

CHAPTER 6.0

PROJECT ALTERNATIVES

INTRODUCTION

This EIR provides a discussion of alternatives to the proposed project as required by the CEQA guidelines. According to the guidelines, alternatives should include realistic measures to attain the basic objectives of the proposed project and provide means for evaluating the comparative merits of each alternative. In addition, though the range of alternatives must be sufficient to permit a reasoned choice, they need not include every conceivable project alternative (CEQA Guidelines, [Section §15126.6\(ad\)\(5\)](#)). The key issue is whether the selection and discussion of alternatives fosters informed decision making and public participation.

Alternatives analyses typically evaluate the “No Project Alternative” as a basis for comparing potential significant environmental impacts. However, Public Resources Code §21178(g) exempts projects that will enable the production of CARB RFG Phase 3 compliant fuels from the requirements of analyzing a No Project Alternative and alternative sites. Accordingly, this EIR addresses only those alternatives that could be developed within the existing Ultramar facilities.

Section 15126.6(f) of the CEQA Guidelines stipulates that the range of alternatives required in an EIR is governed by a rule of reason in that the EIR must discuss only those alternatives “necessary to permit a reasoned choice” and those that could feasibly attain most of the basic objectives of the proposed project. California RFG Phase 3 legislation contains explicit specifications regarding the characteristics of Phase 3 reformulated gasoline. For this reason, and because of the specific refinery processes at the Ultramar Refinery, the range of potential project alternatives is relatively limited.

The project alternatives were developed by modifying one or more components of the proposed project taking into consideration the project’s limitations as to space, permitting requirements, and compliance agreement stipulations. Unless otherwise stated, all other components of each project alternative are identical to the proposed project. Both the identified feasible project alternatives as well as the alternatives rejected as infeasible are discussed further below.

ALTERNATIVES REJECTED AS INFEASIBLE

In accordance with CEQA Guidelines §15126.6(c), a CEQA document should identify any alternatives that were considered by the lead agency, but were rejected as infeasible during the scoping process and briefly explain the reason underlying the lead agency’s determination.

Section 15126.6(c) also states that among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (1) failure to meet most of the basic project objectives;

(2) infeasibility; or (3) inability to avoid significant environmental impacts. Furthermore, CEQA Guidelines §15126.6(f)(2)(B) indicates that if the lead agency concludes that no feasible alternative locations for the project exist, it must disclose the reasons for this conclusion, and should include the reasons in the EIR.

The proposed project objective is to comply with California's RFG Phase 3 requirements for gasoline produced by the Ultramar Wilmington Refinery. The proposed project includes removing MTBE and replacing it with ethanol to comply with the federal oxygenate requirement. There are a number of other oxygenates besides MTBE and ethanol that could potentially be used in gasoline. However, with the Governor's ban on MTBE and the requirements of the CARB Phase 3 regulations, ethanol is the only oxygenate that can be used to replace MTBE at this time (CARB, 2000). Therefore, alternatives to the use of ethanol were not evaluated as they are infeasible.

The proposed project assumes that ethanol will be transported into the Los Angeles area via railcar. Ethanol could also be transported into the Los Angeles area via truck. The worst case analysis for the project assumes that Ultramar will require about 5,000 barrels per day of ethanol. The ethanol could be transported into the Los Angeles area via truck. However, a large number of trucks (about 42 per day) would be required to deliver sufficient ethanol. Delivery of ethanol via truck was not considered feasible due to the large quantity of ethanol that is required.

The installation of a propane/propylene pipeline is not expected to be feasible or result in a reduction in environmental impacts.

