

# Chapter 6

## Analysis of Alternatives

## 6.1 Introduction

This chapter presents a comparison of alternatives to the proposed Project and evaluates their potential impacts. Section 15126.6 of the State CEQA Guidelines requires that an “EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, that would feasibly attain most of the basic objectives of the project, which would avoid or substantially lessen any of the significant effects of the project.” Potential alternatives are identified in Section 6.2. As required by CEQA, the No Project Alternative is included as one of the alternatives. Section 6.3 identifies why an alternative location within in the Port was considered but was eliminated. Section 6.4 compares the selected alternatives against each other and the proposed Project.

Alternatives in this Draft EIR have been analyzed at a level that provides sufficient information about the environmental effects of each alternative for comparative purposes and to allow for informed decision-making.

## 6.2 Project Alternatives

## Requirements for Alternatives

The range of alternatives required by CEQA for an EIR is governed by a “rule of reason” that requires an EIR to set forth only those alternatives necessary to permit a reasoned choice. An EIR need not consider every conceivable alternative to a project. Rather, the alternatives must be limited to alternatives that will feasibly attain most of the basic project objectives, are potentially feasible, and would avoid or substantially lessen at least one of the significant environmental effects of the project. (State CEQA Guidelines, Section 15126.6[f]). The EIR must also identify the environmentally superior alternative, which cannot be the No Project Alternative. Alternatives can be eliminated from detailed consideration in the EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially lessen any significant environmental effects (State CEQA Guidelines, Section 15126.6[c]).

## 6.2.2 Alternatives Considered

This EIR presents a reasonable range of alternatives pursuant to CEQA. LAHD defines a reasonable range of alternatives in light of its legal mandates under the Port of Los Angeles Tidelands Trust (Los Angeles City Charter, Article VI, Sec. 601), the California Coastal Act (20 PRC 30700 et seq.), and LAHD's leasing policy. The Port is one of only five locations in the state identified in the California Coastal Act for the purposes of international maritime commerce (20 PRC 30700–30701). These mandates identify the Port and its facilities as a primary economic/coastal resource of the state and an essential element of the national maritime industry for promotion of commerce, navigation, fisheries, environmental preservation, and public recreation. The primary objective of the proposed Project is to comply with MOTEMS, a state mandated requirement.

The proposed Project's objectives (listed below) form the basis for developing potential alternatives.

- Comply with MOTEMS requirements, which would ensure better resistance to earthquakes, protect the public and the environment, and reduce the potential of an oil spill, and consequently maintain the operation and viability of the marine oil facility (primary objective).
- Optimize the use of existing land at the terminal and associated waterways in a manner that is consistent with the LAHD's public trust obligations.
- Continue operations which contribute to Southern California's energy needs given evolving market conditions and business cycle variability.
- Maintain the existing facility's throughput capabilities and operational parameters.
- Comply with the LAHD's Source Control Program (SCP).

Two alternatives—the No Project Alternative and a Reduced Project Alternative—are analyzed in this Draft EIR.

Under CEQA, the analysis of alternatives need not be as in-depth as the analysis for the proposed Project, but should be at a level that allows the decision-makers to make an informed determination regarding the differences in impacts between the proposed Project and each of its alternatives.

### 6.2.2.1 Alternative 1—No Project

The No Project Alternative required by CEQA represents what would reasonably be expected to occur in the foreseeable future if the proposed Project were not approved. Under this alternative, the existing marine oil terminal would not be compliant with MOTEMS requirements. The current terminal lease expires in 2023. At that time, operations would cease. This location would then be available for use consistent with its zoning (heavy industrial uses) and the Port Master Plan's designated land use (liquid bulk facility). Any subsequent use of the site, once identified, would be subject to additional environmental review.

