context of RP coatings, coating formulators would not be replacing current coalescing solvents, such as EGBE, with less toxic and less flammable solvents such as texanol, propylene glycol, and ethylene glycol in their water-borne formulations. Conversely, in the context of IM coatings, coating formulators would not be incrementally increasing the use of two-component polyurethane water-borne systems containing toxic solvents such as TDI, HDI, and MDI. Therefore, when balancing the loss of replacement solvents that are less toxic and less flammable against the incremental increase in the use of coatings containing more toxic solvents, Alternative C would result in similar insignificant hazards impacts as the proposed project.

Human Health

The No Project Alternative will not change the current human health impacts. The current Rule 1113 VOC content limits would allow the continued use of coatings that contain toxics such as toluene, xylene, MEK, EGBE, and others. The use of these toxic solvents when balanced against the use of toxic solvents such as TDI, MDI, HDI to meet the interim and final VOC content limits of PAR 1113 maintain any existing human health impacts associated with currently available high VOC coatings.

Alternative B would extend the final VOC content limits to January 1, 2008. It is anticipated that the same replacement and coalescing solvents used to meet the PAR 1113 final VOC content limits would be used to meet the Alternative B final VOC content limits. However, in the context of compliant two-component water-borne IM systems containing TDI, HDI, MDI, since formulators have an additional three years to develop coatings they may be able to formulate systems containing less toxic compounds or develop better application techniques to further reduce exposure to these compounds. Therefore, Alternative B would result in slightly less insignificant human health impacts as compared to PAR 1113.

Alternative C would omit the proposed final VOC content limits for IM and RP coatings. The interim VOC content limits for floor coatings and high gloss non-flats of 250 g/l, IM of 250 g/l and RP of 400 g/l, which can be met by both solvent-borne and water-borne technology, would remain in place after the year 2003. Coating formulators would not be required under this alternative to further reformulate with water-borne technology to meet the final VOC content limits in PAR 1113. In the context of RP coatings, coating formulators would not be replacing current coalescing solvents such as EGBE with less toxic solvents such as texanol, propylene glycol, and ethylene glycol in their water-borne formulations. Conversely, in the context of IM coatings, coating formulators would not be incrementally increasing the use of two component polyurethane water-borne systems containing toxic solvents such as TDI, HDI, and MDI. Therefore, when balancing the loss of replacement solvents that are less toxic against maintaining the use of coatings containing more toxic solvents, Alternative C would result in similar insignificant hazards impacts as the proposed project.

CONCLUSION

Pursuant to CEQA Guidelines §15126.6 (d), a matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. Table 5-3 lists the alternatives considered by the SCAQMD and how they compare to PAR 1113 relative to generating adverse environmental impacts. Table 5-4 presents a matrix that lists the significant adverse impacts as well as the cumulative impacts associated with the proposed project and the project alternatives for all environmental topics analyzed. The table also ranks each impact section as to whether

the proposed project or a project alternative would result in greater or lesser impacts relative to one another.

Pursuant to CEQA Guidelines §15126.6 (e)(2), if the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. Since the No Project alternative (Alternative A) would not ultimately achieve the long-term air quality benefits (e.g., VOC reductions) of PAR 1113, it is not the environmentally superior alternative.

TABLE 5-3

Comparison of Adverse Environmental Impacts of PAR 1113 to the Alternatives

Environmental Topic	Alternative A (No Project)	Alternative B (Extended Compliance Deadlines)	Alternative C (No Final IM//RP VOC Content Limits)	Mitigation Measures
Air Quality	Not Significant (loss of VOC emission reductions)	Not Significant (loss of VOC emission reductions in interim years)	Not Significant (loss of VOC emission reductions)	None Required
Water Resources				
Water Demand	Not Significant, less than PAR 1113	Not Significant, equivalent to PAR 1113	Not Significant, less than PAR 1113	None Required
Water Quality	Not Significant, less than PAR 1113	Not Significant, equivalent to PAR 1113	Not Significant, less than PAR 1113	None Required
Public Services				
Public Facility Maintenance	Not Significant, less than PAR 1113	Not Significant, equivalent to PAR 1113	Not Significant, less than PAR 1113	None Required
Fire Department	Not Significant, greater than PAR 1113	Not Significant, equivalent to PAR 1113	Not Significant, greater than PAR 1113	None Required
Transportation/ Circulation	Not Significant, less than PAR 1113	Not Significant, equivalent to PAR 1113	Not Significant, less than PAR 1113	None Required
Solid/Hazardous Waste	Not Significant, less than PAR 1113	Not Significant, equivalent to PAR 1113	Not significant, less than PAR 1113	None Required
Hazards	Not Significant, equivalent to PAR 1113	Not Significant, equivalent to PAR 1113	Not Significant, equivalent to PAR 1113	None Required
Human Health	Not Significant, greater than PAR 1113	Not Significant, equivalent to PAR 1113	Not Significant, greater than PAR 1113	None Required

TABLE 5-4
Ranking of Alternatives

Project/ Alts	Air Quality Impacts		Water Demand Impacts		Water Quality Impacts		Public Facility Maintenance Impacts		Fire Department Impacts		Transportation/ Circulation Impacts		Solid/Hazardous Waste Impacts		Hazards Impacts		Human Health	
	Proj.	Cum.	Proj.	Cum.	Proj.	Cum.	Proj.	Cum.	Proj.	Cum.	Proj.	Cum.	Proj.	Cum.	Proj.	Cum.	Proj.	Cum.
PAR 1113	✓(1)	✓	✓(3)	✓	✓(3)	✓	✓(3)	✓	✓(1)	✓	✓(3)	✓	✓(3)	✓	✓(1)	✓	✓(2)	✓
Alt. A	✓(4)	✓	✓(1)	✓	✓(1)	✓	✓(1)	✓	✓(3)	✓	✓(1)	✓	✓(1)	✓	✓(1)	✓	✓(2)	✓
Alt. B	✓(2)	✓	✓(3)	✓	✓(3)	✓	✓(3)	✓	✓(1)	✓	✓(3)	✓	✓(3)	✓	✓(1)	✓	✓(1)	✓
Alt. C	✓(3)	✓	✓(2)	✓	✓(2)	✓	✓(2)	✓	✓(2)	✓	✓(2)	✓	✓(2)	✓	✓(1)	✓	✓(2)	✓

Notes: The ranking scale is such that 1 represents the least impacts and subsequent higher number represent increasingly higher worse impacts.

The same two numbers in brackets for a specific Impact Section means that these proposals would have the same impacts if implemented.

An X denotes either a project-specific significant adverse impact or cumulative significant adverse impact.

A ✓ denotes no significant adverse impact or no cumulative significant adverse impact.

Proj. = Project-Specific Impacts

Cum. = Cumulative Impacts