PROJECT ALTERNATIVES

Alternative 1 – Receipt of Ethanol via Alternate Modes of Transportation

Ultramar potentially could receive bulk quantities of ethanol at a number of different locations. Sufficient quantities of ethanol are not produced in California so that ethanol will need to be supplied from other states and/or other countries. The proposed project assumes that ethanol will be transported into southern California via railcar directly to a third party terminal. Under this alternative, bulk receipt of ethanol would be transported via railcar to the Refinery. Ethanol that would be shipped to the Refinery would then have to be transported to third party terminals. (Note that Ultramar does not own any terminals in southern California). Shipping ethanol to the Refinery would require more extensive construction to provide sufficient room to bring railcars to the Refinery, construct railcar unloading facilities, construct sufficient tanks for ethanol storage, and truck loading facilities at the Refinery.

Ethanol could also be delivered by marine vessel to a local terminal for ultimate blending with Ultramar products.

Alternative 2 - Alternate Pipeline Routes

Ultramar could use alternate pipeline routes for the construction of new pipelines. However, no significant impacts were identified associated with the location of the proposed pipeline route. The

pipeline route will be constructed within industrial areas, primarily along major transportation routes and generally adjacent to other petroleum refineries. Therefore, siting pipelines in other locations would not provide any additional environmental benefit. Different pipeline routes could be used that would only involve construction within industrial areas but such alternatives are not required.

Alternative 3 – Alternatives to the Storage of Propane/Propylene

Additional quantities of propane/propylene will be generated as a consequence of the CARB Phase 3 proposed project. Propane/propylene will be removed from certain gasoline blend stocks to provide better control of the vapor pressure of finished gasoline and assure compliance with the CARB Phase 3 requirements. Two new propane/propylene bullets are included as part of the proposed project to temporarily store these materials prior to off-site shipment to an end user. As part of the proposed project, one tank will be filled up from the Refinery process units, while the other tank is being unloaded to trucks and transported off the site. Under any alternative, two propane/propylene storage tanks would be required to properly store the material prior to transport offsite.

Under this alternative the propane/propylene bullets would be built but no loading rack would be built. The propane/propylene would be transported via pipeline to a third party or other terminal. The propane/propylene cannot be discharged directly from a processing unit and loaded onto a truck or into a pipeline for safety reasons. The propane/propylene would then be transported via pipeline. Under this alternative, two storage tanks would be required at the Refinery and one would be required at the third party site. Sufficient storage of propane/propylene has not been identified so that a new propane/propylene bullet would need to be constructed at another location.

A propane/propylene pipeline could be installed to transport the material directly to an end user. This alternative would minimize some of the truck transport of the material; however, end users may vary and there may be more than one. Therefore, the truck transport of propane/propylene is still expected to be required.

ALTERNATIVES ANALYSIS

Alternative 1 – Receipt of Ethanol via Alternate Modes of Transportation

The EIR assumes that ethanol will be transported into southern California via railcar. Alternative transportation modes could include truck traffic and marine vessel.

Air Quality: The EIR assumes that ethanol will be transported into southern California to a third party terminal via railcar. Bulk receipt of ethanol also could be received via railcar at the Refinery. However, because ethanol absorbs water easily, it must be blended into gasoline at the distribution terminals to minimize the potential for contamination with water in the distribution system. Ethanol that would be shipped to the Refinery would then have to be transported to the Terminals. Therefore, shipping ethanol to the Refinery would increase the transportation requirements for ethanol. Ultramar will use a third party terminal that already has rail access and existing storage

tanks so that ethanol could be shipped and distributed with fewer facility modifications. Shipping ethanol to the Refinery would require more extensive construction to provide sufficient room to bring railcars to the site, construct railcar unloading facilities, construct sufficient tanks for ethanol storage, and truck loading facilities. Therefore, more emissions would be associated with the construction activities and mobile sources under this alternative.

The air quality impacts associated with this alternative are expected to be greater than the proposed project. The worst case analysis for the project assumes that Ultramar will require about 5,000 barrels per day of ethanol. The ethanol could be transported into the Los Angeles area via truck. However, a large number of trucks (about 42 per day) would be required to deliver sufficient ethanol, thus resulting in additional air emissions. Delivery of ethanol via truck was not considered feasible due to the large quantity of ethanol that is required.