1    **6.2.2.1.1 Alternative 1 Objectives Analysis**

2    Alternative 1 would not meet the primary objective of complying with MOTEMS  
3    requirements. This alternative would also not meet the objective of optimizing land use  
4    at the terminal in a manner that is consistent with LAHD's public trust obligations  
5    because it would result in the elimination of an operating marine oil terminal. Alternative  
6    1 would allow the tenant, Shell Oil Company, to continue to use this facility and supply  
7    petroleum products until their lease expires in 2023. However, terminal operations would  
8    cease in 2023, and from that point on, the terminal would no longer contribute to meeting  
9    the energy demands of Southern California. Alternative 1 would also not comply with  
10   the LAHD's SCP requirements for tanks and secondary containment, as there would be  
11   no mechanism for implementing such improvements (e.g., a new lease).

12    **6.2.2.2 Alternative 2 – Reduced Project – One Platform**

13    Under Alternative 2, only Berth 168 would be improved to meet MOTEMS compliance,  
14    including piping replacement and related support structures, and the SCP would be  
15    implemented. Berth 169 would become non-operational once construction of Berth 168  
16    is complete. As with the proposed Project, the soonest construction of Berth 168 could  
17    begin in 2018 and would occur over a three-year period. Alternative 2 would include a  
18    vapor control system to allow for the loading of refined products onto vessels. A new 30-  
19    year lease would be issued and the terminal would continue to operate as a fully  
20    functional marine oil terminal using one berth (Berth 168) through 2048. Similar to the  
21    proposed Project, this reduced platform alternative would generally be capable of  
22    accommodating the anticipated future throughput (i.e., approximately 25.5 million barrels  
23    and 166 vessel calls annually).

24    The second berth, which would be operational for the proposed Project but not  
25    Alternative 2, would provide Shell with business flexibility and options needed to  
26    minimize potential business interruptions. One berth would operate less efficiently than  
27    the proposed Project since it would not allow for undisrupted terminal operation if one  
28    berth becomes temporarily inoperable.

29    **6.2.2.2.1 Alternative 2 Objectives Analysis**

30    Alternative 2 would satisfy the Project objectives, although, for some objectives, to a  
31    lesser degree than the proposed Project. Alternative 2 would meet the primary objective  
32    of complying with MOTEMS requirements. However, only one berth would be  
33    improved while the other would become non-operational. Therefore, Alternative 2 would  
34    meet the objectives of continuing to use the land at the terminal and associated waterways  
35    in a manner that is consistent with LAHD's public trust obligations while allowing  
36    operations designed to meet Southern California's energy needs. One berth would  
37    operate less efficiently than the proposed Project since it would not allow for undisrupted  
38    terminal operation if one berth becomes temporarily inoperable. Alternative 2 allows for  
39    less operational flexibility and does not meet the third Project objective as well as the  
40    proposed Project.

## 1    **6.3**

## **Alternatives Considered but Eliminated**

2                  As discussed above, CEQA requires an EIR to present a range of reasonable alternatives  
3                  to the proposed Project. CEQA also requires an evaluation of the comparative merits of  
4                  the alternatives. An EIR is not required to consider alternatives that would be infeasible  
5                  or that would not reduce any identified significant impact.

6                  Selecting an alternative site within the Port was considered but eliminated from further  
7                  analysis due to infeasibility. The Project site is an existing marine oil terminal that has  
8                  operated at this location since 1923. The proposed Project is needed to upgrade the site  
9                  so that it would comply with MOTEMS. Therefore, no other sites were considered  
10                 feasible for the proposed Project.

## 11    **6.4**

## **Analysis of Alternatives**

12                 Chapter 3 of this Draft EIR evaluates the proposed Project's potential impacts on five  
13                 environmental resources areas (Air Quality and Meteorology, Biological Resources,  
14                 Greenhouse Gas [GHG] Emissions and Climate Change, Hazards, and Energy  
15                 Conservation). The No Project Alternative (Alternative 1) and the Reduced Project  
16                 Alternative (Alternative 2) are evaluated below.

### 17    **6.4.1**

### **Summary of Alternatives Impacts Analysis**

18                 Table 6-1 presents a summary of the resource area impacts associated with the proposed  
19                 Project and each alternative.

20                 No construction would be undertaken as part of Alternative 1 so there would be no  
21                 impacts related to construction. Alternative 1 would not result in a significant and  
22                 unavoidable impact relative to GHG emissions as a result of the cessation of terminal  
23                 operations in 2023. However, because of operational activity increases through 2023 that  
24                 would occur even without the proposed Project, Alternative 1 would still have significant  
25                 and unavoidable impacts in the areas of air quality. As with the proposed Project,  
26                 biological resources, hazards, and energy conservation would be less than significant.