Ethanol could also be delivered by marine vessel to a local terminal for ultimate blending with Ultramar products. A fewer number of marine vessels would be required than railcars or trucks because marine vessels can transport large volumes of material during each visit. However, the emissions related to marine vessels are generally large (see Appendix B) so that the transport of ethanol via marine vessels is expected to generate more emissions on an annual basis than the proposed project. Based on the above, alternatives to receiving ethanol other than via railcars are not expected to result in fewer emissions than the proposed project.

Geology/Soils: More extensive construction activities would be required at the Refinery if ethanol were to be received, stored, and distributed at the Refinery. More construction activities would be required under this alternative because three storage tanks would be required (instead of two) and one additional pipeline would be constructed. There is the greater potential for the discovery of contaminated soils than with the proposed project. The impacts of this alternative on geology/soils are expected to be less than significant, but greater than the proposed project, due to the existing regulations regarding the discovery of contaminated soils and the Uniform Building Code that governs the building of new structures.

Hazards and Hazardous Materials: The hazards associated with this alternative are expected to be about the same as the proposed project as the same amount of ethanol would be transported into southern California. However, additional transport of ethanol could be required in the event that ethanol was transported to the Refinery and then to a third party terminal for blending, resulting in an increased probability of a transportation accident. The impacts of Alternative 1 on hazardous and hazardous materials are expected to be equivalent to the proposed project and remain significant for Refinery modifications.

Hydrology/Water Quality: The impacts of Alternative 1 on hydrology/water quality would be expected to be about the same as the proposed project, assuming that an alternate site would continue to have storm water control measures, treat contaminated storm waters, prepared and implement an SPCC, and comply with wastewater discharge requirements, including NPDES permit requirements.

Land Use/Planning: The impacts of Alternative 1 on land use/planning would depend on the locations of the third party terminals (marine or rail). It is expected that terminals would be located within heavy industrial areas so that significant impacts to land use/planning would not be expected.

Noise: The impacts of Alternative 1 on noise would depend on the locations of the third party terminals (marine or rail). It is expected that terminals would be located within heavy industrial areas so that significant noise impacts would not be expected.

Solid/Hazardous Waste: Alternative 1 could have greater solid/hazardous waste impacts if additional construction activities at the Refinery necessary for this alternative encounter additional contaminated soils that may require handling and disposal. It is expected that potential solid/hazardous waste impacts under this Alternative would be less than significant as the landfills have sufficient capacity to handle the one-time generation of materials during the construction phase. The solid/hazardous waste generated by Alternative 1 is expected to be slightly greater than the proposed project, and not significant.

Transportation/Traffic: The impact of Alternative 1 could be greater on transportation/traffic than the proposed project as more truck trips would be required to transport ethanol into the area, or to transport ethanol from the Refinery to a third party terminal. These truck trips are expected to occur throughout the day and would not be concentrated during peak hours so that significant transportation/traffic impacts are not expected. An incremental increase in marine traffic is not expected to be significant as the increase would be less than one additional vessel per day.

Alternative 2 - Alternate Pipeline Routes

Ultramar could use alternate pipeline routes for the construction of new pipelines. The pipeline route will be constructed within industrial areas, primarily along major transportation routes and generally adjacent to other petroleum refineries.

Air Quality: The construction of an alternate pipeline route is expected to result in similar construction emissions, unless a much longer or shorter pipeline route was selected. The pipeline route is expected to be of similar length so that the construction emissions would be about the same as the proposed project and significant. The operational emissions associated with this alternative are expected to be about the same as the proposed project and would be significant.

Geology/Soils: The impacts of this alternative on geology/soils is expected to be about the same as the proposed project as similar construction activities would be expected. Contaminated soils also could be encountered during construction activities but sufficient rules and regulations are in place to mitigate the discovery of contaminated soil. Therefore, Alternative 2 is not expected to result in significant impacts to geology/soils.

Hazards and Hazardous Materials: The hazards associated with this alternative are expected to be about the same as the proposed project as the project would be constructed as proposed,

although a slightly different pipeline route would be used. The hazards associated with the pipelines are expected to remain the same as the proposed project and less than significant.

Hydrology/Water Quality: The impacts of Alternative 2 on hydrology/water quality would be expected to be about the same as the proposed project, as the requirements for new pipelines would apply to this alternative as well as the proposed project. Therefore, the impacts of Alternative 2 on hydrology/water quality are expected to be less than significant.

Land Use/Planning: The impacts of Alternative 2 on land use/planning would depend on the locations of pipeline route. It is expected that pipeline route would be located within heavy industrial areas because the area is predominately industrial, so that significant impacts to land use/planning would not be expected.

Noise: The impacts of Alternative 2 on noise would depend on the location of the pipeline route. It is expected that an alternate pipeline route would also be located within heavy industrial areas so that significant impacts to noise would not be expected.

Solid/Hazardous Waste: The impact of Alternative 2 is expected to result in about the same amount of grading and related construction activities as the proposed project. It is expected that the impacts on solid/hazardous waste under this Alternative would be less than significant as the landfills have sufficient capacity to handle the one-time generation of materials during the construction phase. The solid/hazardous waste generated by Alternative 2 is expected to be about the same as the proposed project, and not significant.

Transportation/Traffic: The impact of Alternative 2 on transportation/traffic is expected to be about the same as the proposed project since the only change would be in the location of the pipeline. Construction impacts could be different depending on the route selected. Fewer traffic impacts would be expected if construction along major transportation corridors could be avoided. The traffic impacts under this alternative are expected to remain less than significant.

Alternative 3 – Alternatives to the Storage of Propane/Propylene

Under this alternative, there would be two propane/propylene bullet storage tanks at the Refinery, similar to the proposed project, but no propane/propylene truck loading rack. An additional propane/propylene bullet would need to be constructed at another location. A propane/propylene pipeline could be installed to transport the material directly to an end user.

Air Quality: Under Alternative 3, two propane/propylene storage tanks or bullets would be constructed at the Refinery and one at another location. An additional loading rack and pipeline would be pipeline would be required at a third party location. The construction impacts associated with Alternative 3 would be greater than the proposed project, since an additional pipeline would be constructed. The impact of Alternative 3 on air quality during construction is expected to be significant.

The operation of the Refinery under Alternative 3 would be expected to have about the same emissions as the proposed project, and would be significant for NO_x (associated with the transport of ethanol via railcar). There may be less truck trips associated with this alternative as fewer truck trips would be required to transport propane/propylene and more of the material would be transported by pipeline.

Geology/Soils: More extensive construction activities would be required under this alternative as construction at both the Refinery and at a third party site would be required and construction of an additional pipeline would be required. Sufficient mitigation measures are available so that the impacts of Alternative 3 on geology/soils could be mitigated to less than significant.

Hazards and Hazardous Materials: The hazards associated with this alternative are expected to be greater than the proposed project since one additional pipeline would be constructed to transport propane/propylene. Sufficient storage of propane/propylene has not been identified so that a new propane/propylene bullet would need to be constructed at another location. The hazards related to the storage of propane/propylene under this alternative could be significant as it is unlikely that a site could be found that would not have off-site impacts. The hazards at the Refinery would be the same under this alternative as the proposed project and are expected to remain significant.

Hydrology/Water Quality: The potential impacts of Alternative 3 on hydrology/water quality would be greater than the proposed project since three storage tanks and one additional pipeline would be constructed. Assuming that an alternate site for a propane/propylene storage would continue to have storm water control measures, treat contaminated storm waters, prepare and implement an SPCC, and comply with wastewater discharge requirements, including NPDES permit requirements, no significant impacts would be expected. The impacts of Alternative 3 on hydrology/water quality would be expected to be about the same as the proposed project, as the requirements for new pipelines would apply to this alternative as well as the proposed project. Therefore, the impacts of Alternative 3 on hydrology/water quality are expected to be less than significant.