27                 Alternative 2 would have less construction emissions but would accommodate a similar  
28                 level of operations as that of the proposed Project. Therefore, Alternative 2 would also  
29                 have significant and unavoidable impacts in the same areas as those for the proposed  
30                 Project (air quality and GHG emissions) but the emissions associated with construction  
31                 would be less due to a single berth construction. Similar to the proposed Project,  
32                 biological resources, hazards, and energy conservation would be less than significant.

33                 As shown in Table 6-1, Alternative 1 (the No Project Alternative) would have fewer  
34                 significant impacts than the proposed Project or Alternative 2. As discussed in Section  
35                 6.4.2, Alternative 2 (the Reduced Project) would have similar but slightly reduced  
36                 construction impacts than would occur under the proposed Project.

37

1

**Table 6-1: Impacts Summary by Alternative**

<b>Environmental Resource Area*</b>	<b>Proposed Project</b>	<b>Alt 1</b>	<b>Alt 2</b>
<b>Air Quality</b>			
Construction	S	N	S
Operation	S	S	S
Health Risk	L	L	L
<b>Biological Resources</b>			
Construction	M	L	M
Operation	L	L	L
<b>Greenhouse Gas Emissions and Climate Change</b>			
Construction and Operation	S	L	S
<b>Hazards</b>			
Construction	L	N	L
Operation	L	L	L
<b>Energy Conservation</b>			
Construction and Operation	L	L	L

## Notes:

\* The analysis includes project-level impacts, not cumulative effects.

S = Unavoidable significant impact

M = Significant but mitigatable impact (not significant with mitigation)

L = Less than significant impact (not significant without mitigation)

N = No impact

2

## 3      **6.4.2 Resources with Significant Impacts**

4      The proposed Project would result in significant impacts in the areas of Air Quality and  
 5      Meteorology and GHG's. The following is an analysis for each alternative.

### 6      **6.4.2.1 Air Quality and Meteorology**

#### 7      **6.4.2.1.1 Alternative 1 – No Project**

8      Under Alternative 1, no new construction of terminal improvements would occur.  
 9      Therefore, there would be no construction-related impacts. Terminal operations would  
 10     continue until the current lease expires in 2023.

11     Terminal operations are assumed to grow at an annual rate of two percent and reach  
 12     approximately 15.5 million barrels and 101 vessel calls by 2023. This would result in an  
 13     increase in annual air emissions through 2023. This would occur without implementation  
 14     of the proposed Project. However, when the terminal lease expires, operations would  
 15     cease and existing operational emissions would no longer occur. Any subsequent use of  
 16     the site was not evaluated in this EIR; once identified, it would be subject to additional  
 17     environmental review. During operations, impacts would be expected to be significant  
 18     and unavoidable similar to the proposed Project (peak day NOx and VOC emissions  
 19     would be significant).

Similar to the proposed Project, operation of Alternative 1 would not result in an exceedance of ambient air quality thresholds (see Appendix B2). Alternative 1 would not result in significant cancer risk, population cancer burden, or non-cancer risks (see Appendix B3).

Under the proposed Project, air emissions would occur over a longer period (from 2019 through 2048) than Alternative 1. Therefore, Alternative 1 would have a reduced impact on air quality emissions compared to the proposed Project. No mitigation is available under Alternative 1, as there would be no new or amended lease through which to require mitigation.

#### **6.4.2.1.2 Alternative 2 – Reduced Project**

Under Alternative 2 only Berth 168 would be improved. Berth 169 would become non-operational once construction of Berth 168 is complete. Thus, while peak day construction emissions would be the same as the proposed Project in the first three years of construction, construction would occur over a shorter time period. Therefore, total construction emissions would be reduced as compared to the proposed Project. Although reduced compared to the proposed Project, construction impacts would still remain significant for NO<sub>x</sub>, VOC, and PM<sub>2.5</sub> (during overlapping construction/operation) even after implementation of mitigation measures (MM AQ-1 through MM AQ-4). Similar to the proposed Project, construction of Alternative 2 would result in exceedances of the ambient air quality thresholds for federal and state 1-hour NO<sub>2</sub> concentrations (see Appendix B2). With application of mitigation measures MM AQ-1 through MM AQ-4, the federal and state 1-hour NO<sub>2</sub> concentrations would continue to exceed the thresholds during construction.