Land Use/Planning: The impacts of Alternative 3 on land use/planning would depend on the locations of the third party site for the storage of propane/propylene. The land use impacts related to the storage of propane/propylene under this alternative could be significant as it is unlikely that a site could be found that would not have off-site impacts associated with hazards.

Noise: The impacts of Alternative 3 on noise would depend on the location of the propane/propylene bullets and the location of a new pipeline. It is expected that third party sites would be located within heavy industrial areas so that significant impacts to noise would not be expected.

Solid/Hazardous Waste: The impact of Alternative 3 on solid/hazardous waste is expected to be greater since additional construction activities would be required, increasing the potential to discover contaminated soils. It is expected that the impacts on solid/hazardous waste under this alternative would be less than significant as the landfills have sufficient capacity to handle the one-time generation of materials during the construction phase. The solid/hazardous waste generated

by Alternative 3 during project operation is expected to be about the same as the proposed project, and not significant.

Transportation/Traffic: The impact of Alternative 3 could be less than the proposed project on transportation/traffic as fewer truck trips would be required to transport propane/propylene from the Refinery. The transportation/traffic impacts associated with Alternative 3 are expected to be similar to the proposed project and less than significant.

CONCLUSION

Table 6-1 compares the potential environmental impacts of the various alternatives with those of the proposed project. Based on the analyses herein, no feasible alternatives were identified that would eliminate the potentially significant air quality or hazard impacts related to the proposed project. Construction at the Refinery is required to eliminate MTBE and comply with the CARB RFG Phase 3 requirements so no feasible alternatives were identified that would achieve the objectives of the proposed project (compliance with the CARB RFG Phase 3 requirements) and result in fewer environmental impacts.

All the alternatives and the proposed project would result in significant impacts to air quality and hazards. No other feasible alternatives were identified that would reduce the air quality or hazard impacts to a less than significant level. Consequently, the proposed project is preferable to the alternatives because it allows the Refinery to meet the project objectives of complying with state reformulated fuels requirements while resulting in fewer environmental impacts than any of the identified project alternatives.

TABLE 6-1

**ENVIRONMENTAL IMPACTS OF ALTERNATIVES
as compared to proposed project**

ENVIRONMENTAL TOPIC	Proposed Project	Alternative 1*	Alternative 2*	Alternative 3*
AIR QUALITY				
Construction	S	S(+)	S(=)	S(+)
Operation	NS	S(+)	S(=)	S(+)
Toxic Air Contaminants	NS	NS(+)	NS(+)	NS(=)
GEOLOGY/SOILS				
Construction	NS	NS(+)	NS(=)	NS(+)
Operation	NS	NS(=)	NS(=)	NS(=)
HAZARDS/HAZARDOUS MATERIALS				
Operation	S	S(=)	S(=)	S(=)
Transportation Risks	NS	NS(+)	NS(=)	NS(+)
HYDROLOGY/WATER QUALITY	NS	NS(=)	NS(=)	NS(+)
LAND USE	NS	NS(=)	NS(=)	NS(+)
NOISE				
Construction	NS	NS(=)	NS(=)	NS(+)
Operation	NS	NS(=)	NS(=)	NS(+)
SOILD/HAZARDOUS WASTE	NS	NS(=)	NS(=)	NS(=)
TRANSPORTATION/ CIRCULATION				
Construction	NS	NS(+)	NS(=)	NS(+)
Operation	NS	NS(+)	NS(=)	

Notes:

S = Significant

NS = Not Significant

PS = Potentially Significant

MNS = Mitigated to Non-significance

(-) = Potential impacts are less than the proposed project.

(+) = Potential impacts are greater than the proposed project.

(=) = Potential impacts are approximately the same as the proposed project.