Operationally, Alternative 2 would be capable of accommodating the same anticipated future throughput as the proposed Project (i.e., approximately 25.5 million barrels and 166 vessel calls annually). Therefore, annual air emissions would be similar to the proposed Project. Peak daily operational emissions would also be similar for both Alternative 2 and the proposed Project (see Table 3.1-23 in Section 3.1, Air Quality and Meteorology for peak daily operational emission associated with the proposed Project). Therefore, operational emissions associated with Alternative 2 would also be significant and unavoidable for NO<sub>x</sub> and VOC after implementation of mitigation (MM AQ-5).

Similar to the proposed Project, operation of Alternative 2 would not result in an exceedance of ambient air quality thresholds (see Appendix B2). Alternative 2 would not result in significant cancer risk, population cancer burden, or non-cancer risks (see Appendix B3).

#### **6.4.2.2 Greenhouse Gas Emissions and Climate Change**

##### **6.4.2.2.1 Alternative 1 – No Project**

Under Alternative 1, no new construction activities would occur. Operations would continue until 2023. Terminal operations are assumed to grow at an annual rate of two percent and reach approximately 15.5 million barrels and 101 vessel calls annually when the existing terminal lease expires in 2023 (see Appendix B2). This would result in an associated increase in annual greenhouse emissions. However, emissions would not exceed the GHG threshold of 10,000 mty prior to 2023. Therefore, GHG impacts under Alternative 1 would be less than significant, and reduced compared to the proposed Project.

#### 1   **6.4.2.2.2    Alternative 2 – Reduced Project**

2              As with the proposed Project, vessel emissions for all source categories would increase  
3              over time because of terminal throughput increases. As the throughput would be similar  
4              under Alternative 2 as with the proposed Project, Alternative 2 GHG emissions would be  
5              significant by 2048 (when 139 vessel calls are reached annually) prior to mitigation (see  
6              Table 3.3-3 in Section 3.3, Greenhouse Gas Emissions and Climate Change, for the  
7              proposed Project’s GHG emissions before mitigation). With implementation of air  
8              quality mitigation measure MM-AQ-5 and lease measures (LM AQ-1 and LM GHG-1),  
9              GHG emission impacts would be reduced, but would remain significant and unavoidable  
10             (see Table 3.3-4 in Section 3.3 for the GHG emissions after mitigation associated with  
11             the proposed Project).

### 12   **6.5    Environmentally Superior Alternatives**

13             CEQA requires identification of an environmentally superior alternative. The No Project  
14             Alternative (Alternative 1) is the Environmentally Superior Alternative because it would  
15             have reduced impacts in all four resource areas. However, none of the proposed Project  
16             objectives, including the primary objective of compliance with MOTEMS requirements  
17             would be met (see Section 6.3). State CEQA Guidelines Section 15126.6(e)(2) requires  
18             that in cases where the No Project Alternative is determined to be the environmentally  
19             superior alternative, another alternative must also be identified as environmentally  
20             superior.

21             Under Alternative 2, only one berth would be upgraded and thus less construction and  
22             construction-related impacts would occur, relative to the proposed Project. Terminal  
23             throughput would be the same as the proposed Project. Consequently, under Alternative  
24             2, impacts in the area of air quality and GHG’s would be slightly reduced as compared to  
25             the proposed Project due to slightly less construction (only one loading platform would  
26             be constructed under Alternative 1 compared to two platforms under the proposed  
27             Project). Due to the slightly reduced impacts to air quality and GHG emissions (as  
28             described above in Sections 6.4.2.1.2 and 6.4.2.3.2, respectively), Alternative 2 is also  
29             deemed to be environmentally superior.

30

- 1 *This page left intentionally blank*